Effective governance of Protected Areas: an analysis of stakeholder's perspectives

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Abstract

Protected areas represent places of great importance for the conservation of environmental resources and biodiversity. However, divergent interests among different stakeholders can undermine the effectiveness of conservation goals. In literature, there is a lack of clear evidence on which governance approaches are more effective in governing PAs. In particular, there are no studies that actively involve key stakeholders, taking into account conflicting points of view and interests. This study aims to fill this gap, investigating the views on PAs of four main categories of stakeholders: biodiversity experts, tourism operators, agricultural entrepreneurs and local administrators. Our final goal is to identify the drivers and barriers to effective governance of PAs on environmental, economic, political and social levels. The Q methodology is applied, which is recommended to elicit views on environmental issues and policies in ecological economics research. Our results identified four main discourses, two of which (1 and 4) have a proactive attitude, identifying both ecological (Discourse 1) and economic (Discourse 2) benefits in their current management; the other two have a decidedly more critical vision, expressing disappointment above all on political issues (Discourse 2) and related to the agricultural economy (Discourse 3). The study highlights the need for an integrated approach to the political management of protected areas, involving strategic planning, multi-stakeholder cooperation and a long-term commitment to the conservation of the natural environment and biodiversity

Keywords: PAs; environmental economics; stakeholders' analysis; q-methodology; biodiversity

1. Introduction

Protected areas (PAs) represent places of great importance for the conservation of environmental resources and biodiversity (Haight and Hammill, 2020). These areas are special designations that aim to preserve and protect ecosystems and cultural heritages of ecological, scientific, and social value (Willemen et al., 2013; Liu et al., 2020). They can prevent species from going extinct by protecting their habitat from anthropogenic pressures such as land-use change and climate change (Geldmann et al., 2013). PAss can take many forms, such as national parks, nature reserves, marine PAss, regional parks and natural monuments (Law 394/91).

However, divergent interests among different stakeholders can undermine the effectiveness of conservation goals. Therefore, there are important issues that need to be considered to optimize its

governance (Gall and Rodwell, 2016; Mangi and Austen, 2008). In particular, urbanization and the exploitation of natural resources, deriving from intensive agriculture and industry, can cause biodiversity loss and pollution, compromising ecosystems within the PAs (Haight and Hammill, 2020). Anthropic activities often determine the ecosystem fragmentation which compromise the ecological connectivity between the different PAs (Coppola et al., 2020). This can hinder species movement, migration and genetic exchange, negatively affecting ecosystem resilience (Morandi et al., 2020). Additionally, PAs are subject to illegal activities such as unregulated hunting and fishing, illegal logging, and trafficking of protected species (Paiva et al., 2020; Phelps et al., 2016). Another key concern is represented by inadequate management, which may include a lack of funding, resources, and personnel to monitor and protect the area, as well as a lack of long-term planning and adequate participation of local communities (Niedziałkowski et al., 2018; Borrini, 1996). Local communities living in the vicinity of PAs should be actively involved in their management. Lack of meaningful community engagement can lead to a lack of awareness, understanding and support for area conservation. Furthermore, decisions made centrally without consulting local communities can lead to conflict and resistance (Walker et al., 2020; Abukari et al., 2020). Another issue is that PAss frequently become the focal point of tensions between environmental preservation and economic development. The presence of natural resources, such as valuable timber or mineral deposits, can lead to pressure to exploit these resources, jeopardizing the integrity of the PA (García-Frapolli et al., 2018). Poor management can favor decisions that favor short-term economic interests over long-term preservation (Gurney at al., 2014).

To address these problems, it is essential to adopt integrated approaches involving the participation of local communities, collaboration between different actors, long-term planning and the implementation of sustainable conservation and management measures.

The fundamental tenet of economic theory is that markets do not allocate lands for conservation purposes in an acceptable manner, which leads to the necessity of government involvement (Webster, 1998). The public good characteristics of biodiversity lead to inadequately valued services or benefits in markets, under-allocating areas for conservation reasons (Tisdell, 2007). Therefore, governmental policies can raise social welfare to levels that markets might not be able to achieve, for as by imposing land-use limits through PAs.

Previous studies have focused on the management and governance of PAs, analyzing management models, conservation policies and local community participation (Eagles et al., 2013; Valasiuk et al., 2023; Niedziałkowski et al., 2018; Nyaupane et al., 2022). Research has highlighted the importance of participatory and collaborative approaches in the management of PAs, to ensure the sustainability and effectiveness of conservation measures (Eklund and Cabeza, 2017; Nobel et al., 2023). However, there is a lack of clear evidence on which governance approaches are more effective in governing PAs to achieve these goals. In particular, there are no studies that actively involve key stakeholders, taking into account conflicting points of view and interests, despite the fact that PAs are often a socially controversial topic and on which stakeholders have strong opinions.

This study aims to fill this gap, investigating the views on PAs of four main categories of stakeholders: biodiversity experts, tourism operators, agricultural entrepreneurs and local administrators. Our final goal is to identify the drivers and barriers to effective governance of PAs on environmental, economic, political and social levels.

The Q methodology is applied, which is recommended to elicit views on environmental issues and policies in ecological economics research "in a way that is responsive to the attitudes held by the respondents, rather than the researchers, while still having a rigorous statistical basis for the extraction

of the discourses within the population" (Barry and Props, 1999). Furthermore, it can identify common and controversial issues and perspectives in the population, which is important because policies directed toward commonly shared concerns would be likely to enjoy social and political support, and be effective (ibid.).

2. Background: PAs and their governance in Italy

PAs in Italy has been developed over time reflecting the features of a country rich of natural and cultural heritage. Italy is known for its diverse landscapes, including national parks, regional parks, nature reserves, and other PAs, which play a crucial role in conserving biodiversity, preserving ecosystems, and promoting sustainable development. Historically, the establishment of PAs in Italy can be traced back to the late 19th century with the creation of the Gran Paradiso National Park in 1922, the first national park in the country (Piccioni, 2014). Since then, the network of PAs has expanded, and their governance has undergone significant transformations.

Currently, PAs in Italy cover a total of 64,429km^2 on land and 40,384km^2 at sea corresponding to a percentage of area covered by PAs of 21.4% of terrestrial area of Italy. Italy has a total of 3,512 PAs, comprising 875 sites designated under national laws and 2,637 recognized as Natura 2000 sites (Figure 1). Specifically, more than a half of the PAs in the terrestrial environment are designated exclusively as Natura 2000 sites. The rest consists mainly of Natura 2000 sites overlapping with national designations, with a smaller portion covered solely by nationally designated areas (10.7%) (MASE, 2023).

Figure 1 - Georeferencing of national PAs and Natura 2000 Network Sites
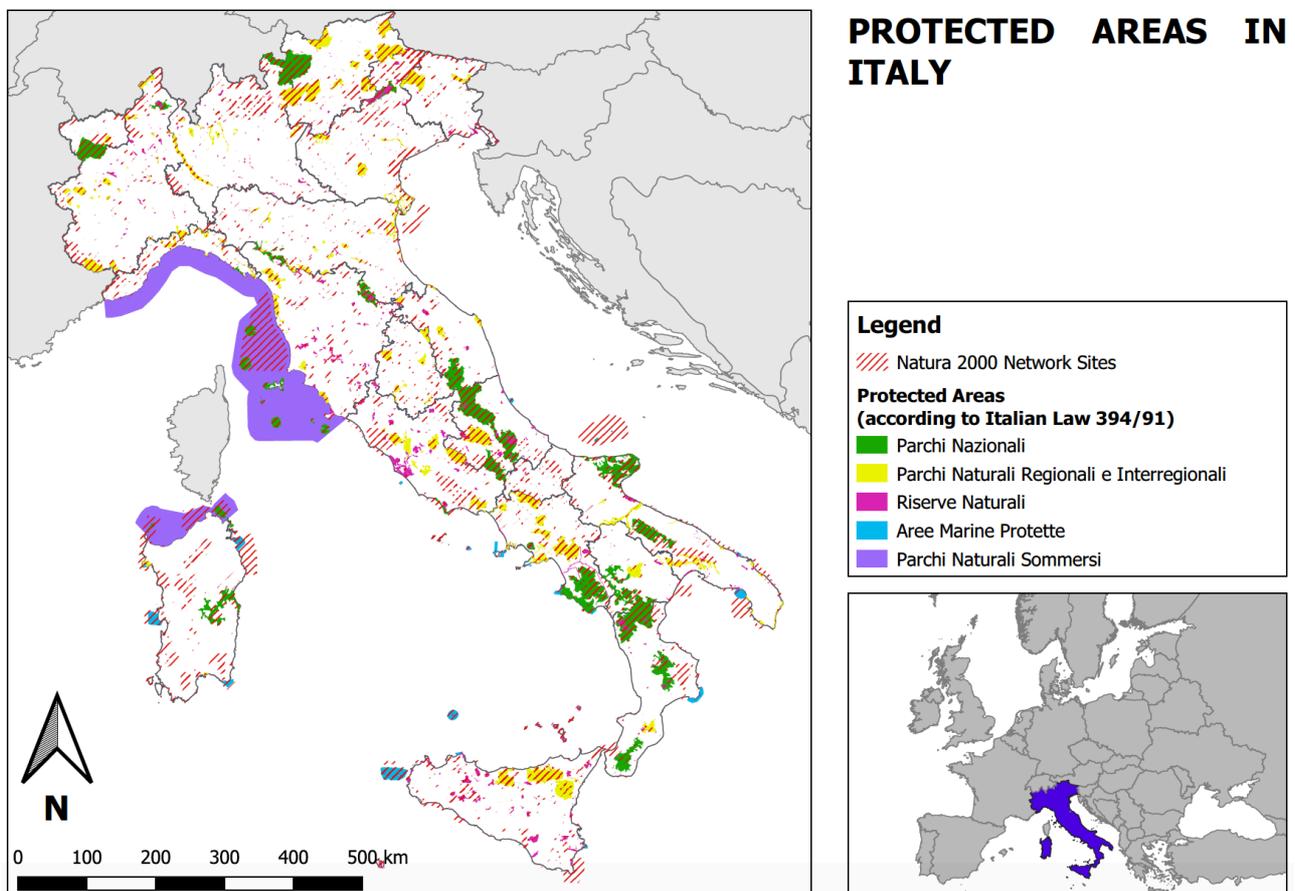
Looking at the next future, further expansion of terrestrial PAs will be needed to achieve the target of legally protecting a minimum of 30% of EU land, as set out in the EU Biodiversity Strategy for 2030. The designation of PAs is not in itself a guarantee of biodiversity conservation. Effective management requires building a coherent and well-connected network of PAs with clearly defined conservation objectives and measures (European Commission, 2022; EEA, 2022).

At the national level, the governance structure of PAs in Italy is characterized by a multi-level approach (Law 394/91). The primary authority responsible for the governance of PAs is the Ministry of Ecological Transition, formerly the Ministry of the Environment. This ministry formulates policies, guidelines, and regulations related to the management and conservation of PAs. It plays a vital role in coordinating efforts between different stakeholders and ensuring compliance with international agreements and conventions. At the regional level, the responsibility for managing PAs lies with the individual regions (e.g., Lombardy, Tuscany, Sicily). Each region has the autonomy to establish and manage its own PAs within the framework of national legislation. Within the regions, the governance of PAs involves various actors, including regional authorities, park authorities, local municipalities, and stakeholders such as local communities, environmental organizations, and tourism operators (Marotta, 2022). These actors collaborate in decision-making processes, management planning, and the implementation of conservation measures. Park authorities, known as *Enti Parco*, have a significant role in the governance and management of PAs. They are responsible for coordinating activities within their respective parks, developing management plans, and promoting sustainable use of natural resources. Park authorities often engage in partnerships with local communities, research institutions, and NGOs to enhance conservation efforts and foster community involvement (Capra and Soppa, 2003).

Furthermore, Italy is an active participant in international initiatives and collaborations related to the governance of PAs. It is a signatory to various international conventions, including the Convention on Biological Diversity and the Ramsar Convention on Wetlands, which guide the management and conservation efforts of PAs. The description at national and local level just shown that the governance of PAs in Italy is a complex and dynamic process involving multiple levels of government, regional authorities, park authorities, and various stakeholders. This process asks for participatory approaches and collaboration reflecting the commitment to sustainable conservation (Riggs et al., 2021). In order to implement a participatory approach a stakeholder engagement is necessary. This shift recognizes the importance of involving local communities and stakeholders in decision-making processes, as they possess valuable knowledge and can contribute to the sustainable management of PAs.

3. Material and methods
3.1 Q Methodology: background and objectives

In order to clarify stakeholders' thinking on the effectiveness of PAs, we used Q methodology, an approach developed by the psychologist William Stephenson that provides structured assessment of human subjectivity (Stephenson, 1935). The Q methodology has been called a mixed method, as it combines the benefits of both qualitative and quantitative research. Similar to qualitative methods, it succeeds in describing the behavior of participants, capturing their thoughts and opinions. It also incorporates aspects of quantitative approach, as it is able to give a measure to these "subjective" variables (Brown, 1980; Watts and Stenner, 2012).

A key tenet of Q is that subjectivity is communicable and can be systematically analyzed. Q methodology can identify and characterize ways of thinking about an issue but it cannot quantify the

prevalence of those ways of thinking (Van Exel and De Graaf, 2005). Results of a Q study describe a population of viewpoints, not a population of people (Risdon et al., 2003; Van Exel and De Graaf, 2005). Q method requires a relatively small number of possibly diverse respondents but the sample does not have to be representative of the population (Neff, 2011).

Q methodology uses factor analysis of rankings of statements to identify and understand the range of social perspectives that exist on the topic, rather than to provide a representative sample of the frequency of views held (Winkler and Nicholas, 2016). Using Q methodology can serve both to clarify points of agreement and disagreement within groups and to help individuals clarify their own thinking (Webler et al., 2009).

The objective of Q methodology is to identify dominant perspectives on the topic under study. For this, the basic idea is to let participants sort a number of statements into an order that reflects their individual attitude towards a certain topic. The perspectives then result from clustering similar groups of attitudes—they can therefore be defined as generalizations over comparable attitudes held by people (Hermelingmeier and Nicholas, 2017). The method is especially relevant for disciplines such as social science and ecological economics where it has been applied to examine the way in which people think about issues such as policy, governance and management (Webler et al., 2009; Frantzi et al., 2009; Nijnik et al., 2014). This methodology has been advocated as an appropriate tool to study the social and political acceptability of environmental policy (Barry and Props, 1999). It was therefore proposed to use Q methodology to explore the views of four key categories of stakeholders on the social, economic, political and environmental aspects of PAs. In this scenario, it has the potential to give a contribution to developing more effective knowledge and information systems for the enactment of focused environmental policies for PAs.

3.2 Q study: set-up and execution

The set-up of the Q study follows four steps: the identification of the concourse, the selection of statements, the choice of participants, the sorting of statements (Figure 2). The subsequent analysis is based on the quantitative derivation of factors that are then interpreted as dominant perspectives among study participants.

Figure 2 – Study design
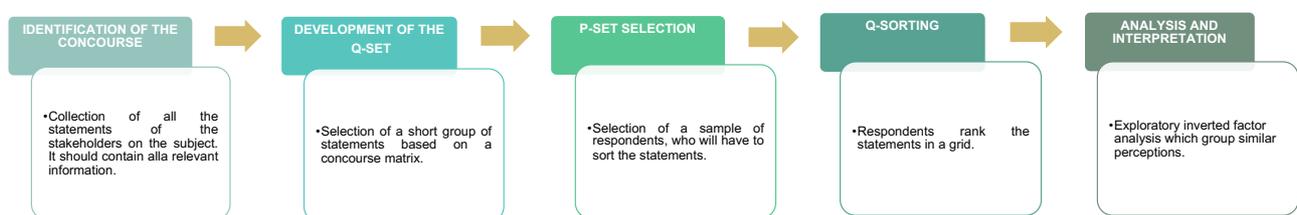
3.2.1 Identification of the concourse

The so-called concourse is represented by the general discussion or discourse that exists around a topic (Brown, 1980). As a qualitative approach, identifying the concourse is a highly subjective step that reflects the researcher's perspectives. In this case, the concourse was gathered based on a comprehensive review of scientific literature, nature conservation journals and magazines, conferences and workshop reports and minutes of parliamentary meetings.

We also used participant observation material during a focus group organized with five university professors, all experts in biodiversity conservation. Experts should be selected so as to comprise "*the full spectrum of voices reflecting all possible opinions on the topic of interest*" (Zabala et al., 2018). Focus group participants were encouraged to speak freely about the key aspects of PAs. In Q methodology, once the concourse is identified, the researcher's task is to filter out opinion statements that mirror the variety of different perspectives on the topic (Davies and Hodge, 2007).

After removing obvious repetitions, we came up with 137 statements addressing involvement of various groups in the PAs governance.

3.2.2 Selection of the statements

In order to select the statements that participants will rank, the concourse is reduced to a "miniature representation" (Brown, 1986, p. 187) consisting of the minimum number of statements necessary to capture the breadth and variety of the discourse around the topic. For that it is helpful to construct a concourse matrix. A concourse matrix is a tool for categorizing selected statements in the form of a table in order to make sure that statements are as diverse as possible and that they reflect the breadth of the concourse. Therefore, it is necessary to define relevant categories that appear to be the main points or pillars in the debate around a topic.

It is helpful to construct a concourse matrix to make this selection. A concourse matrix is a tool for categorizing selected statements in the form of a table in order to make sure that statements are as diverse as possible and that they reflect the breadth of the concourse. Therefore, it is necessary to define relevant categories or dimensions that appear to be the main points in the debate around a topic. If statements fill the same category within the table, only one of them needs to be taken into the study as the others fulfill the same function or present the same point of view.

Based on our literature review and focus group, we then identified four key perspectives on PAs: economic, environmental, social and political. We sorted all of the initially collected statements into the concourse matrix in order to identify overlaps or missing aspects.

This process reduced the number of statements to a final list of 49 (Q-set). According to the literature, the minimum number of statements should be between 25 and 80 (Watts and Stenner, 2012). It is important to note that the concourse matrix is merely a tool – a mental frame – for the researcher to help leave out those statements that overlap too much with other statements. This underlines that the concourse matrix is a sorting tool and not a strict categorization — as statements are taken out of their context, some of them might not resemble the core idea but only one point of the discussion brought forward in an article.

3.2.3 P-set selection

Q-methodology does not require large population samples to obtain statistically valid results (Brown, 1980), as it produces an in-depth view of different perspectives that exist in a given situation but does not intend to generalize its results to a larger population (Steelman and Maguire, 1999). Q methodology does not aim at working with a representative number of people, but rather with a representative breadth of viewpoints given through the diversity of participants. In this study, the group of participants (P-set) was composed by four categories of stakeholders: farmers, tour operators, biodiversity experts, local administrators. They have been chosen because they are considered among those with the greatest interest in the proper management and conservation of protected natural areas. In particular, farmers may have interests in natural resources found in PAs,

such as farmland, water, pasture or forest. PA management policies, such as land use restrictions or environmental regulations, can have a direct impact on the agricultural practices of farmerss (Ma et al., 2021). These policies may affect crop choice, production methods, access to water resources, or livestock management practices (Mbanze et al., 2020; Verburg et al., 2006). However, PAs can also offer economic opportunities for agricultural entrepreneurs. For example, the promotion of agritourism or the production of organic or local agricultural products within PAs can generate additional income (Na Songkhla et al., 2012; Ferreira & Sánchez-Martín, 2022; Marcinkevičiūtė et al., 2022).

Furthermore, tour operators are considered stakeholders of PAs because their activity can influence both positively and negatively environmental conservation and the well-being of local communities (Bushell and Bricker, 2017; Zeng et al., 2022). Involving them in the management and planning of PAs is essential to promote sustainable tourism and maximize the benefits for all actors involved (Whitelaw et al., 2014).

Local administrators were also included among the stakeholders. They are considered stakeholders of PAs because they have the responsibility to manage and develop the territory in which these areas are located. They must balance environmental conservation needs with sustainable development, engage local communities, and ensure conservation policies are enforced. Their involvement is essential for the long-term success and protection of PAs (Abukari and Mwalyosi, 2018).

Finally, a group of biodiversity experts have been included in the P-set, who, having an in-depth knowledge of the interactions between living organisms and knowing the mechanisms of ecosystems, understand the complexity of biodiversity within PAs and can develop truly effective management strategies (Gleason et al., 2020; Cazalis et al., 2020). Biodiversity experts can provide advice and support to protected area managers and local administrators in decisions related to biodiversity management and conservation. Their experience and scientific knowledge are essential to identify conservation priorities, define management objectives and propose concrete actions to conserve biodiversity (Giakoumi et al., 2018; Ruiz-Frau et al., 2015).

For all these reasons we included in the p-set 10 farmers, 10 tour operators, 10 biodiversity experts and 10 local administrators.

Among the final P set there were 21 women (51%) and 19 men (49%). The age of respondents ranged between 26 and 65 with the median of 36 and the mean of 38. All the participants were aware of and knew about the Pas.

The co-authors of this article conducted the interviews in April and May 2023.

3.2.4 Sorting of statements

Respondents were asked to sort the statements by how strongly they agreed or disagreed with them, ordering the statements in a forced distribution grid (Figure 3). The grid that was used allowed for the respondents to agree or disagree from - 6 to + 6 for the different statements. In this way, a set of sorted data is collected for each participant (so called Q-sort), and the pattern of the sort represents the individual perceptions. The survey was administered face to face, leading to the obtaining of 40 Q-sorts (one for each respondent). Prior to administration, a pilot test was conducted to a limited number of respondents and the Q-set was modified.

Figure 3 - Ranking grid
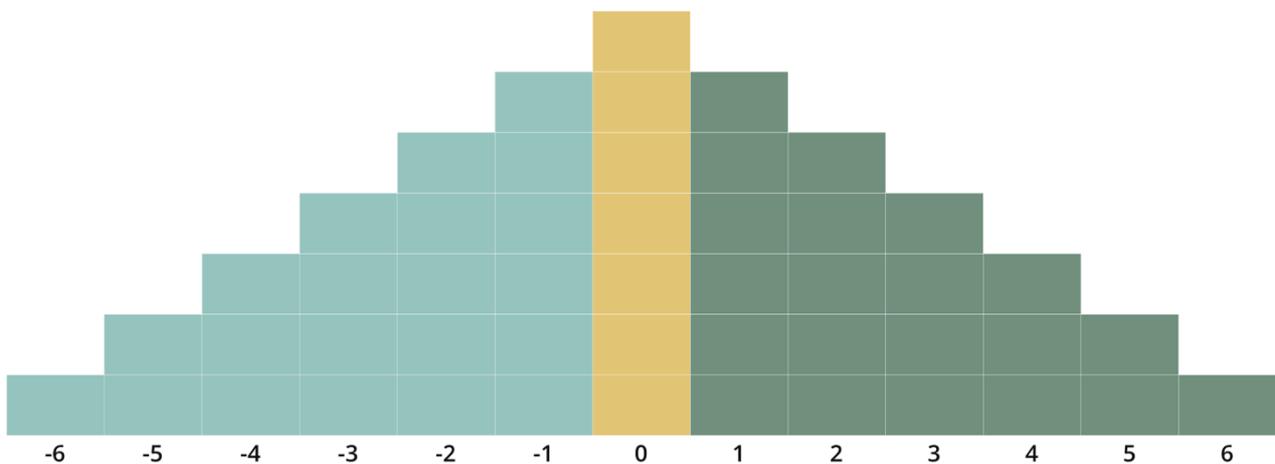
3.3 Statistical analysis and interpretation

Once the Q-sorting is completed, the data is collected and analyzed using an unconventional use of classical factor analysis proposed by Stephenson (1953) and called "inverted factor analysis".

In traditional factor analysis, the goal is to identify common factors that explain the variance in the data. However, in Q-methodology, the focus is on identifying distinct viewpoints or perspectives held by individuals. In inverted factor analysis, the steps are reversed compared to traditional factor analysis. Instead of identifying common factors, inverted factor analysis seeks to detect distinct clusters of individuals who share similar viewpoints. In other words, it identifies correlations between respondent and not between variables. For the present study, the statistical analysis was conducted using the Q-method software (Lutfallah and Buchanan, 2019). First, the software calculated a correlation matrix of all 40 Q-sorts representing the level of similarity of the perceptions of individual participants (Van Exel and de Graaf, 2005).

Then, the inverted factor analysis is conducted using principal component analysis (PCA) as extraction technique. This process aims to identify groups of individuals who share similar patterns of sorting the statements, grouping together and forming a factor.

Factors were then varimax rotated in order to find the best solution maximizing the variance explained by the factors and improving their interpretability. The rotated factors represent distinct perspectives on the topic of interest, i.e., the discourses of the analysis.

Each discourse identified in the analysis is typically named and described based on the statements that are highly associated with it. This step helps researchers understand the underlying perspectives and can provide insights into the diversity of opinions within the studied population.

4. Results

Four factors emerged from the analysis of the results, which were interpreted as "discourses". Each discourse received a summarizing label, representative of the prevailing thought: discourse A "Ecological benefits", discourse B "Need for political and management reform", discourse C "Disadvantages to agricultural economics", discourse D "Local well-being and development".

Together the four factors explained 52% of the total variance (29%, 12%, 6% and 5% respectively).

Discourses were described qualitatively in a narrative form. The interpretation was informed by the distinguish statements for each discourse, i.e. statements that members of the group ranked significantly differently from other groups (higher of lower than overall mean at P < 0.05) as well as by the statements with the highest and the lowest z-scores (corresponding with Q sort values −6 and 6), measuring how far (in standard deviations) a statement lies from the middle of a distribution (Donner, 2001; Webler et al., 2009). The summary of the key statements is presented in Table 1.

Table 1 - Distinguish statements for each discourse, ranked by level of agreement (highest z-score) and disagreement (lowest z-score)

DISCOURSE LABEL	#	MORE AGREEMENT	#	LESS AGREEMENT
DISCOURSE 1 **Ecological benefits**	7	They enhance and protect ecosystem services	22	They are set up on the basis of unclear criteria
	2	They contribute to the reduction of soil consumption	19	All they do is transfer harmful activities, such as illegal logging or mining, to other areas
	8	They fight climate change	36	They can be a limit to local economic development
	20	They suffer from a lack of regulatory clarity	33	They stimulate the spread of eco-sustainable behavior among citizens
DISCOURSE 2 **Need for political and management reform**	46	They suffer from a lack of financial and human resources	40	They favor the development of agriculture
	14	They are under the control of local authorities and the interests that govern them	49	They promote the creation of new businesses
	15	They need to change their governance structure	32	They improve the well-being of local populations
	13	They are consigned to the logic of local and party degeneration	17	They are too many
	18	They require local development actions shared between the different institutions and according to the different competences	38	They favor employment
DISCOURSE 3 **Disadvantages to agricultural economics**	27	They harm farmers	32	They improve the well-being of the local population
	9	They contrast hydrogeological instability	40	They favor the development of agriculture
	39	They favor related industries in the tourism sector	49	They promote the creation of new businesses
DISCOURSE 4 **Local well-being and development**	44	They are tourist attractions	24	They contrast the marginality and depopulation of some areas
	42	They support organic and agricultural productions of excellence	35	They are rarely visited
	32	They improve the well-being of local populations	25	They improve the well-being and quality of life of neighboring populations

4.1 Discourse 1: Ecological benefits

This discourse accounts for 29% of the total variance, representing the most widespread view in the sample considered. According to this discourse, PAs, as they are conceived and managed in Italy, have a high ecological potential. They are considered able to preserve ecosystem services (#7), reduce soil consumption (#2) and are considered a good strategy to combat climate change (#8). The point of view of this Discourse, in addition to emphasizing the environmental benefits generated by PAs, differs from the main political criticisms attributed to them. Indeed, this discourse strongly disagrees that the foundations of PAs are unclear (#22). It therefore recognizes its value also from a political point of view, as well as from a strictly environmental one. According to this vision, PAs are also able to generate benefits on an economic level. In fact, the representatives of discourse 1 reject the idea that PAs can represent a limit to local economic development (#36). Finally, in line with a proactive vision, this discourse clearly denies the possible "leakage effect", rejecting the idea that PAs can transfer harmful activities, such as illegal logging or mining, to other areas (#19).

4.2 Discourse 2: Need for political and management reform

This discourse includes very critical views towards PAs and accounts for 12% of the total variance. There is a strong belief that the current management of PAs is problematic because they are under the control of local authorities and the interests that govern them (#14). The representatives of discourse 2 believe there is a lack of regulatory clarity (#20) and that their current governance structure needs to change (#15). In a very clear way, the management of PAs is criticized, believing that they are handed over to the logic of local and party degeneration (#13). In this sense, proponents of discourse 2 believe that there must be a different distribution of powers and responsibilities in the political management of PAs, requiring local development actions shared between the different institutions and according to the different competences (#18). Even from an economic point of view, this vision appears very critical. In fact, it states that the financial and human resources allocated to the care of PAs are insufficient to guarantee their effectiveness (#46) and that conceived in this way they do not give the possibility to develop economically profitable businesses (#49) and to generate new jobs work, promoting employment (#38). It is believed that the overall well-being of local populations cannot be improved by the establishment of a protected area (#32), however, according to this view, the areas should not be reduced in number, because it is believed that there are not too many (# 17).

4.3 Discourse 3: Disadvantages to agricultural economics

Discourse 3 represents 6% of the total variance and describes an unconfident view of the benefits that PAs can ensure to the local economy, especially the agricultural one. According to this view, PAs harm farmers (#27), but can only help tourism businesses (#39). Similar to discourse 2, the representatives of this discourse deny any economic benefits deriving from PAs and they are also skeptical about the benefits on the quality of life of local populations (#32). In fact, PAs are not able to promote the creation of new businesses (#49) and they are not considered drivers for the development of the agricultural sector (#40). However, from an environmental point of view, this Discourse strongly believes in the positive action that PAs can guarantee to counter hydrogeological instability (#9).

4.4 Discourse 4: Local well-being and development

The latter discourse is representative of 5% of the total variance. The representatives of discourse 4, despite being in a clear minority, are strongly convinced that PAs may benefit local populations in significant ways. There is a significant notion that they are tourist attractions (#44), it is believed that they are rightly frequented by citizens (#35) and that they support organic and agricultural productions of excellence (#42) and are therefore able to improve the well-being of local populations (#32). The benefits, however, are limited to the area on which they insist, denying the possibility of advantages for the well-being and quality of life of neighboring populations (#25). Discourse 4, does not believe that PAs can act to counteract the depopulation of some areas (#24).

4.5 Consensus / disagreement statements and key differences among stakeholder groups

We found nine consensus and disagreement statements, i.e. statements that do not distinguish between any pair of discourses at $P > 0.01$ and $P > 0.05$.

It was found that representatives of all four discourses believe that PAs have the ability to enhance the landscape of the places they insist on (#6). Furthermore, all four speeches agree on the fact that PAs are among the most effective tools for preserving nature (#3) and fauna (#1) and that they have a strategic role in countering the loss of biodiversity (# 4). From an economic point of view, all the discourses believe that PAs can represent a competitive advantage in the areas on which they insist (#43), that they are able to generate wealth (#31) and that they are an opportunity to generate induced for the tourism sector (#39). On the other hand, the representatives of all discourses believe that the presence of the PAs is not useful to favor the development of the local handicraft sector (#41). Furthermore, there is a strong common belief that the benefits generated by PAs are limited to the place on which they are located. In fact, all the discourses hold that they cannot tackle deforestation even beyond their borders (#11). Finally, the latest disagreement statement found states that the marginality and depopulation of some geographical areas cannot be effectively contrasted with the establishment of PAs (#24).

With regard to the distribution of discourses among four aggregated stakeholder groups (Tour Operators, Farmers, Biodiversity expert and Local administrators), the small-n sample size, characteristic for a Q study, did not allow for generalization. These patterns should be treated with caution as 'working hypotheses' (Ockwell, 2008, p. 278), however, it offered insight into potential attitudes of the groups involved (Niedziałkowski et al., 2018). The results showed that most of the administrators involved (80%) supported discourse 1, oriented towards the ecological enhancement of PAs (Figure 4). The rest of the respondents (20%) concentrated on Discourse 4, strongly convinced that PAs may benefit local populations in significant ways. The administrators, therefore, do not seem to find any critical issues or negative effects of the current management of the PAs, as they have no representative to support Discourse 2 and 3, considered the most contesting ones.

Biodiversity experts have a more heterogeneous position within the four discourses, but maintain a similar line to that of administrators. Half of them support discourse 1, 30% discourse 4, however the remaining 20% is equally divided between Discourse 2 and Discourse 3. Farmers are by far the most critical category towards PAs, falling for the 40% in Discourse 2, which underlines the need for political and management reform, for 40% in Discourse 3, which emphasizes the disadvantages to agricultural economics and only 20% in Discourse 1. Finally, tour operators, despite having a vision more fragmented, more than half are supporters of

Discourse 2, 30% support Discourse 1 and the remaining 20% is equally split between Discourse 3 and Discourse 4.

Figure 4 - Distribution of discourses among key stakeholder groups.
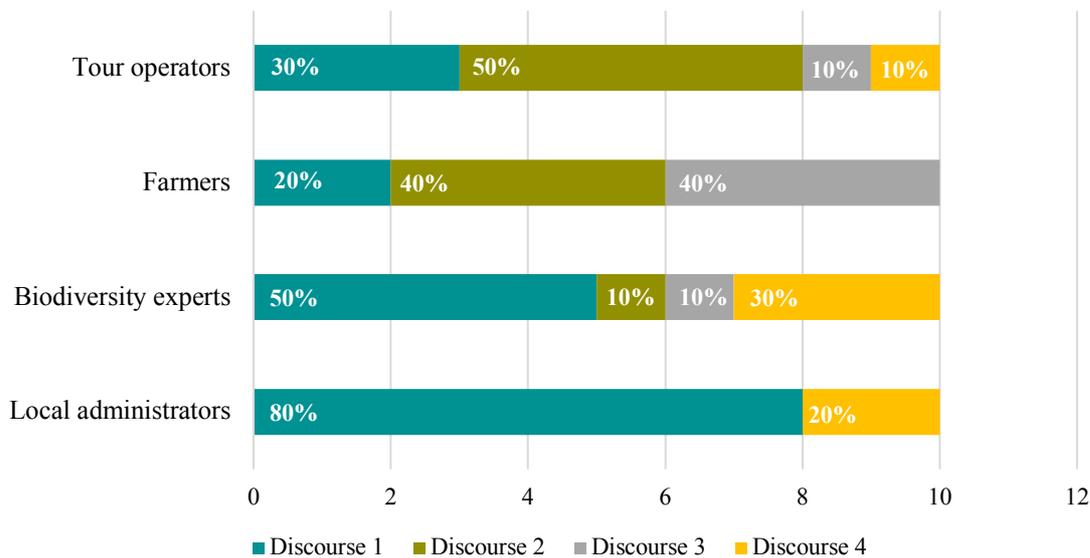
5. Discussion

This article is the first published Q study focusing on the attitudes towards PAs of key stakeholders at the national level. Our results identified four main discourses, two of which (1 and 4) have a proactive attitude, identifying both ecological (Discourse 1) and economic (Discourse 2) benefits in their current management; the other two have a decidedly more critical vision, expressing disappointment above all on political issues (Discourse 2) and related to the agricultural economy (Discourse 3).

What emerges is that the ecological benefits are those most widely shared by all categories of stakeholders, but in particular by local administrators. The latter prove to be very distant from criticisms of inefficient management and the protection of economic interests. According to Pomeroy and Douvere (2008) although the environmental issue is fundamental, they should have the task of balancing the needs of biodiversity conservation with the economic, social and political interests of the local communities and the various economic sectors involved. Those who prove to be the most critical are precisely the farmers and tourism entrepreneurs, who, placing themselves to a greater extent in discourse 2 and 3, believe that better political management is necessary with a view to achieving environmental and economic objectives more easily. Policy makers are responsible for creating and enforcing laws affecting PAs, therefore they have a long-term approach, focused on long-range sustainability (Dell'Anna and Dell'Ovo, 2022). They tend to emphasize the need to comply with environmental restrictions and regulations. On the other hand, farmers and tourist operators see PAs as an environmental and economic tool aimed at making money from their primary activities. Therefore, their interests fall within a shorter time frame and are guided by direct and concrete experience with PAs. Adams et al. (2003) pay attention to the importance of adequately moderating stakeholder power differences to create the right conditions for effective stakeholder engagement. According to Dawkins (2014) the involvement of stakeholders conceptualized as "low power" is crucial to the natural sustenance

of the common good (Mahanty & Russell, 2002). However, Cent et al., (2013) proved to be more skeptical regarding the need for local participation, due to an excessive divergence of interests, knowledge and responsibilities. Tacconi (2000) pointed out that conservation education could be a tool to make local people pay for conservation initiatives that are beneficial to national and international communities. In his view, despite the lack of conservation education, local people will meaningfully participate when presented with real benefits from conservation. Also, the study by Soma and Vatn (2014) affirmed the importance of a governance of PAs that balances local and central influences, emphasizing the importance of more inclusive narratives. In this sense, the study demonstrated the importance of integrating the visions of those who know the PAs from their own direct experience and those who have a more theoretical vision. The challenges in balancing these different perspectives can be complex and require open dialogue and the search for solutions that take into account both environmental conservation and the needs of agricultural communities. Involving farmers and tourism operators in decisions can help mitigate conflicts and promote more effective management of PAs.

6. Conclusion

By analyzing stakeholders' views and attitudes towards PAs, four separate discourses were developed that provide insight into their social, economic, political and environmental effectiveness.

The results demonstrated that the advantages from an ecological point of view are recognized by most categories, however concerns about the current inadequate political management and the economic and productive consequences mainly concern those who have direct experience with protected areas (tour operators and farmers). In light of these divergences, an integrated approach to the political management of protected areas is required through multi-stakeholder cooperation using the tools of round tables, public-private partnerships, public consultations, advisory committees. The study highlights the need for an integrated approach to the political management of protected areas, involving strategic planning, multi-stakeholder cooperation and a long-term commitment to the conservation of the natural environment and biodiversity. That stakeholder engagement should take place through the duration of any PA process, from the design of sites, to implementation and development of management measures, thus incorporating both top down and bottom-up approaches. The study conducted has limitations as the small n sample size, characteristic of a Q study, did not allow for generalization. However, it provides the starting hypotheses for other studies, for example adopting the stakeholder empowerment methodology.

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