MARINE PROTECTED AREAS AND
THE PROBLEM OF PAPER PARKS

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Abstract – The ocean makes the Earth habitable for humankind and careful management of the ocean is of utmost importance for sustainable future. Marine Protected Areas (MPAs) are a key instrument of ocean protection. According to *UN World Database on Protected Areas* more than 15000 MPAs protect 7.68 % of the ocean while IUCN recommended that at least 30 % of the ocean should be protected effectively by 2030. The *International Union for Conservation of Nature* (IUCN) defines protected area as: *A clearly defined geographical space, recognised, dedicated, and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values*. In the report *Conversion of paper parks to effective management: developing a target*, paper park is defined as: *A legally established protected area where experts believe current protection activities are insufficient to halt degradation*. Many MPAs exist on maps but offer little real protection. Understanding and explaining the ineffectiveness of MPAs is a difficult task due to the complexity of MPAs social-ecological systems that require a multidisciplinary study approach. The aim of this paper is to briefly overview paper parks problem regarding MPAs, to emphasize the causes of the phenomenon as well as to address the possible solutions of the problem, as highlighted in reports and scientific literature.

In the process of MPAs establishment, human dimension plays important role, since social, economic, and institutional factors significantly affect MPAs effectiveness. According to Pieraccini et al. (2017), key obstacles limiting conservation effectiveness of MPA include inappropriate planning, poor governance, low enforcement level, few socio-economic incentives for compliance, conflicts among stakeholder groups and little community involvement in the management. There are many examples of paper parks in the literature, and the lack of effective surveillance of MPAs is considered as the greatest obstacle inhibiting success of MPAs. MPAs will be effective if surveillance and enforcement mechanisms are strong. According to Ferse et al (2010), the poor performance of MPAs can be result of failure to include effectively local communities in the design and implementation of relevant measures and aspects of community-based management should be incorporated into a hybridform of management upon existing local management practices.

The IUCN has recognized good governance, sound design and planning, as well as effective management as basic criteria for the global standard of best practice for area-based conservation and has set the first global standard of best practice for area-based conservation - *The IUCN Green List of Protected and Conserved Areas*. In a document *The World Wildlife Fund (WWF) 2017 Report Preventing paper parks: How to make the EU nature laws work*, it is highlighted that European Union protected areas were at risk due to lack of proper implementation of EU laws by member states and the Commission legal actions. WWF 2019 Report *Protecting our ocean. Europe's challenges to meet the 2020 deadlines* assesses that 12.4 % of the EU marine area is designated for protection but only 1.8 % of is covered by

MPAs with management plans and far less than 1.8 % is under effective management and monitoring. The WWF Reports demonstrates the importance of management plans as well as the importance of involving all stakeholders in management plan developing process. 2020 report *Unmanaged = Unprotected: Europe's marine paper parks* reveals the current network of European MPAs is not well-managed and not restrictive enough to limit increasing pressures mostly due to a race to MPA designation to meet European and international targets, which has sacrificed quality for quantity. The analyses shows that about 80 % of plans were incomplete and had often been seriously delayed. Most of the assessed plans were weak due to a lack of deadlines for implementing measures, a failure to manage specific features for which sites were designated; a failure to address major threats and the absence of provisions for surveillance and monitoring. Although, management plan is critical element of MPA, the existence of management plan does not guarantee effective management. Detailed assessments including stakeholder user surveys are required in order to estimate if MPA is effectively managed. Without effective management, designated MPAs remain mere paper parks that provide little to no real protection of species or habitats and creates a false impression of achievement.

Introduction – the importance of the oceans and MPAs

Ocean covers more than 72 % of the earth's surface and drives global systems that make the Earth habitable for humankind [1]. The ocean provides food, jobs, and recreation for population [2] and careful ocean management is a key feature of a sustainable future [1]. According to [3] the ocean economy contributes to global value added in the order of 1.5 trillion US$ annually and it could more than double its economic contribution to GDP equivalent until 2030.

Marine Protected Areas (MPAs) are a key instrument in protecting the ocean and they have to be effectively managed in order to reduce overfishing, marine pollution and ocean acidification [1]. The International Union for Conservation of Nature (IUCN) defines protected area as: *A clearly defined geographical space, recognized, dedicated, and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values* [4].

According to IUCN (IUCN-WCPA, 2018), MPAs *are parts of intertidal or subtidal environments, together with their overlying waters, flora and fauna and other features, that have been reserved and protected by law or other effective means*. According to Briggs et al. (2018), the term MPA reflects a spectrum of management objectives from delivering sustainable exploitation to protecting biodiversity or sites of scientific and/or cultural interest [5]. MPAs can be classified according to:

• Their Main Aim: MPAs vs Other Effective Area-Based Conservation Measures (OEABCMs): only sites whose primary declared aim is biodiversity conservation can be deemed MPAs. [4]
• Management Objectives: The IUCN established six protected area categories according to their main management objectives: Category Ia: Strict nature reserve; Category Ib: Wilderness area; Category II: National park; Category III: Natural monument or feature; Category IV: Habitat/species management area; Category V: Protected landscape/seascape; Category VI: Protected area with sustainable use of natural resources. [6]

- Their Legal Background: MPAs may be statutorily designated or established through voluntary agreements by stakeholders: voluntary MPAs.

As defined by the Guidelines for applying the IUCN Protected Area Management Categories to Marine Protected Areas [7], essential MPAs characteristics should be:

- conservation focused with nature as the priority;
- defined goals and objectives which reflect these conservation values;
- suitable size, location, and design that deliver the conservation values;
- defined and fairly agreed boundary;
- management plan or equivalent, which addresses the needs for conservation of the MPAs major values, and achievement of its social and economic goals and objectives;
- resources and capacity to effectively implement.

According to UN World Database on Protected Areas more than 15000 MPAs protect more than 27 million square kilometres of ocean (7.68 %) [8] while IUCN recommended that at least 30 % of the ocean should be protected effectively by 2030 [9].

The UN Sustainable Development Goal 14 and Aichi Target 11 under the Strategic Plan for Biodiversity 2011–2020 of the UN Convention on Biological Diversity highlighted the need for networks of effective MPAs [7].

The *Protocol concerning specially protected areas and biological diversity in the Mediterranean* (*SPA/BD Protocol,* 1995) [10] *stresses the importance of protecting and improving the state of the Mediterranean natural and cultural heritage, in particular through the establishment of specially protected areas and also by the protection and conservation of threatened species.* In Annex I of *SPA/BD Protocol* common criteria for the choice of protected marine and coastal areas that could be included in the Specially Protected Areas of Mediterranean Importance (SPAMI) list are given.

The *EU Biodiversity strategy for 2030* (COM (2020) 380 final) [11] states that improving and widening network of protected areas is neccessary in order to put biodiversity on the path to recovery by 2030. The Annex of the *EU Biodiversity strategy for 2030* presents action plan that will be taken forward in line with the better regulation principles, including evaluations and impact assessments as appropriate.

Many MPAs exist on maps but offer little real protection. For some countries, it is estimated that majority of MPAs exist primarily on paper (80 % - 90 %) [12]. In the report *Conversion of paper parks to effective management: developing a target*, paper park is defined as: *A legally established protected area where experts believe current protection activities are insufficient to halt degradation* [13]. There are many examples of paper parks (*i.e. designated protected areas that are not ensuring a high level of protection on the ground*) in the literature [14].

Establishing of MPAs requires long-term political and financial commitments that go far beyond simply declaring new parks [15], as well as their usefulness depends upon a number of ecological, management, and political factors [16]. Understanding and explaining the ineffectiveness of MPAs is a difficult task due to the complexity of MPAs social-ecological systems that require a multidisciplinary study approach [14]. The aim of this paper is to briefly overview paper parks problem regarding MPAs, to emphasize the causes of the phenomenon as well as to address the possible solutions of the problem, as highlighted in reports and scientific literature.

Results and discussion - the management of MPAs and problem of paper parks

According to Dudley (2008), protected areas have a wide range of management aims and are governed by many different stakeholders [6]. MPAs are more easily created and managed by governments in national waters while in Areas Beyond National Jurisdiction (ABNJ) it is more difficult to create MPAs due to the complex legal [8].

The [17] and the Convention on Biodiversity (CBD) recognize four broad governance types for protected areas:

- Type A: Governance by government (at various levels);
- Type B: Shared governance by diverse rights holders and stakeholders together;
- Type C: Governance by private entities (often land owners);
- Type D: Governance by indigenous peoples and/or local communities (at times referred to as ICCAs or territories of life).

IUCN principles of good governance for protected areas includes:

- Legitimacy and voice;
- Direction;
- Performance;
- Accountability;
- Fairness and rights [18].

In order to improve governance of protected areas or a specific site, the IUCN and CBD have published *Guidelines for assessing, evaluating and planning for action* - an analysis of the historical, socio-cultural, institutional and legal contexts, a spatial analysis of governance and the status of conservation of nature, including an assessment of biological, ecological and cultural values and their potential association with governance diversity, quality and vitality [19].

In a paper *Recommendations to IUCN to Improve Marine Protected Area Classification and Reporting*, Briggs et al. (2018) evaluated global targets and MPA definitions, highlighted key recommendations for improving the application of the IUCN categories for MPAs together with improved reporting standards. The authors stated that policy makers should favour highly and strongly protected MPAs as the most effective means of achieving global conservation targets. According to Briggs et al. (2018), levels of protection and biological benefits of MPAs are difficult to determine due to broad definitions of MPA and generalized progress reports and that strengthening the IUCN Protected Areas Categories and improving reporting standards is an essential [5].

According to [20], it is vital to have in depth knowledge of the area but also to have the support of the public and established techniques for surveillance and monitoring of compliance.

Oregon State University, IUCN World Commission on Protected Areas, Marine Conservation Institute, National Geographic Society, and UNEP World Conservation Monitoring Centre published a science-based framework to categorize, plan and track MPAs: *The MPA Guide* [21]. There are wide-ranging types of MPAs with various goals and expectations according to Stage of Establishment (proposed/committed, designated/MPA exists on paper, implemented and actively managed, with ongoing monitoring and adaptive management), Level of Protection (fully protected, highly protected, lightly protected, and

minimally protected), Enabling Conditions and Outcomes. *The MPA Guide* stresses that not all MPAs are equal for conservation or social outcomes and that the likely outcomes of an MPA depend directly on stage, level, and conditions to succeed [21].

In the process of MPAs establishment, human dimension plays important role, since social, economic, and institutional factors significantly affect MPAs effectiveness [22]. Bruner et al. (2004) [15] state that while funding is only one of several basic needs for creating functional protected-area systems, inadequate financial support plays a central role in the loss and degradation of important natural resources, as it limits both the management effectiveness of established protected areas and the coverage of protected-area systems. Rife et al. (2013) [23] found that funding for management was not the limiting factor in MPA efficacy, although funding for enforcement might be deficient.

According to Pieraccini et al. (2017), key obstacles limiting conservation effectiveness of MPA include inappropriate planning, poor governance, low enforcement level, few socio-economic incentives for compliance, conflicts among stakeholder groups and little community involvement in the management [14]. The socio-legal studies of MPAs ineffectiveness are very important and they can provide the insight into non-compliance motivations not only of regulatees but also of regulators, to outline a number of inter-linked causes leading to non-compliance and to provide policy recommendations [14].

There are many examples of paper parks in the literature, and the lack of effective surveillance of MPAs is considered as the greatest obstacle inhibiting success of MPAs [14, 24, 25]. MPAs will be effective if surveillance and enforcement mechanisms are strong, because actors comply with the management rules due to their fear of subsequent sanctions, especially if the amount of the penalty outweighs the benefits of non-compliance [11, 26]. According to Ferse et al (2010) [26], the poor performance of MPAs can be result of failure to effectively include local communities in the design and implementation of relevant measures and aspects of community-based management should be incorporated into a hybridform of management upon existing local management practices. Baldwin and Black (2008) [27] point out that more external surveillance and enforcement will not raise environmental knowledge, but will increase levels of mistrust between the actors. Therefore, efforts should be directed towards the building of trust, increasing environmental knowledge and communication between actors (*Really Responsive Regulation*) [14]

The IUCN has recognized good governance, sound design and planning, as well as effective management as basic criteria for the global standard of best practice for area-based conservation. IUCN has set the first global standard of best practice for area-based conservation (national parks, natural World Heritage sites, community-conserved areas, nature reserves…) - *The IUCN Green List of Protected and Conserved Areas* [28]. The Standard has recognized 59 well-managed and well-governed protected and conserved areas in 16 countries. According to the Standard, the time from application to certification depends on the management quality of the site at the time of application.

The *World Wildlife Fund (WWF) Report Preventing paper parks: How to make the EU nature laws work* [29] states that European Union protected areas are at risk due to lack of proper implementation of EU laws by member states and legal actions started by the European Commission. The WWF Report encourages Member States and the Commission to complete the designation of marine Natura 2000 sites, develop conservation measures and management plans for all Natura 2000 sites, increase investment and strengthen enforcement. Member States should ensure that the designation and management of Natura 2000 sites is

transparent and science-based process that involves local stakeholders. Member States should make additional efforts to define and implement conservation measures, if the Natura 2000 network consists of paper parks. The case studies included in *WWF Report* demonstrate the importance of good management plans based on well-defined conservation objectives and highlights the importance of involving landowners, resource users and other key stakeholders in the process of management plans developing. The WWF Report highlights the importance of participation of a broad range of stakeholders for successful management and societal support for Natura 2000 sites as well as the importance of raising public awareness. [29]

WWF's 2019 Report *Protecting our ocean. Europe's challenges to meet the 2020 deadlines* [30] assesses the spatial coverage of all designated MPAs, MPAs with a management plan and effectively managed MPAs (are areas that have been designated, have an implemented management plan and are carrying out actions for conservation and/or active nature restoration that results in actual protection). It reports that 12.4 % of the EU marine area is designated for protection but only 1.8 % of is covered by MPAs with management plans and far less than 1.8 % is under effective management and monitoring. 11 out of 23 marine EU Member States have not reported any management plans for their MPAs and eight Member States have management plans for less than 10 % of their marine area (more data may be available within individual Member State databases). In addition to the lack of protection currently provided, EU MPAs fail to function together as a network. [30]

WWF's 2019 Report states that in order to provide effective protection, MPAs must have comprehensive management plans based on the IUCN model which addresses details ranging from legislative authority, site description, its value to general and specific conservation objectives, existing uses, regulation of human activities, and monitoring of progress towards objectives and enforcement [31]. Although, management plan is critical element of MPA, the existence of management plan does not guarantee effective management. Detailed assessments including stakeholder user surveys are required in order to estimate if MPA is effectively managed [32].

Besides that, WWF recommends that EU Member States commit to the goal of reaching at least 30 % effectively managed MPAs by 2030 that will function together as network, as well as to increase transparency of the protection of MPAs by ensuring timely and accurate reporting. Without urgent actions to enforce and implement effective ocean protection, nearly all EU MPAs stand at risk of remaining protected on paper, but not in practice [30].

2020 report *Unmanaged = Unprotected: Europe's marine paper parks* [33] reveals that only 0.5 % of European seas are protected within real MPAs. The current network of European MPAs is not well-managed and not restrictive enough to limit increasing pressures mostly due to a race to MPA designation to meet European and international targets, which has sacrificed quality for quantity. The analyses shows that management plans were reported to exist for only 47 % of the 43 sites assessed according to official information provided by countries to the European Commission. About 80 % of plans were incomplete and had often been seriously delayed [33]. Most of the assessed plans were weak due to a lack of deadlines for implementing measures, a failure to manage specific features for which sites were designated; a failure to address major threats and the absence of provisions for surveillance and monitoring. The report urges the European Commission, EU Member States, and the UK to significantly step-up efforts to manage their MPAs, deliver proper protection and restrict the most impacting human activities. The European Commission should improve the standardised reporting of management measures by EU Member States.

Without effective management, designated MPAs remain mere paper parks that provide little to no real protection of species or habitats and creates a false impression of achievement [34].

Conclusion

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