A9- Creation of a proposal for specific measures to minimise the presence of marine litter in Marine Protected Areas adapted to the different stakeholders (fishing, agriculture, tourism, etc).

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1. Introduction

This report is derived from the project "Research and citizen science to improve the management of the presence of plastics in Marine Protected Areas (SOCIPLAS)" and will be used to achieve the specific objective "To inform and advise on management measures for the minimisation of marine litter pollution in Marine Protected Areas (MPAs)" and is based on the data from action 8: "Coordination meetings and presentation of the results obtained with different stakeholders to integrate their perspective in the development of measures to minimise the presence of marine litter in MPAs" as well as the ideas provided by those attending the meeting held on 31 January 2022 on the occasion of the closure of the project.

The participants in this meeting came from different institutions as shown below:

- José Luis Nuin Susín: Jefe de Servicio de Medio Ambiente, Diputación de Alicante.
- Eva Espinar Ruiz: Vicerrectora de Igualdad, Inclusión y Responsabilidad Social de la Universidad de Alicante.
- María Plaza Arroyo: Investigadora Química, Centro de Estudios de Puertos y Costas, Centro de Estudios y Experimentación de Obras Públicas (CEDEX)
- Daniel Rolleri: director de Ambiente Europeo.
- Estíbaliz López-Samaniego: dirección de proyectos, Vertidos Cero.
- María Ballesteros Rivas: Responsable de Medioambiente y Educación, Surfrider España.
- Giorgio Anfuso: profesor titular, Universidad de Cádiz

The following proposals, based on the information gathered, are disaggregated according to the sector they are aimed at.

2. Proposals to minimise the presence of marine litter in Marine Protected Areas

2.1. Measures aimed at companies, waste and environmental managers

SOCIPLAS has identified up to more than 10,000 items collected on a single beach. Of these, the ten most common items reported in SOCIPLAS from highest to lowest abundance were:

- cigarette butts,
- pieces of grass less than 2.5 cm in size,
- plastic bottle caps
- packaging wrappers,
- bottles,
- ropes,
- pieces of glass,
- straws,
- plastic bags,
- ear swabs.

In addition, a notable influence on waste input, such as large numbers of swabs and microplastics in the form of fibres, has been reported in areas close to areas influenced by a sewage treatment plant. Therefore, it would be necessary to implement new systems that allow the efficient disposal of these objects.

The large number of waste items identified in this project suggests that it is necessary to continue with the plan of measures to minimise the impact of descriptor 10 (marine litter) of the MITERD Marine Strategies in all aspects.

Based on the nature of the most frequent items identified, priority should be given to the prevention of marine litter from land-based sources and to awareness-raising and dissemination. Within these lines, it would be possible to:

- Continue to make progress in the creation of measures focused on extended producer responsibility as planned to be included in the new Waste Act. In this way, the Collective Extended Producer Responsibility Systems could be strengthened.

- Improve the waste collection system to increase the effectiveness of the minimisation measures already outlined in the MITERD Action Plan.

- Improve wastewater treatment management, especially in marine protected areas, in two main aspects:

1. Do not allow the discharge of any type of water without prior purification.

2. Implement systems to collect microplastics and prevent them from reaching the environment either through effluent discharge or in the form of sludge.

- Use citizen science databases in conjunction with Geographic Information Systems to estimate the vulnerability of species or habitats and areas of greatest accumulation to help prioritise clean-up actions in marine protected areas.

2.1. Beach users

In the SOCIPLAS project, beach users have been identified as an important source of solid waste abandonment. Therefore, measures aimed at this group would be:

- Emphasise specific environmental education programmes focusing on the groups that are most at risk of producing waste in the environment (e.g. smokers, fishermen, etc.) and that are specific to each area, as the characteristics of the area attract different types of groups.

- Advance in the creation of action protocols to ensure the correct application of existing regulations, as well as informing and sanctioning people who dump waste into the environment.

- Work on cleaning beaches in areas further away from population centres, but which are frequented by users.

- Regulate the flow of tourists in marine protected areas.

2.2. Stakeholders

In line with the Sustainable Development Goal 17 (partnerships) proposed by the United Nations for 2030, it would be advisable to encourage communication between entities working to reduce the impact of waste in protected areas at national and international level in order to promote collaboration, create synergies and avoid overlapping efforts. This could be useful to learn from other experiences or to find allies when demanding more ambitious measures from the European Commission.

On the other hand, it would be interesting to promote citizen stewardship programmes for marine protected areas (or their surrounding areas) to encourage the greatest possible number of local agents to become involved in the protection of these areas against this major environmental threat.