

ASSESSING SOCIAL OUTCOMES OF MARINE PROTECTED AREAS IN SOUTH EUROPE

RESULTS FROM FOUR MARINE PROTECTED AREAS IN
GREECE, FRANCE, SPAIN AND ITALY

2024



FULL REPORT

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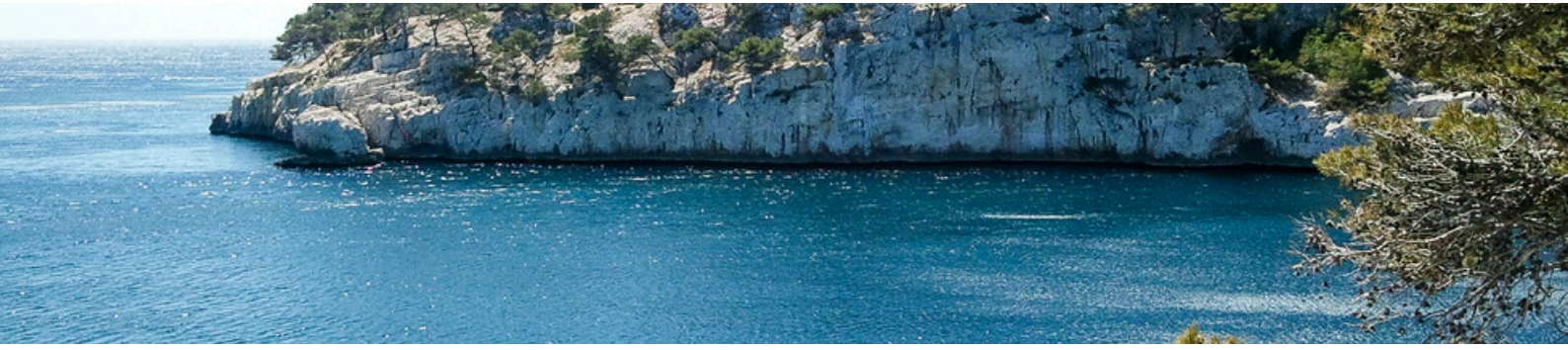


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INTRODUCTION



Marine Protected Areas (MPAs) in Southern Europe are essential conservation tools aimed at preserving the region's rich and diverse marine ecosystems. MPAs in countries like Spain, Italy, Greece, and France protect critical species and habitats, ensuring the sustainability of marine resources. They serve as sanctuaries for endangered species such as the Mediterranean monk seal, the loggerhead sea turtle, and various species of cetaceans, providing a refuge from the pressures of fishing, pollution, and other human activities.

The establishment of MPAs in Southern Europe has shown significant ecological benefits, including the restoration of fish populations and the recovery of degraded habitats. These protected areas often function as nursery grounds for many marine species, contributing to the replenishment of adjacent fishing areas through the spillover effect. This not only supports biodiversity but also benefits local fishing communities economically by ensuring sustainable fish stocks. Moreover, MPAs in Southern Europe play a crucial role in scientific research and environmental education. They provide living laboratories where scientists can study marine ecosystems and the impacts of climate change, invasive species, and human activities. Educational programs within these areas raise awareness among local communities and tourists about the importance of marine conservation.

Considering the important role of Marine PAs for local communities we explored the perceived social outcomes of four protected areas in France (Calanques National Park), Greece (Alonissos Marine National Park), Italy (Egadi) and Spain (Atlantic Islands of Galicia National Park). The social outcomes assessment was conducted as part of the project FIDELIO which had as a final aim to predict the change of social outcomes in European protected areas across time, taking into consideration spatial and temporal dimensions.

METHODS



To explore people's views on the social outcomes of the four marine PAs, we used the Social Impact Assessment Tool for Protected Areas (SOCIAT) which has been developed by researchers at the University of Warwick and the University of Cambridge in collaboration with several park authorities across Europe. This consists of a structured questionnaire including several questions covering a variety of topics. Further information on SOCIAT can be found here: www.warwick.ac.uk/sociat.

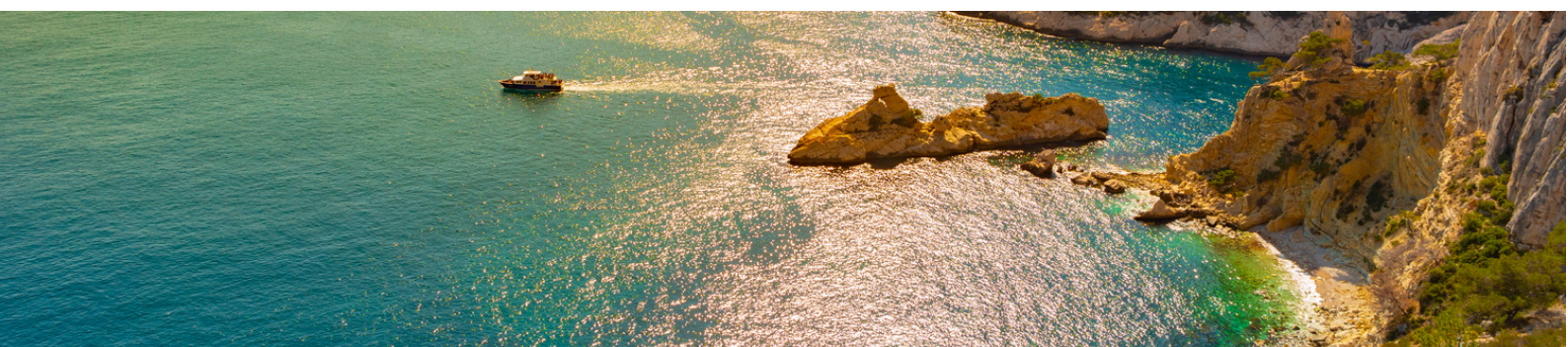
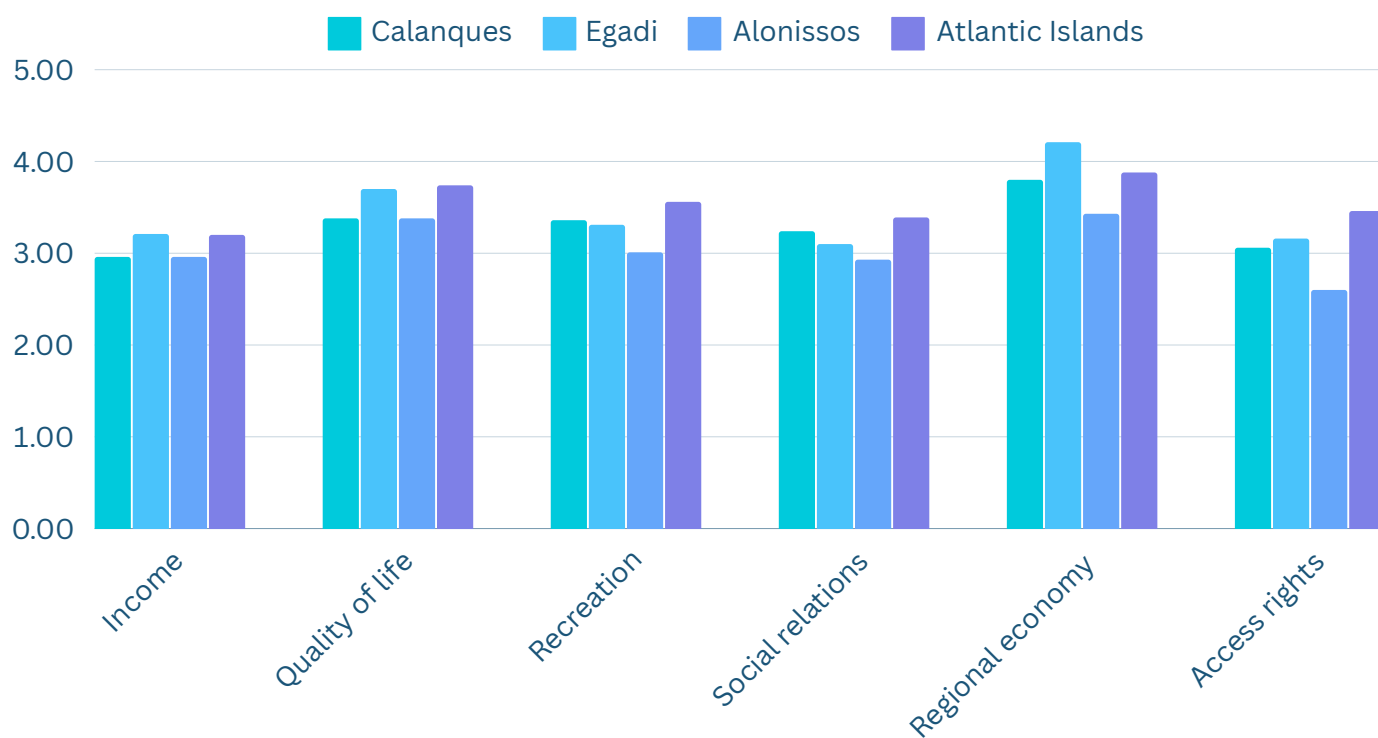
The questionnaire was distributed in the Summer of 2021 in local residents living near or within the boundaries of the 4 marine protected areas. The questionnaires were distributed across all locations by experienced researchers. The questionnaire included a number of questions capturing social outcomes of protected areas, trust in institutions, environmental and social values and also the level of support for the protected areas. The full questionnaire is available in different languages in the page of the FIDELIO project: www.warwick.ac.uk/fidelio/tools.

In total 1161 responses were collected: 634 from Calanques NP, 162 from Alonissos MPA, 64 from Egadi Islands protected area and 301 from Atlantic Islands of Galicia in Spain. In all locations a larger number of questionnaires were collected but only those respondents who stated that they are permanent residents or visit regularly the area (e.g. second home owners) were retained in the final dataset. 44.7% of the sample were male respondents and 55.3% female. 8.6% had completed primary education, 36.5% secondary and 54.8% higher education. The sample had a good age distribution with 7.2% being 18-25, 17.7% 26-35, 29.7% 36-45, 23.1% 46-55, 12.9% 56-65, 6.5% 66-75 and 4% being over 75.

RESULTS

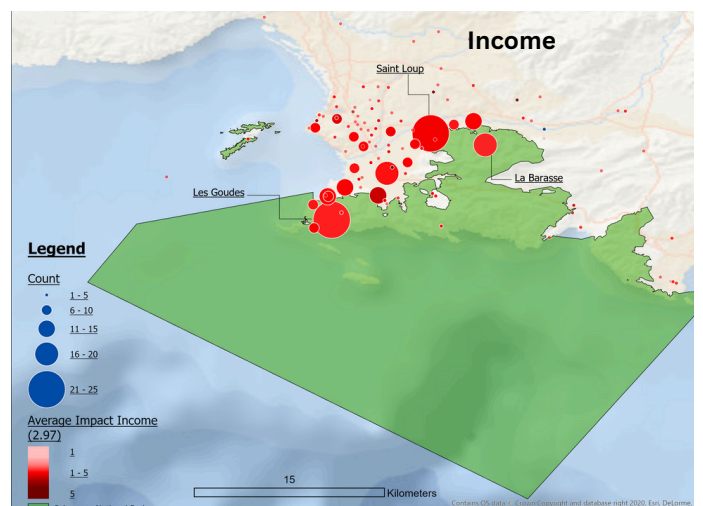
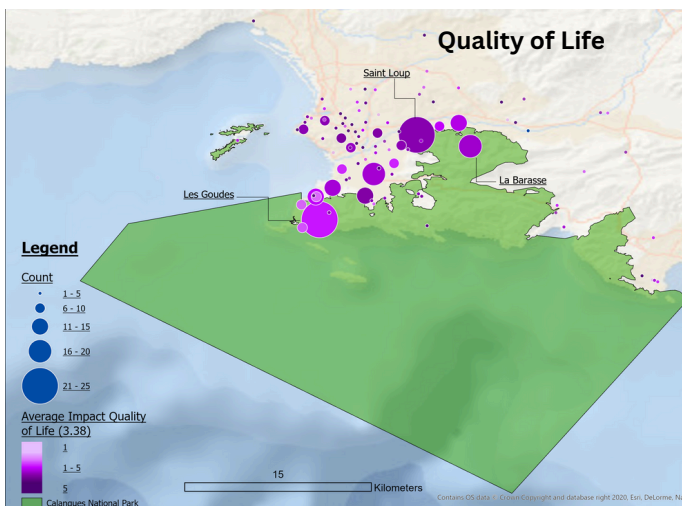
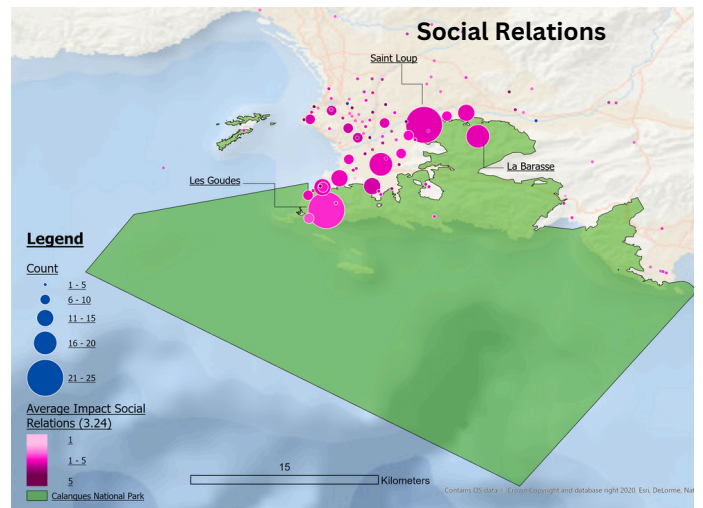
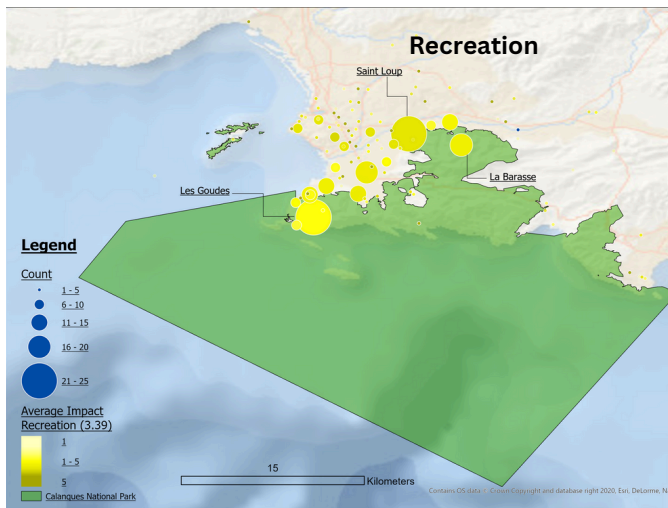
SOCIAL OUTCOMES

Social outcomes were measured for six aspects across all areas on a five point Likert scale with higher values revealing higher benefits (1: negative impact, 3: no impact, 5: maximum impact). The impact of the protected areas on the regional economy is significant across all sites. However, the impact on personal income is considered as less important and in general it is one of the least important benefits according to respondents. All protected areas have significant benefits for locals in terms of their quality of life and recreation. Access rights was considered a negative outcome in Alonissos marine national park. This was less of an issue for Atlantic islands.

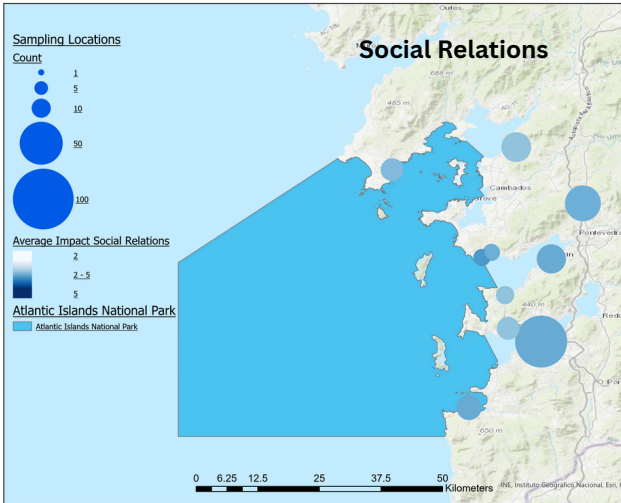
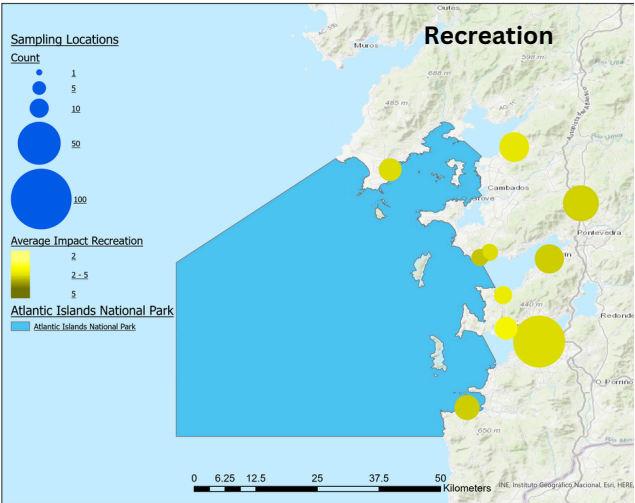
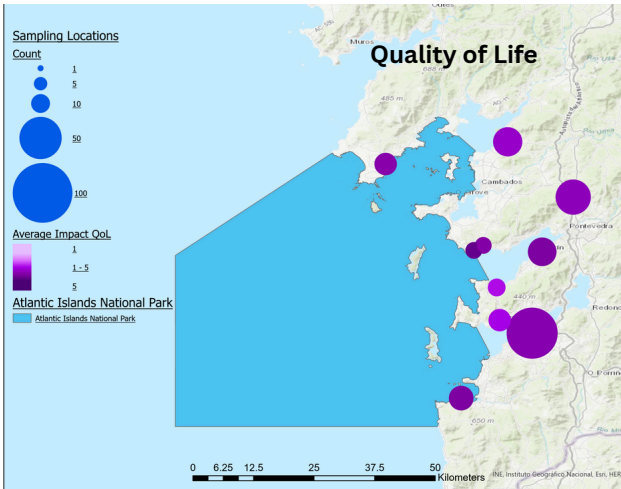
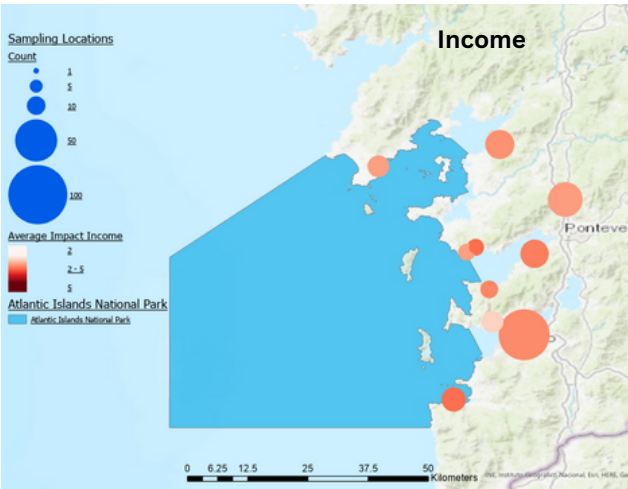


DISTRIBUTION OF SOCIAL OUTCOMES: CALANQUES

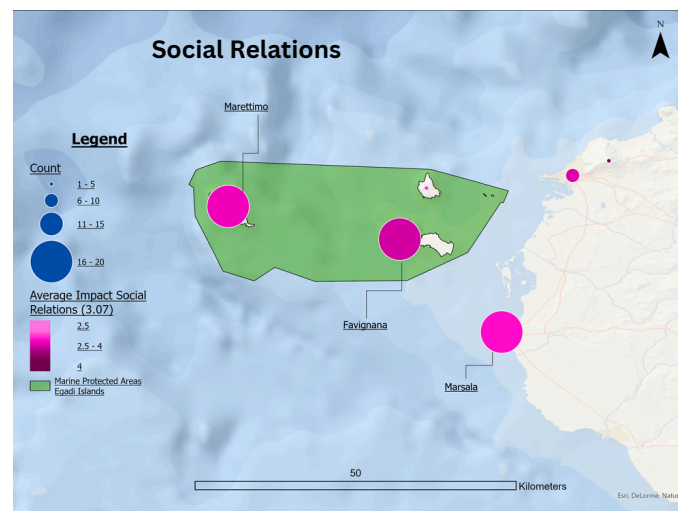
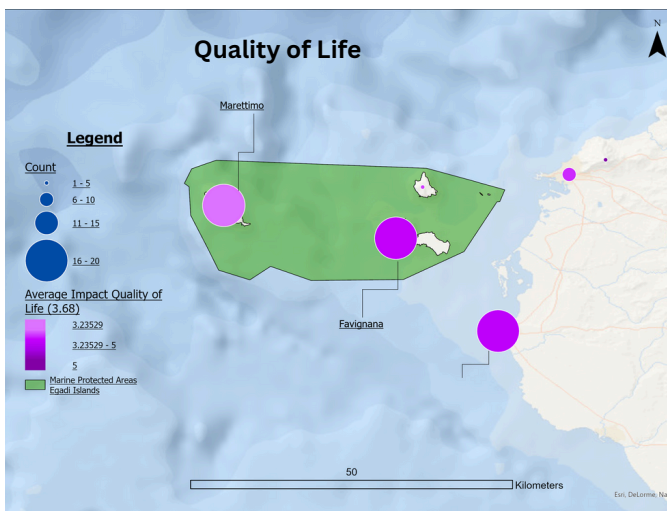
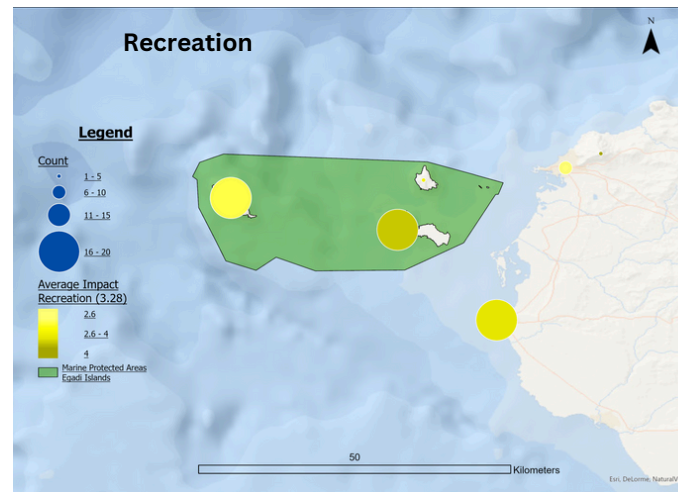
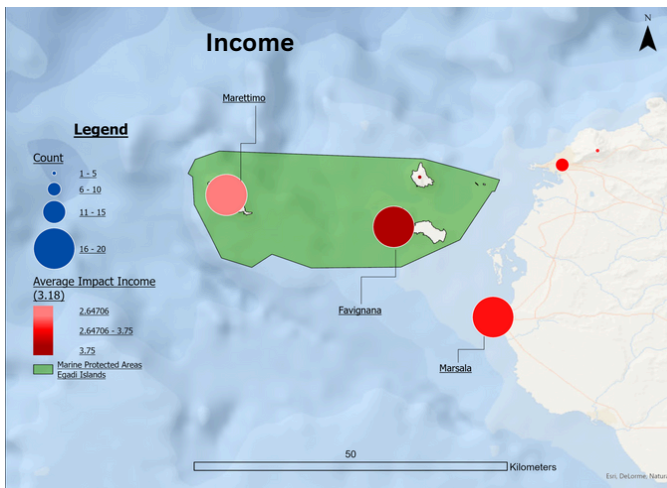
The spatial distribution of four social outcomes was also captured through dedicated spatial analysis and a detailed mapping process. These maps reveal differences between communities on how they perceived social impacts. The maps presented in the next pages reveal the distribution of social impacts across different communities in each site (average score with darker colours revealing higher perceived benefit and larger circle revealing larger sample size). Maps have been prepared for impact on personal income, recreation, social relations and quality of life.



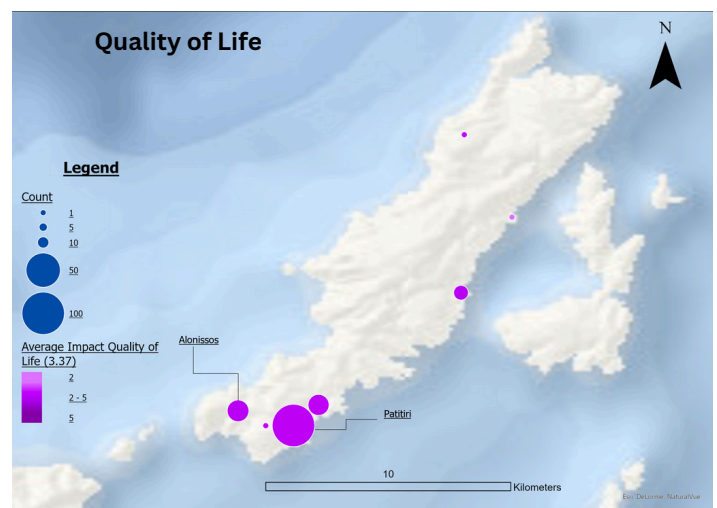
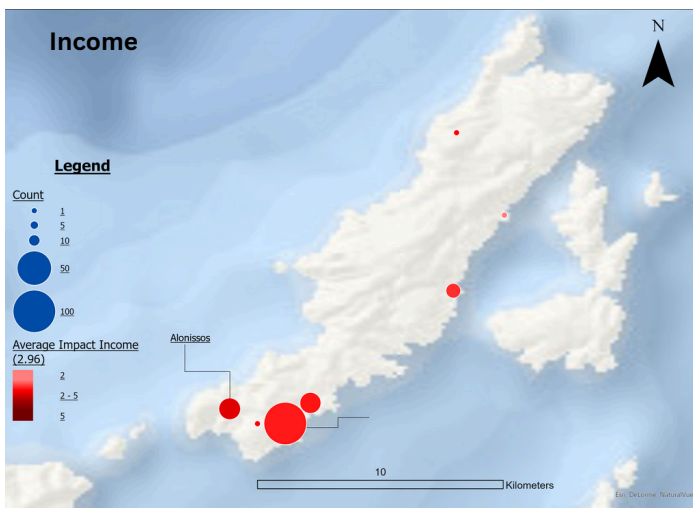
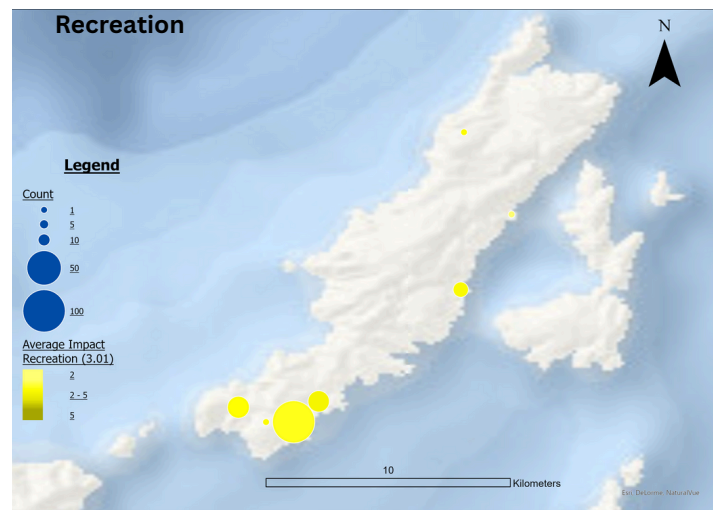
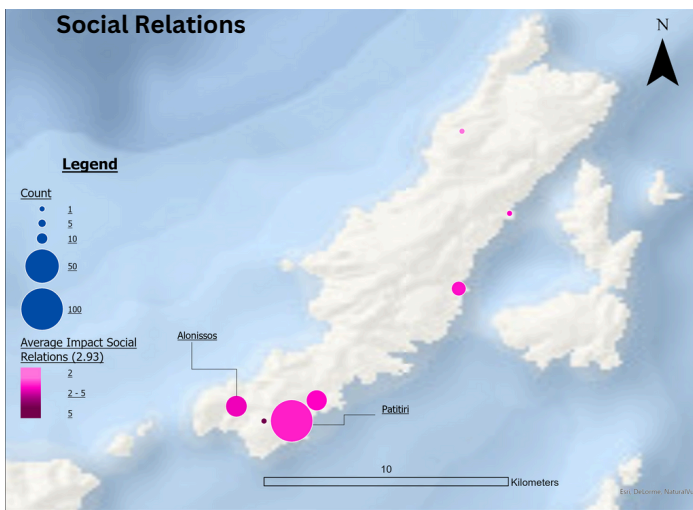
DISTRIBUTION OF SOCIAL OUTCOMES: ATLANTIC ISLANDS



DISTRIBUTION OF SOCIAL OUTCOMES: EGADI ISLANDS

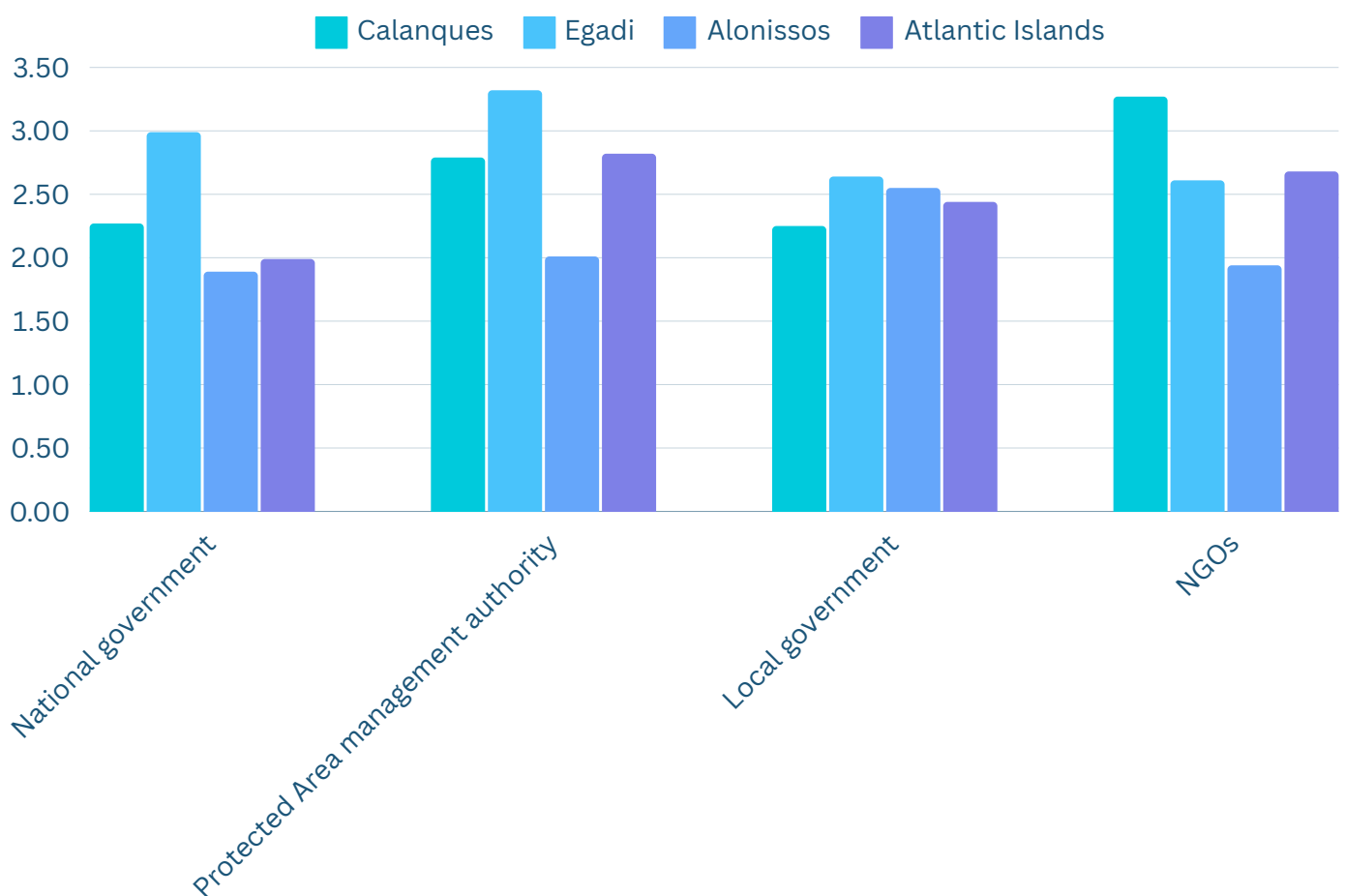


DISTRIBUTION OF SOCIAL OUTCOMES: ALONISSOS



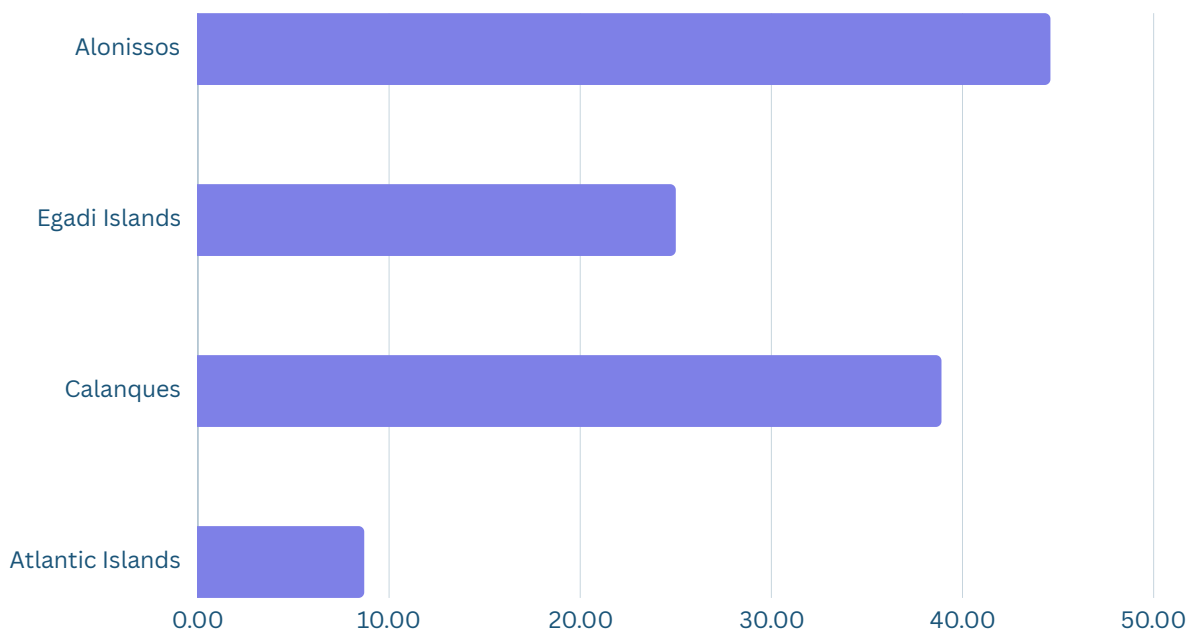
TRUST IN INSTITUTIONS

We measured the level of trust for four different institutions on a 5 point Likert scale with 1 representing lower levels of trust, 3 neutral position and 5 the higher level of trust. Level of trust for national governments was low across all sites with higher trust noted in Egadi island (closer to the neutral score of 3). It is encouraging that trust in the management authorities for the protected areas was high in most areas compared to other institutions. Only exception was Alonissos national park where the most trust institution was the local government. It is important to note that the four parks have a different level of involvement from these institutions. For example in Alonissos national park, NGOs have significant role in the establishment and management of the park and thus this may affect respondents views of specific institutions.

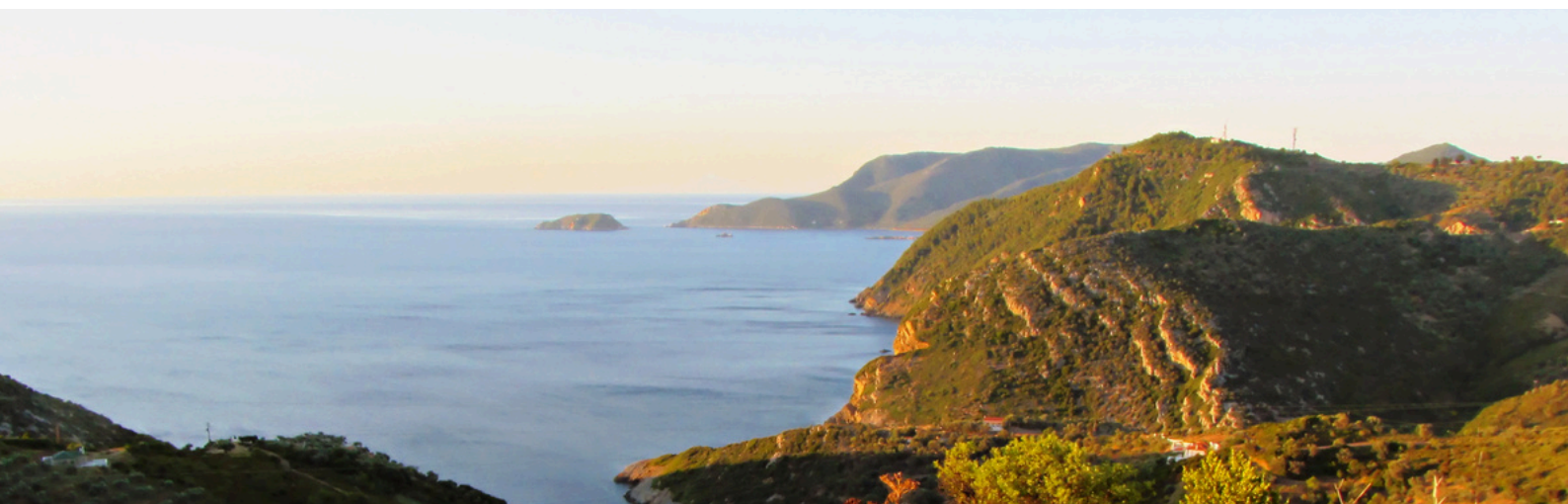


PUBLIC ENGAGEMENT & VOLUNTEERING

Respondents were also asked whether they have engaged in any activity supporting the protected area. This included for example litter picking, volunteer ranger or supporting with day to day needs of the protected area. Overall a high level of volunteerism was noted especially in Alonissos, Egadi islands and Calanques national park.

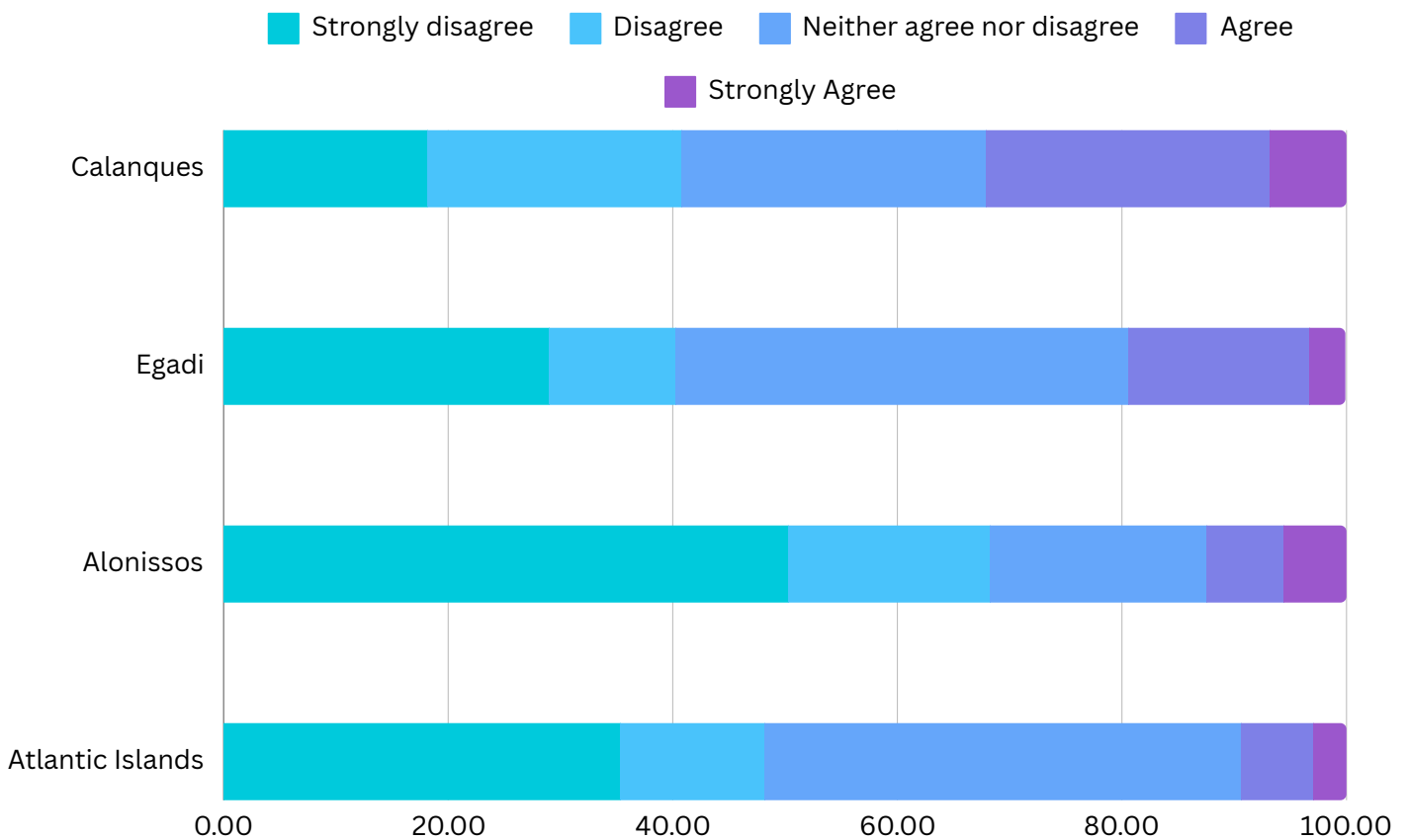


Percentage of positive answer when asked if they have participated in an activity (as a volunteer) supporting the protected area.



OPPORTUNITY AND RESOURCES TO SUPPORT THE PROTECTED AREA

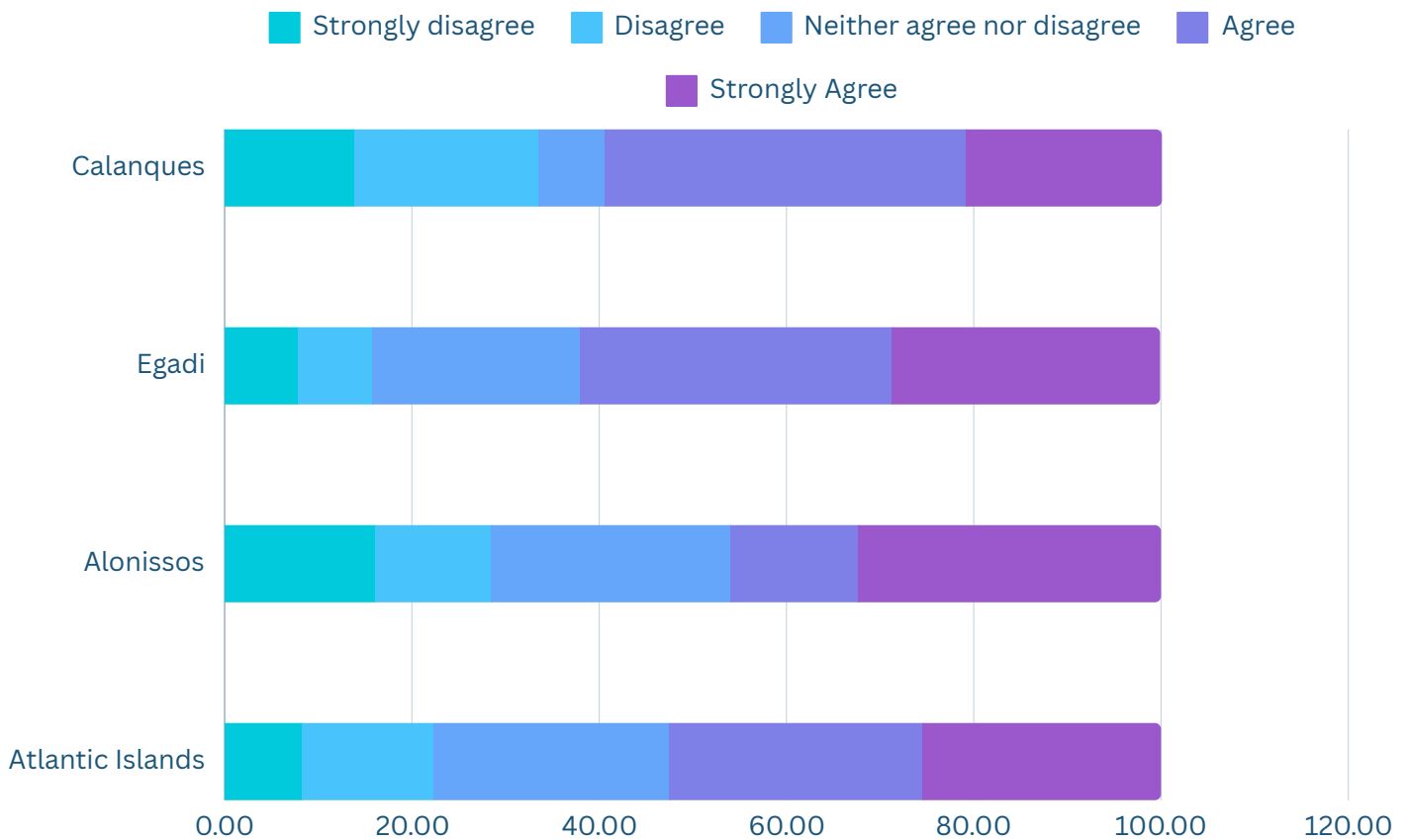
Respondents were asked whether they have enough time, money and opportunities to support the protected area (for example through volunteering opportunities). From the analysis it is evident that in all case studies these resources and opportunities are fairly limited. In Calanques approximately 30% of the sample stated that they strongly agree or agree with this statement. This percentage is lower in the other parks. In Alonissos the respective percentage is 12% and in Atlantic Islands 10%.



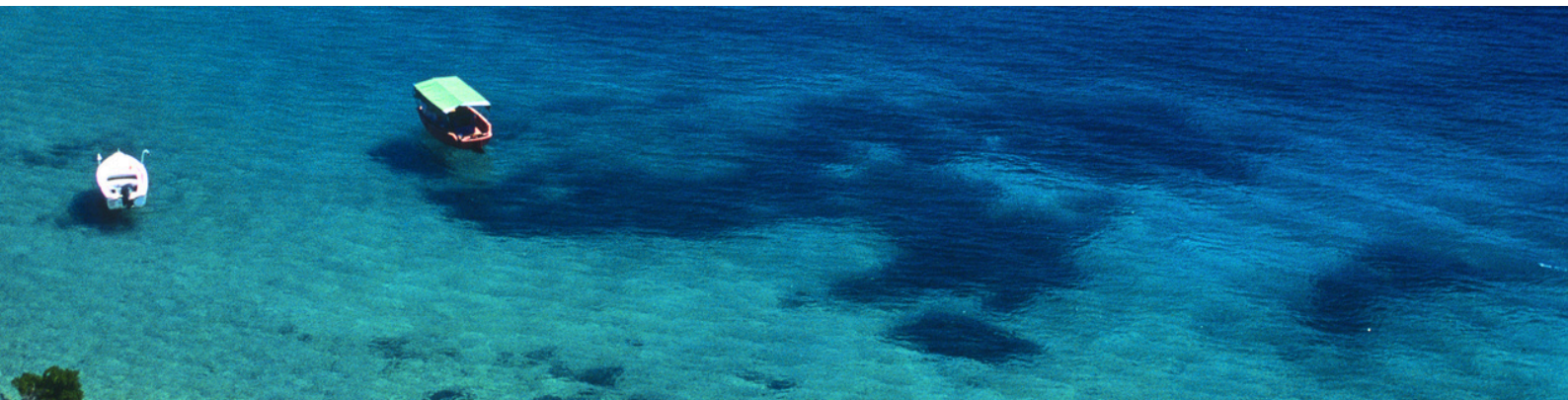
Level of agreement in the statement 'I have enough time, money and opportunities to support the protected area'

ENVIRONMENTAL BEHAVIOUR

Respondents were asked whether they find it easy to use the protected area in a responsible way. In Calanques and Egadi over 50% of the sample stated that they agree or strongly agree with this statement. In Alonissos the respective percentage was approximately 45%.



Level of agreement in the statement 'I find it easy to use the protected area in a responsible way'

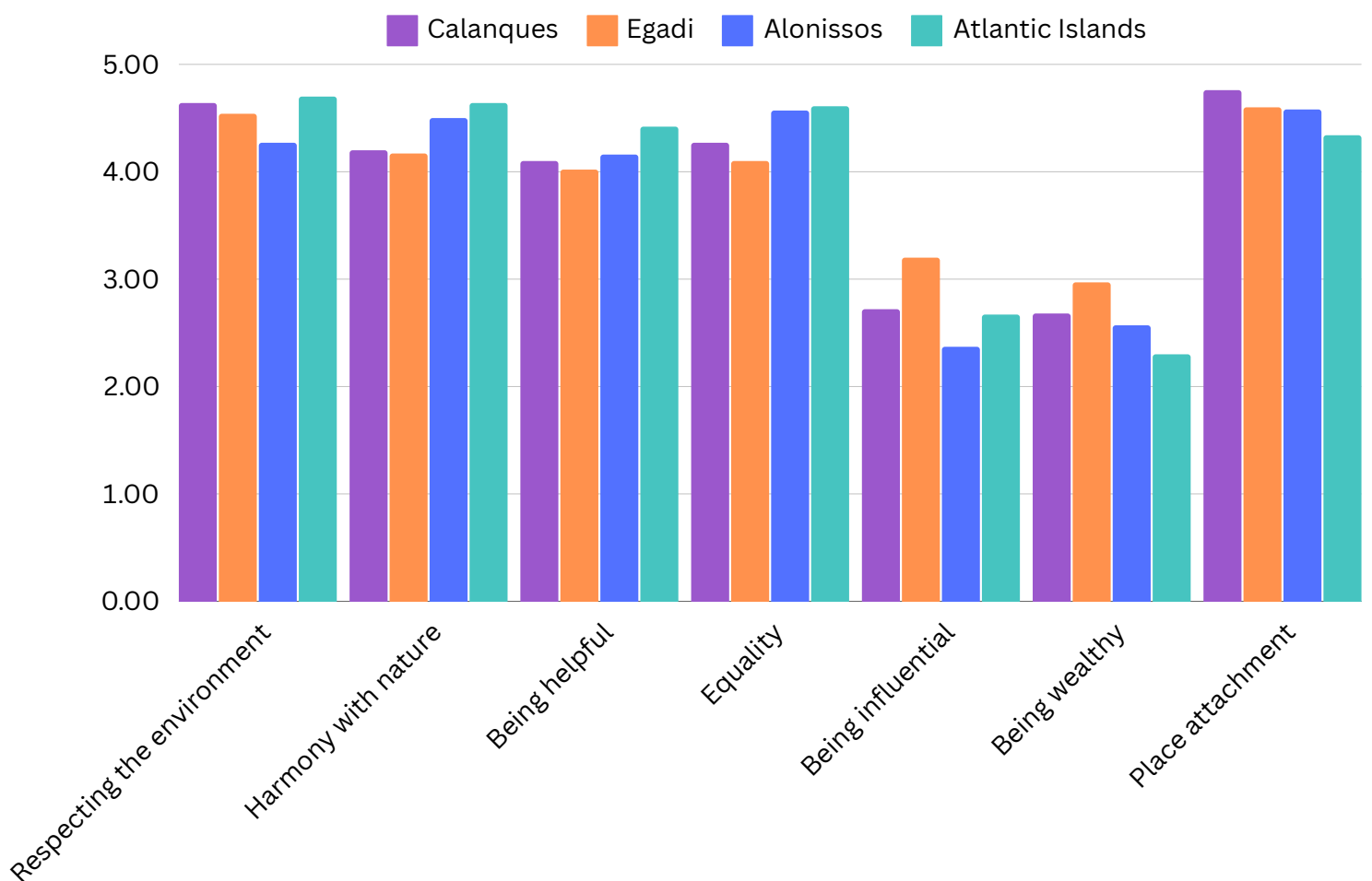


ENVIRONMENTAL & PLACE VALUES

A strong place attachment was noted across all sites

A set of questions explored environmental and place values of local communities. These questions were measured on a 5 point Likert Scale with highest values representing highest level of agreement. Strong environmental values were recorded in all areas with 'respecting the environment' and living in harmony with nature having an average score over 4 across all sites. High social values were also recorded across all areas with average scores being over 4 in terms of the importance of being helpful and equality. On the contrary values of being influential and wealthy were considered as less important in all sites.

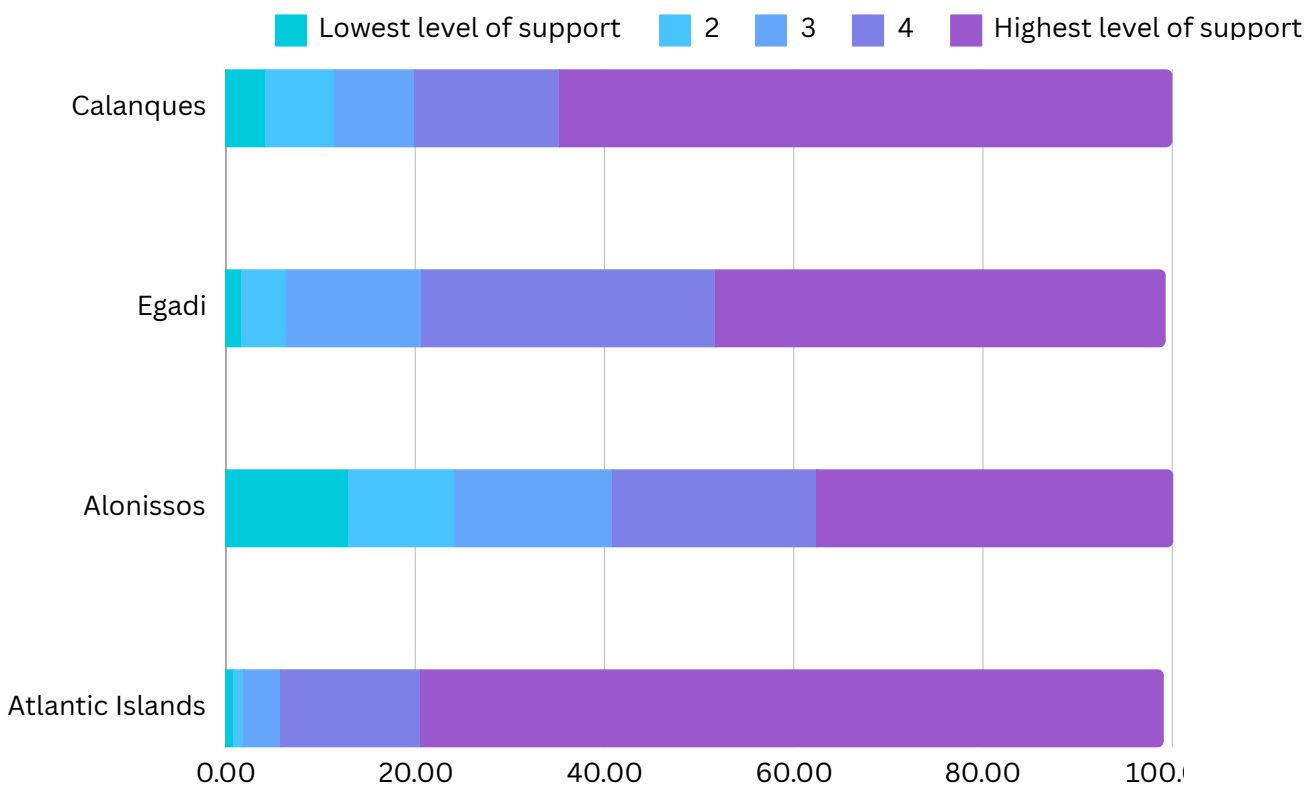
A very strong level of place attachment were also noted across all areas. In all areas respondents were asked to state their level of agreement/disagreement with the statement 'This areas means a lot to me'. In Calanques the average score in this question was 4.76 and similar higher scores were noted in all sites (Average scores over 4).



PUBLIC SUPPORT FOR THE MARINE PROTECTED AREAS

Respondents were asked how they rate the existence of the marine protected areas. This question was measured on a 5 point Likert scale with 1 representing the lowest level of support and 5 the higher level. 3 was considered a neutral position towards the protected area.

Overall the level of support was very high for all areas with the highest level of support noted for the Atlantic islands where approximately 90% of the sample were supportive of the park. High rates of support were also noted in the Calanques with 80% of the sample stating they are supportive. Lowest level of support were noted in Alonissos Marine National Park with approximately 60% of respondents stating a score over 3 out of 5.



Level of agreement in the statement 'I support the existence of the protected area'

DISCUSSION POINTS



In this study, we conducted surveys in four protected areas, including marine sites in Southern Europe. Our results show that all areas provide numerous benefits, including a significant positive impact on the regional economy, recreation, and quality of life. However, while MPAs have a substantial positive impact on the regional economy, their effect on personal income for local communities is less pronounced. Benefits in terms of quality of life and recreation are substantial across all sites, although access rights can be contentious in some cases. There is generally high public support for MPAs, with varying levels of enthusiasm across different regions. For instance, the Atlantic Islands of Galicia National Park enjoys a 90% support rate, while Alonissos Marine National Park has around 60% support. The level of trust in management authorities is relatively low, suggesting a need for improved governance and community involvement. Residents exhibit strong environmental values and a high degree of place attachment. Respect for the environment and living in harmony with nature are highly valued, while the importance placed on wealth and influence is minimal.

Our study also showed that social impacts are not distributed evenly across different locations within the same area. This is one of the first studies to explore this kind of spatial variation, and it would be useful to continue research in this direction. This would help identify areas that are benefiting the least from the protected area, understand the reasons behind this trend, and explore pathways to mitigate negative impacts.

Considering our findings, we recommend that surveys like this one are conducted consistently, taking into account aspects of social equality and the distribution of social impacts. This would help in several ways, including in the development of strategies to Support local economic Benefits, rolling out Volunteer programs fostering a sense of ownership and responsibility towards MPAs and strengthening positive social Relations to minimize social conflicts. These recommendations aim to enhance the social, economic, and ecological outcomes of MPAs, ensuring their sustainability and the continued support of local communities.

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