

Global lessons and success factors in the co-management of protected and conserved areas

Lecciones globales y factores de éxito en el comanejo de áreas protegidas y conservadas

Marco Antonio Carias Mejia

Universidad Internacional Iberoamericana, México (marco.carias@doctorado.unini.edu.mx) (<https://orcid.org/0009-0005-1701-610x>)

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ABSTRACT

Keywords:

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Protected areas are a fundamental tool for biodiversity conservation; however, their effectiveness depends not only on legal recognition, but also on the quality of the governance arrangements that guide their management. This study assessed governance quality in protected and conserved areas through a systematic review of international literature, with the aim of identifying which governance types and management systems are associated with better outcomes. The review followed the PRISMA protocol and analyzed 106 articles, from which 154 governance cases were extracted. Each case was classified by governance type and management system and assessed using an index based on five IUCN good governance principles: legitimacy and voice, direction, performance, accountability, and fairness and rights. The results show that shared governance with a bottom-up approach had the highest governance quality index (9.33 ± 0.51), followed by community-based bottom-up governance (8.90 ± 0.40) and shared governance under co-management arrangements (7.83 ± 0.21). In contrast, the lowest values were observed in shared top-down governance (4.57 ± 0.47) and governmental top-down governance (4.19 ± 0.30). The qualitative analysis identified effective participation, recognition of local authority, community and Indigenous leadership, trust, integration of local knowledge, clear rules, appropriate external support, and tangible benefits as success factors. Overall, the findings show that shared governance does not, by itself, guarantee good governance unless it redistributes power, authority, resources, and benefits among the actors involved.

RESUMEN

Palabras clave:

áreas protegidas; calidad de gobernanza; gobernanza compartida; comanejo; Honduras.

Las áreas protegidas son una herramienta fundamental para la conservación de la biodiversidad; sin embargo, su efectividad no depende únicamente de su reconocimiento legal, sino también de la calidad de los arreglos de gobernanza que orientan su manejo. Este estudio evaluó la calidad de la gobernanza en áreas protegidas y conservadas mediante una revisión sistemática de literatura internacional, con el propósito de identificar qué tipos de gobernanza y sistemas de gestión se asocian con mejores resultados. La revisión siguió el protocolo PRISMA y analizó 106 artículos, de los cuales se extrajeron 154 casos de gobernanza. Cada caso fue clasificado según tipo de gobernanza y sistema de gestión, y evaluado mediante un índice basado en cinco principios de buena gobernanza de la UICN: legitimidad y voz, dirección, desempeño, rendición de cuentas, y justicia y derechos. Los resultados muestran que la gobernanza compartida con enfoque bottom-up presentó el índice más alto de calidad (9.33 ± 0.51), seguida por la gobernanza comunitaria bottom-up (8.90 ± 0.40) y la gobernanza compartida bajo esquemas de cogestión (7.83 ± 0.21). En contraste, los valores más bajos se observaron en la gobernanza compartida top-down (4.57 ± 0.47) y en la gobernanza gubernamental top-down (4.19 ± 0.30). El análisis cualitativo identificó como factores de éxito: la participación efectiva, el reconocimiento de la autoridad local, el liderazgo comunitario e indígena, la confianza, la integración del conocimiento local, reglas claras, apoyo externo adecuado y beneficios tangibles. En conjunto, los hallazgos muestran que la gobernanza compartida no garantiza por sí misma una buena gobernanza si no redistribuye poder, autoridad, recursos y beneficios entre los actores involucrados.

Introduction

Protected areas are one of the main strategies for conserving biodiversity and maintaining the ecosystem services that support human well-being. According to Dudley (2008), these are clearly defined geographical areas that are recognized and managed through legal instruments or other effective mechanisms, with the aim of ensuring the long-term conservation of nature, along with associated cultural values and ecosystem services. Currently, about 17.6% of the Earth's land area and 8.4% of the planet's marine and coastal areas are under some form of protection, in an international context marked by the goal of conserving at least 30% of terrestrial and marine ecosystems by 2030 (UNEP-WCMC & IUCN, 2024).

Beyond their territorial extent, protected areas fulfill essential functions for species conservation, climate regulation, and water and soil protection, as well as for the preservation of cultural, recreational, and economic values that are important to human communities (Pisani et al., 2021; Sobhani et al., 2025; Zeng et al., 2022). However, designating an area as protected does not in itself guarantee its effective conservation. International experience shows that results depend, to a large extent, on the quality of governance: that is, on how decisions are made, who participates in them, how responsibilities are distributed, and how agreements are translated into concrete management actions (Eklund & Cabeza, 2017).

Governance of protected areas refers to the structures, processes, and practices through which authority is exercised, responsibilities are defined, and decisions are made regarding the management of these areas (Graham et al., 2003). The IUCN recognizes four main types of governance: governmental, in which management rests primarily with state agencies or organizations delegated by the state; shared, based on collaborative agreements among different stakeholders; private governance, exercised by individual landowners or for-profit or nonprofit organizations; and governance by indigenous peoples or local communities, in which these actors directly assume responsibility for managing the area (Borrini-Feyerabend et al., 2014). Each of these arrangements involves different forms of participation, authority, and responsibility, and these differences can significantly influence the sustainability and effectiveness of conservation strategies (Nyaupane et al., 2022).

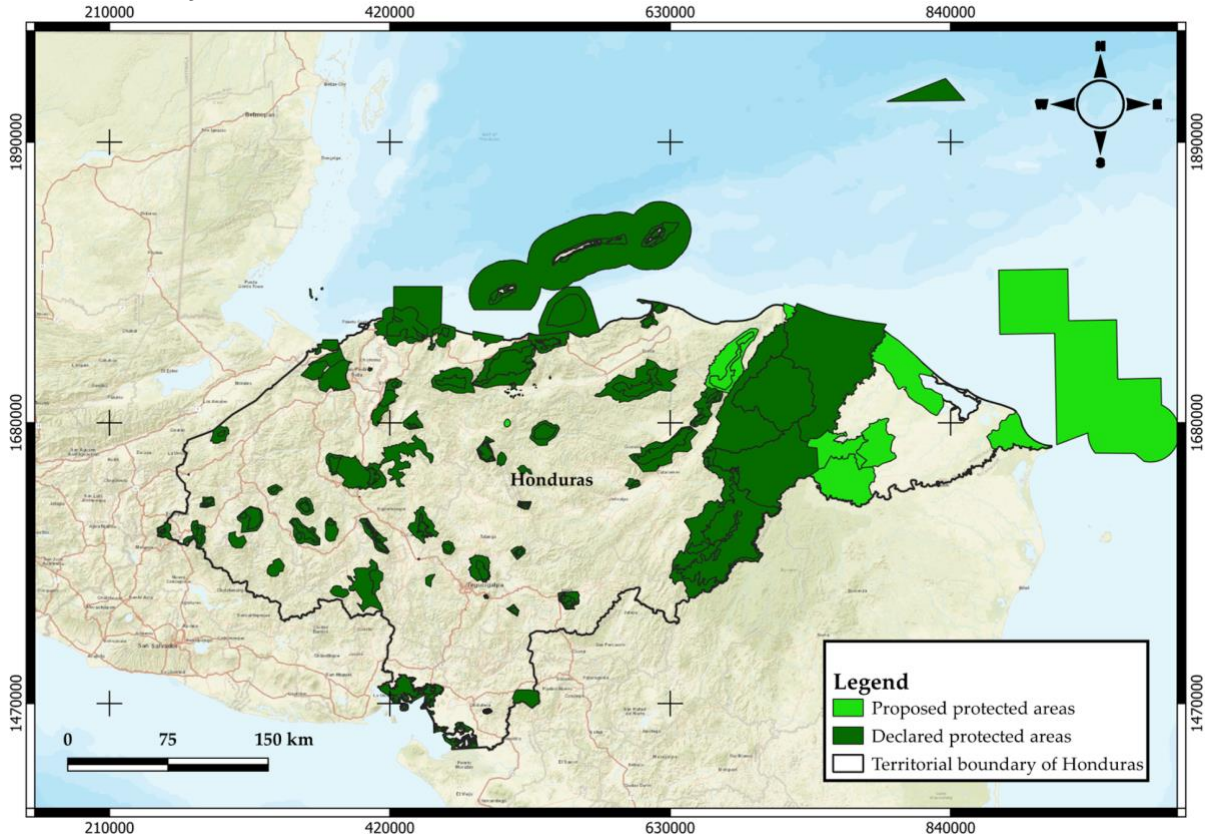
In recent decades, shared or collaborative governance has become particularly important as an alternative to the centralized models that historically dominated the management of protected areas (Lockwood, 2010). Its importance lies in the fact that it seeks to distribute authority and responsibility more evenly among government agencies, local communities, indigenous peoples, resource users, and other local stakeholders. In this context, co-management cannot be understood solely as an administrative arrangement, but rather as a process through which shared responsibility, legitimacy, and equity in decision-making are built (Armitage et al., 2007; Carlsson & Berkes, 2005). Through committees, councils, management agreements, or other coordination bodies, these models can facilitate information exchange, conflict resolution, and the implementation of conservation actions that are better suited to local realities (Ansell & Gash, 2008). However, the results are not always consistent: while some schemes manage to take root and endure over time, others weaken, lose legitimacy, or reproduce centralized dynamics under the guise of participation (Williams & Tai, 2016).

This debate is particularly relevant for Honduras, a country with abundant natural resources and a National System of Protected Areas (SINAPH) comprising 93 protected areas. These cover approximately 30,000 km² of land area—equivalent to 28% of the national territory—and about 20,000 km² of marine areas (ICF, 2025). The Institute for Forest Conservation (ICF) promotes the management of these areas both directly and through co-management agreements

with municipalities, associations of municipalities, and civil society organizations (Forest, Protected Areas, and Wildlife Act, 2007). However, many of these arrangements face operational constraints related to coordination among stakeholders, the definition of roles and responsibilities, institutional continuity, and the availability of resources to implement management actions.

Figure 1.

Distribution of Terrestrial and Marine Protected Areas in Honduras



Source: Based on data from SINIT (2025).

Added to these challenges is the role of municipalities, which by law must contribute to the management of protected areas within their territory (Municipalities Act, 1990), but whose capacity to act is often affected by political changes, shifting institutional priorities, and technical or financial constraints. In this context, strengthening the governance of Honduras' protected areas requires more than just the formal existence of agreements or coordination structures. It also requires an understanding of the conditions that enable collaborative arrangements to function effectively and why some shared models fail to result in quality governance.

In this context, this article analyzes international experiences with governance in protected and conserved areas in order to assess which institutional arrangements and management systems are associated with higher levels of governance quality. To this end, a systematic literature review is conducted, cases are classified according to governance type and management system, an index is developed based on the IUCN's principles of good governance, and the factors that explain both instances of strong governance and the limitations observed in some shared arrangements are identified. Although the analysis is based on international evidence, its findings offer useful lessons

for Honduras, particularly for strengthening co-management agreements, improving institutional coordination, promoting more effective participation, and moving toward a clearer distribution of responsibilities, authority, and benefits in the management of its protected areas.

Method

This study was conducted as a systematic literature review using a mixed-methods approach, integrating quantitative and qualitative analyses. The quantitative component made it possible to characterize the included studies and compare the quality of governance across different institutional arrangements and management systems. The qualitative component, for its part, made it possible to identify the factors associated with high-quality governance, as well as the mechanisms that explain the low quality observed in some shared or co-management arrangements. The review followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to ensure transparency, traceability, and rigor in the identification, selection, and analysis of the studies reviewed (Page et al., 2021).

2.1. Search Strategy

The literature search was conducted on November 7, 2025, in three academic databases: ScienceDirect, Scopus, and Wiley Online Library. Keywords in English related to collaborative governance, co-management, co-governance, protected areas, natural parks, biosphere reserves, institutional coordination, collaboration, governance networks, and stakeholder participation were used. The search was conducted on titles, abstracts, and keywords, using Boolean operators to broaden the identification of relevant studies, including those that addressed governance processes directly or indirectly. The search equation used was as follows:

((("co-management" OR "co-governance") AND ("protected area" OR "natural park" OR "biosphere reserve") AND ("coordination" OR "collaboration" OR "governance network" OR "stakeholder participation")))

The initial search yielded 2,133 records, of which 76 came from Scopus, 1,748 from ScienceDirect, and 309 from Wiley Online Library. Before beginning the selection process, inclusion and exclusion criteria were defined to ensure thematic relevance, academic quality, and consistency in the analysis.

2.2. Inclusion and Exclusion Criteria

We included peer-reviewed academic articles that presented case studies or empirical research related to governance, co-management, stakeholder participation, or institutional coordination in protected and conserved areas. The studies were expected to provide information on governance arrangements, management systems, stakeholders, participation mechanisms, strengths, limitations, or factors that influence the quality of governance. The documents had to be available in full or open access and written in English, with no restrictions on the year of publication. Books, technical documents, literature reviews, and studies focused exclusively on ecological or biological aspects unrelated to institutional coordination, stakeholder participation, or the governance of protected areas were excluded.

2.3. Selection and Evaluation of Studies

After applying the filters for document type, language, and full-text availability, the search was narrowed down to 459 articles: 27 in Scopus, 337 in ScienceDirect, and 95 in Wiley Online

Library. The results were exported to the Rayyan software (Ouzzani et al., 2016), which facilitated the identification and removal of duplicates. After this process, a refined set of 450 articles was obtained.

Subsequently, the titles and abstracts were reviewed to determine the relevance of each document based on the defined inclusion criteria. This step made it possible to narrow the set down to 127 potentially relevant articles. Finally, these documents were read in their entirety to evaluate their content and their contribution to the analysis of governance in protected and conserved areas in greater detail. As a result, 106 articles were selected, which formed the literature base for the study's analysis and discussion.

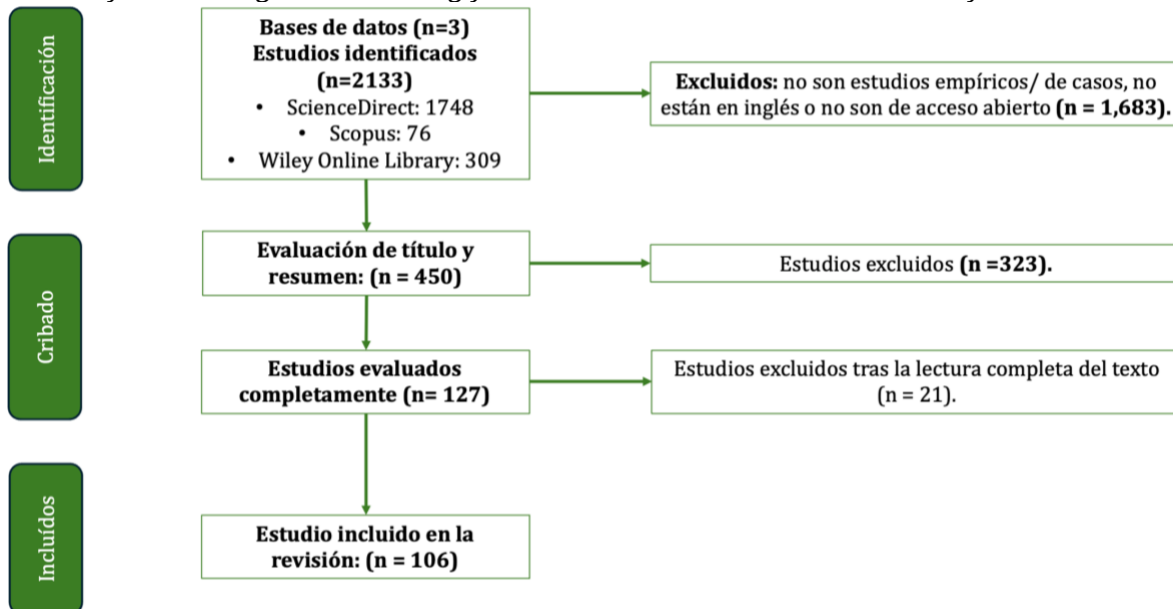
2.4. Data Analysis and Extraction Unit

The unit of analysis was not just the article, but the governance case reported in each study. When a single article analyzed more than one protected area, more than one institutional arrangement, or more than one management system, each case was recorded separately. For this reason, the 106 articles included made it possible to identify a total of 154 cases of governance.

A standardized data collection form was developed for each case. This fact sheet compiled information on the author and year of publication, geographic region, country, name of the protected or conserved area, IUCN management category, type of designation, type of governance, management system, stakeholders, participation mechanisms, strengths, limitations, and key lessons reported in the studies. This information made it possible to systematically compare the cases and establish a common basis for quantitative and qualitative analysis.

Figure 2.

Process for selecting and screening journal articles based on the PRISMA flowchart.



2.5. Assessment of Governance Quality

The quality of governance was assessed based on five principles of good governance proposed by the IUCN: i) legitimacy and voice, ii) leadership, iii) performance, iv) responsibility

and accountability, and v) justice and rights (Borrini-Feyerabend et al., 2014). Each principle was rated on a scale from 0 to 2, where 0 indicates a lack of evidence in the reviewed study, 1 indicates partial evidence, and 2 indicates clear and consistent evidence.

Combining these five principles made it possible to develop a governance quality index with values ranging from 0 to 10. Higher scores indicate better governance, defined as the existence of more legitimate, participatory, fair, accountable, and effective processes for decision-making and the management of the protected or conserved area. To facilitate interpretation, the cases were classified into three categories: low, medium, and high quality of governance.

Scores were assigned based on the information reported in each study. To this end, evidence was considered regarding stakeholder participation, clarity of objectives, implementation capacity, accountability mechanisms, recognition of rights, distribution of benefits, and the social legitimacy of the governance arrangement. Since the evaluation was based on the content available in each article, the scores reflect the evidence documented in the reviewed studies and not a direct field measurement.

2.6. Data Analysis

The analysis combined descriptive statistics, comparison of means, and thematic qualitative synthesis. First, the reviewed literature was categorized by geographic region, year of publication, scientific journal, management category, type of protected area designation, type of governance, and management system. This characterization made it possible to identify general patterns in the included studies and in the cases evaluated.

Second, the averages for the governance quality index were calculated for each combination of governance type and management system. Differences between groups were assessed by comparing means using Fisher's LSD test with a significance level of $p < 0.05$. This analysis made it possible to identify which institutional arrangements were associated with higher or lower levels of governance quality.

Finally, a qualitative thematic analysis of the reviewed cases was conducted. This analysis made it possible to identify recurring factors associated with high-quality governance, particularly in community-based, shared, and co-management arrangements that employ participatory approaches. It also made it possible to analyze the mechanisms that explain why some cases of shared governance are of low quality, particularly when there is a gap between formal participation and the actual influence of local actors. In this way, the qualitative analysis complemented the quantitative results, making it possible to explain not only which arrangements yielded the best results, but also why some governance models work better than others.

Results

3.1. Characterizing Literature

The included studies show a broad geographic distribution, although a greater number of cases occurred in the Americas, accounting for 34% of the total. The literature reviewed is recent, as 79% of the articles were published between 2020 and 2025. Furthermore, the journal **Marine Policy** accounted for the largest number of studies included in the review, reflecting the prominence that debates on marine governance, co-management, and stakeholder participation have gained in recent literature.

The protected areas evaluated fall into different IUCN management categories. National parks—which fall under Category II—predominated, accounting for 28% of the cases analyzed. These were followed by habitat or species management areas (Category IV), at 14 percent, and protected areas with sustainable use of natural resources (Category VI), at 13 percent. In addition,

22% of the cases were UNESCO Man and the Biosphere (MAB) Biosphere Reserves, while 17% did not have a clearly defined management category.

In terms of governance models, shared governance was the most common, occurring in 62% of the cases evaluated, followed by government-led governance at 23% and community-led governance at 13%. Similarly, the most common management system was co-management, while top-down approaches accounted for 32% and bottom-up models for 21%. These results show that recent literature tends to document participatory and collaborative arrangements more frequently; however, as noted below, the formal existence of these arrangements does not always translate into better governance.

Figure 3.

3A. Percentage distribution of the assessed protected areas by geographic region, **3B.** number of studies published per year, and **3C.** scientific journals with the highest number of articles included in the review.

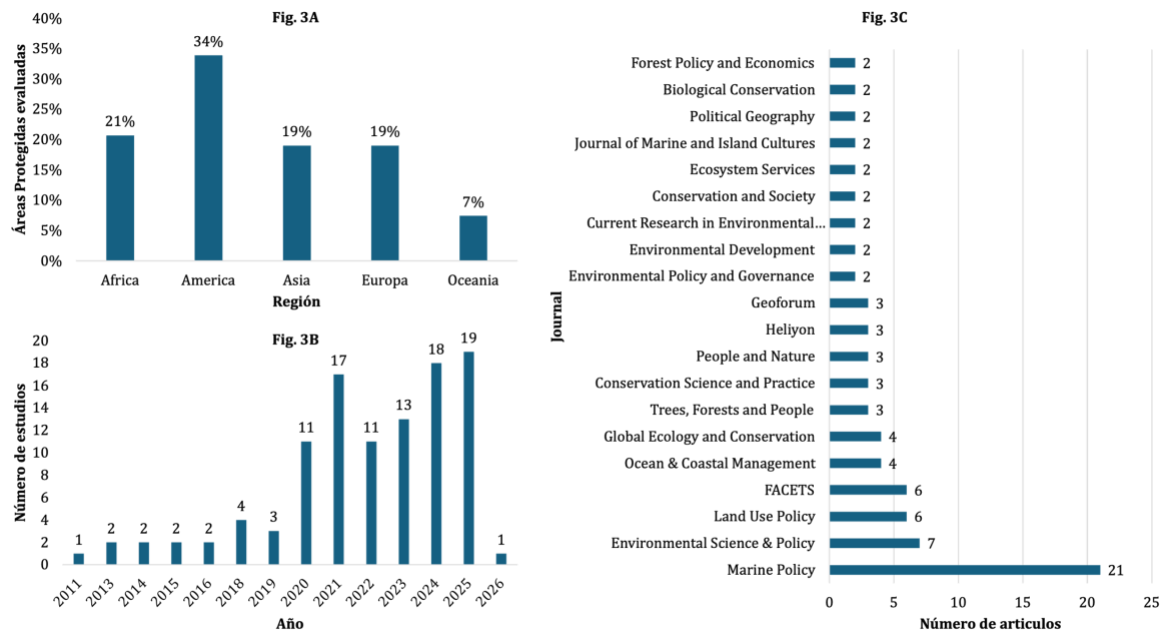
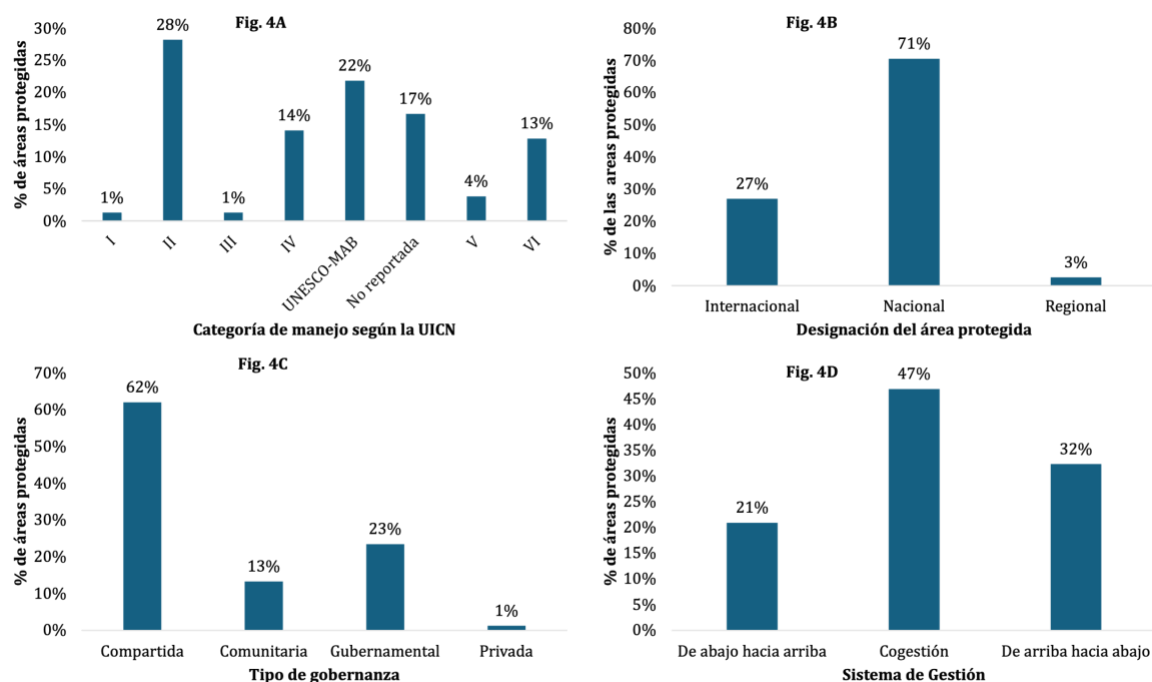


Figure 4.

General characteristics of the protected areas evaluated in the reviewed studies: **4A.** IUCN management category, **4B.** type of protected area designation, **4C.** type of governance, and **4D.** management system implemented.



3.2. Assessing the Quality of Governance in Protected Areas

The quality of governance was assessed based on five principles of good governance proposed by the IUCN: legitimacy and voice, leadership, performance, responsibility and accountability, and justice and rights (Borrini-Feyerabend et al., 2014). The results show clear differences among the arrangements evaluated. Shared governance and community governance had the highest scores, while government governance had the lowest scores. The combination with the highest score was shared governance based on a bottom-up approach (9.33 ± 0.51), followed by bottom-up community governance (8.90 ± 0.40). Shared governance with co-management also scored relatively high (7.83 ± 0.21), although with greater variability due to the number and diversity of the cases included.

In contrast, the lowest scores were observed in shared governance with top-down management (4.57 ± 0.47) and in top-down government governance (4.19 ± 0.30). This suggests that the quality of governance does not depend solely on the presence of multiple stakeholders, but rather on the extent to which they have a voice, influence, and the actual capacity to participate in decision-making.

Table 1.

Governance Quality Index by Type of Governance and Management System for the Protected Areas Evaluated

Type of Governance	Management system	Governance Index	n	E.E.
Shared	From the bottom up	9.33rd	12	0.51
Community	From the bottom up	8.90th	20	0.40
Shared	Co-management	7.83ab	72	0.21
Shared	From top to bottom	4.57c	14	0.47
Government	From top to bottom	4.19c	36	0.30

Note: Means with the same letter are not significantly different according to Fisher's LSD test ($p < 0.05$).

3.3. Explaining the Quality of Governance in Protected Areas

Based on a qualitative analysis of the cases reviewed, recurring factors were identified that explain the differences in the quality of governance. These factors were grouped into two dimensions: (i) factors associated with high-quality governance and (ii) factors that limit or weaken governance. This classification complements the quantitative index presented above and explains why certain institutional arrangements—particularly shared and community-based models with bottom-up or co-management approaches—achieved better results than top-down models.

3.3.1 Factors Associated with Good Governance

Effective participation. Good governance is strengthened when local stakeholders are not only consulted but also actively participate in the design of rules, decision-making, and the implementation of management actions. Rangel et al. (2025) show that the co-design of a marine protected area in Portugal made it possible to involve stakeholders from the earliest stages, through the mapping of land uses, the development of a shared vision, and the pursuit of agreements among economic interests, such as fishing and tourism, and conservation objectives. This process led 96% of the participants to endorse the final proposal, which shows that rules tend to be more widely accepted when they are developed in collaboration with those who will have to follow them. Similarly, Dublin & Natori (2020) document how fishermen participated directly in the development of the co-management plan for the Mahé Plateau in the Seychelles by identifying practical measures, generating information, and assessing resilience using indicators. This participation from the very beginning of the process strengthened the sense of ownership and allowed the interventions to be better tailored to the local context. In Brazil, Jacob et al. (2023) show that, in the Pirajubaé Marine Extractive Reserve, artisanal fishermen hold the majority of seats on management platforms, which gives them real influence over management strategies and facilitates dialogue with public institutions. These cases show that participation improves the quality of governance when it results in effective influence over decisions, rather than merely formal involvement in the process.

Recognized local authority. One of the most important factors in cases of strong governance is the recognition of community, indigenous, or local authority over the territory and resources. Aime & Robinson (2023) highlight the case of the Warddeken Indigenous Protected Area, managed by Warddeken Land Management Ltd., a company that is 100% Indigenous-owned, where 90% of the park rangers are also Indigenous. This case demonstrates that conservation models that fully incorporate Indigenous leadership can yield better biodiversity outcomes and greater resilience than those based solely on Western scientific or administrative approaches. Tran et al. (2020) illustrate a similar process in the Green Inlet Indigenous Protected and Conserved Area, spearheaded by the Kitasoo/Xai'xais Nation based on its own territorial vision. In the absence of timely management plans from the government, indigenous leadership made it possible to establish clear rules, strengthen monitoring through the Guardian Watchmen, and ensure greater local legitimacy. In Colombia, Premauer & Berkes (2015) show that collaboration in the Makuira National Natural Park was possible because the government recognized the heads of the Wayúu extended families as the legitimate owners and authorities of the territory. This recognition made it possible to combine the Wayúu's monitoring capabilities with the park's legal protection against external threats, such as mining. Similarly, Stronghill et al. (2015) show that the legal framework

of the “Conservancy” in Canada made it possible to formally integrate Indigenous interests into the delimitation, monitoring, and management of protected areas. Taken together, these cases indicate that governance is stronger when communities not only participate but are also recognized as legitimate authorities over the territory.

Local leadership. The presence of legitimate leadership helps sustain governance, mobilize stakeholders, and ensure continuity in management. This leadership can take the form of traditional chiefs, hereditary custodians, Indigenous park rangers, community leaders, or individuals capable of building collaborative networks. Wilson et al. (2025) show that the traditional leadership of Chief Makanjira on Mbenji Island, Malawi, yielded better conservation results than the centralized government model. Their effectiveness stems from the fact that the rules are embedded in local beliefs and institutions, which promotes their acceptance and compliance. In addition, the community reaps tangible benefits, such as higher catches following closed seasons, and the system incorporates equity criteria by allowing vulnerable households to use less productive coastal areas. Community-based surveillance under the authority of local leaders also helps offset the government's staffing and resource constraints. Artelle et al. (2019) They emphasize that Indigenous leadership in Canada strengthens governance by allowing Indigenous peoples to set priorities, apply their own customary laws, and maintain an active presence in their territories. A key example is the Guardians programs, which consist of members of indigenous communities who monitor and protect ancestral territories, especially in remote areas. In co-management arrangements, Baird et al. (2018) identify leadership as a critical factor in connecting stakeholders, facilitating opportunities for interaction, and sustaining adaptive processes, as was the case in the Östra Vätterbranterna Biosphere Reserve in Sweden. Orozco-Quintero et al. (2020) also show that Indigenous leadership can drive transitions from state-dominated models toward more cooperative frameworks by demanding greater recognition of ancestral land tenure, territorial stewardship, and local knowledge.

Trust among stakeholders. Trust emerges as a cross-cutting factor in successful cases, especially in shared and co-management arrangements. It helps reduce conflicts, facilitate agreements, and sustain collaboration over time. Eastwood et al. (2022) show that, in the Cairngorms National Park, social relationships and trust facilitated self-organized collaborative processes. The study highlights trust based on affinity, built on social ties, shared values, and informal interactions, such as “having a cup of tea.” This type of relationship made land managers more receptive to changes in management practices and helped mitigate conflicts among stakeholders with differing interests. Bodin et al. (2020) show that face-to-face discussions, group stability, and the presence of facilitators reduce the perceived risks of collaboration. When trust at the network level is high, actors expect fairer contributions, and the incentives to seek illegitimate personal gain are reduced. In addition, López-Rodríguez et al. (2020) highlight the value of long-term relationships based on trust and friendship with decision-makers in the Sierra de Guadarrama. These relationships facilitated informal agreements, volunteer work, and outreach activities, although the study also notes that informal networks can reinforce exclusion if they are limited to certain actors. In this regard, trust does not arise automatically as a result of participation, but rather as a condition that must be built through ongoing relationships, openness, and opportunities for interaction.

Integrated local knowledge. Cases with high-quality governance integrate local, indigenous, empirical, and scientific knowledge into decision-making. This integration allows management rules and actions to better respond to the ecological, cultural, and social context of the region. Paxton et al. (2024) show that, on the Great Barrier Reef, Traditional Owners promote governance based on co-management and an understanding of the reef as a biocultural landscape,

where ecological and community well-being are closely linked. This perspective broadens the criteria for conservation success, incorporating not only biological metrics—such as coral cover—but also cultural heritage, contributions to knowledge, and indigenous self-determination. Carrasco-Bahamonde et al. (2025) show that the integration of Mapuche-Williche ecological and historical knowledge into the Trincao ECPMP helps revitalize coastal stewardship practices based on principles such as Küme Mogen—well-being—and Itrofil Mogen—sacred biodiversity—. This process challenges centralized and techno-scientific approaches and strengthens communities' capacity to negotiate with industries and government agencies. Arjaliès & Banerjee (2024) highlight the “Two-Eyed View” (Etuaptmunk) approach in Canada, which allows for the integration of Indigenous and Western knowledge within an ethical decision-making framework. In this case, indigenous peoples are recognized as rights holders and not merely as stakeholders, which allows them to define success in management through holistic metrics that include spiritual connection, community well-being, and stewardship of the land. These examples show that incorporating local knowledge not only improves the technical relevance of decisions but also strengthens legitimacy, self-determination, and the cultural connection to the territory.

Clear and widely accepted rules. Governance improves when there are clear, legitimate rules that are recognized by the stakeholders involved. These rules may be based on customary norms, local sanctions, legal statutes, institutional protocols, or community-based monitoring mechanisms. Dick et al. (2022) show that the ancestral rules of peoples such as the Kwakwaka'wakw constituted comprehensive systems of governance designed to protect resources. Hereditary chiefs acted as guardians with spiritual and political authority, regulating access to key species based on ecological cues. In the case of the eulachon, for example, fishing could not begin until the chief confirmed that spawning was sufficient; when shortages were detected in certain areas, harvesting was prohibited to allow populations to recover. In Ghana, Baddianaah & Baaweh (2021) show that the CREMA model in Zukpiri combines legal norms, local committees, volunteer patrols, traditional beliefs, totems, and taboos to regulate activities such as hunting, logging, fishing, grazing, and forest fires. This combination strengthens compliance because the rules are not perceived as external, but rather as part of the local authority and culture. In co-management arrangements, Kittinger et al. (2011) show that, in the Papahānaumokuākea National Marine Monument, the establishment of rules, protocols, and communication procedures helped reduce inter-agency conflicts, overcome rigid institutional practices, and strengthen a culture of collaboration. These cases suggest that rules strengthen governance when they are clear, adaptable, and socially legitimate.

Adequate external support. Partnerships with NGOs, academia, public institutions, or international cooperation organizations can strengthen governance when they support local capacities without replacing community decision-making. Tran et al. (2020) show that, in the case of the Kitasoo/Xai'xais Nation, strategic alliances, funding, and legislative recognition made it possible to expand territorial management capacity without displacing indigenous leadership. This support included funding sources such as the Coast Opportunities Fund and partnerships with academic institutions, which helped integrate indigenous and scientific knowledge, strengthen technical capacity, and gradually reduce dependence on outside experts. Stacey et al. (2021) show that external support can be key to initiating community-based management processes in coastal areas, especially when it provides funding, technical training, and institutional support. However, they warn that this support may weaken governance if it creates dependency or imposes rigid models designed from the outside. For this reason, they emphasize the importance of local facilitators and NGOs that are respected by the community, capable of strengthening self-management and adapting interventions to the local context. Rohe et al. (2019) show that, in Fiji

and the Solomon Islands, international NGOs and research centers play an important role as bridge institutions between communities and the state, especially where the state's presence is limited. These organizations can facilitate the exchange of knowledge, provide information on new laws, and mobilize resources for local management. However, they can also exert undue influence on community priorities if there are no clear accountability mechanisms in place. For this reason, external support works best when it complements and strengthens local processes, rather than directing them from the outside.

Generating tangible benefits. Governance tends to be more stable when conservation generates tangible benefits for local communities or users. These benefits may include employment, income, tourism, secure access to resources, improvements in livelihoods, or enhanced community well-being. Chamberland-Fontaine et al. (2022) show that, in Punta Galeta, Panama, granting stewardship rights to artisanal fishermen can strengthen both mangrove conservation and local well-being. In this case, mangroves provide essential resources—such as shellfish, timber, and other forest products—that serve as a safety net for vulnerable communities. Involving local users in management helps improve compliance, reduce conflicts, and promote a more equitable distribution of benefits. Rodríguez-Rodríguez et al. (2024) show that small community reserves in Madagascar, such as the Anja Reserve, can generate significant socioeconomic benefits through ecotourism. The revenue generated is reinvested in infrastructure and basic services, which improves residents' economic well-being and strengthens social cohesion. The study also suggests that direct community governance can facilitate a more equitable distribution of resources and strengthen local decision-making capacity. Tyrrell et al. (2024) show that, at the Enonkishu Conservation Area in the Maasai Mara, conservation is becoming a viable alternative to agricultural expansion because it generates benefits such as land lease payments, jobs, and profits from a community-owned cattle herd. The combination of tourism, livestock farming, and community participation strengthened the model's legitimacy and made it more resilient in the face of crises such as the COVID-19 pandemic. Taken together, these cases show that tangible benefits increase social acceptance, strengthen compliance, and reduce the perceived costs of conservation.

3.3.2. *Why do some examples of shared governance fail?*

The results show that shared governance does not always translate into high-quality governance. Although these arrangements typically include advisory bodies, committees, participatory processes, or co-management agreements, in several cases collaboration exists more as a formal structure than as an actual redistribution of authority. This means that the problem is not merely a lack of participation, but rather the existence of participatory forums that do not substantially change who makes decisions, who controls resources, and who bears the costs of conservation. In these cases, co-management can broaden the range of stakeholders involved, but not necessarily their ability to influence outcomes.

One limitation is the **gap between formal participation and actual influence**. In Sanjiangyuan National Park, Ma et al. (2023) show that the “one household, one post” model brought thousands of Tibetan herders on board as guardians of the protected area. However, planning for the park continues to be guided primarily by national and global objectives, with little input from local communities. This reduces local actors' leeway to set priorities and shifts their role from one of decision-making to one of an operational nature. A similar situation is observed in the ECAN system in Palawan, where Madarcos et al. (2022) point out that public participation is often incorporated late in the planning process, when many decisions have already been made. As a result, local stakeholders are familiar with the rules when they need to comply with them or

apply for permits, but not necessarily when those rules are being drafted. Jacob et al. (2023) also show that consultative processes can perpetuate historical inequalities when they prioritize technical and scientific knowledge over local knowledge. Taken together, these cases suggest that participation does not improve governance unless it translates into a real capacity to influence decision-making, recognition of local knowledge, and greater agency for traditionally marginalized groups.

A second limitation is the ***persistence of state control*** within arrangements that are presented as shared. In Peru's Communal Reserves, Sarmiento Barletti & Rolando (2024) show that the government transfers responsibility for monitoring and meeting conservation goals to indigenous organizations, but without an equivalent transfer of authority or financial resources. This limits the autonomy of indigenous leaders and forces them to operate within externally defined technical agendas, which are often far removed from community priorities. In Canada, Champagne-Côté et al. (2023) show a similar tension in the Akumunan Biodiversity Reserve: although the initiative is led by the Essipit Innu First Nation, the final decision rests with the government, which prevents the area from functioning fully as a protected territory under Indigenous self-determination. In Gili Balu, Indonesia, Christian et al. (2025) They also note that national legislation maintains conservation as a state responsibility, leaving communities in a collaborative role without decision-making power. These cases show that co-management is weakened when tasks are decentralized but power is not redistributed.

A third cause of poor governance in some shared arrangements is the ***inability to resolve structural conflicts over territory, rights, and access to resources***. Peltola et al. (2023) show that, in areas such as Hammastunturi, Finland, management plans tend to treat conflicts as technical planning issues, without addressing the power imbalances that affect the Sámi people and their territorial rights. Similarly, Won & Seto (2025) demonstrate that, in San Francisco Bay, current conflicts over access to coastal resources are linked to histories of exclusion, dispossession, and unjust planning that continue to limit the ability of vulnerable communities to exert influence. In Madagascar, Ward et al. (2018) point out that the creation of protected areas can drastically alter traditional access to resources when the rules are defined top-down by the government. This leads to perceptions of inequality, internal conflicts, and mistrust toward conservation projects. In these cases, co-management loses its legitimacy because it recognizes communities as participants, but not necessarily as holders of rights or territorial authorities.

A fourth limitation relates to the ***gap between institutional frameworks and actual implementation capacity***. In Kenya, Muok et al. (2021) show that reforms such as the devolution of powers and the 2016 Community Lands Act have progressed slowly and are not well known among pastoralist communities. This has led to unclear roles, overlapping jurisdictions, and conflicts over access to forest resources. In Hungary, Kovács et al. (2021) show that the adaptive co-management process in the soda plains depends largely on external and temporary funding, which calls into question its continuity once the LIFE project ends. Similarly, Macpherson et al. (2021) point out that ecosystem-based management often remains at the policy level when it is not translated into operational rules, coordinated institutions, and sufficient budgets. These cases show that laws, management plans, or collaborative discussions do not guarantee good governance if there is a lack of institutional capacity, stable funding, and clear mechanisms for implementing agreements.

Finally, several cases reveal a ***discrepancy between conservation costs and locally perceived benefits***. In the Communal Reserves of the Peruvian Amazon, Sarmiento Barletti & Rolando (2024) show that indigenous communities take on monitoring and conservation responsibilities, while facing restrictions on the ancestral use of resources such as timber and

hunting, without a corresponding transfer of decision-making power or funding. In the Giant Panda National Park in China, Shen et al. (2021) show that the creation of the protected area affected traditional livelihoods, such as the harvesting of timber and medicinal herbs, while the benefits offered—such as green jobs—were not always accessible to the local population due to educational or gender requirements. In the Galápagos Marine Reserve, Castrejón & Charles (2013) note that fishermen's expectations regarding alternative livelihoods and fishery recovery were not fully met, which reduced the credibility of institutions and encouraged noncompliance with regulations. Taken together, these cases show that conservation loses its legitimacy when it imposes restrictions without fair compensation, viable alternatives, or visible benefits for those who depend directly on the protected resources.

Session 2

Discussion and Conclusions

The results of this review show that the quality of governance in protected and conserved areas does not depend solely on the type of institutional arrangement adopted, but on how that arrangement functions in practice. Shared governance, for example, is often associated with more participatory models; however, the cases analyzed show that its effectiveness depends on whether local actors have a real influence on decisions, or whether their participation is limited to formal consultation forums. Therefore, rather than the label of the model, what seems to make the difference is the way in which power, authority, responsibilities, and benefits are distributed within the governance system.

Cases with higher levels of governance quality share several common elements. These include, notably, effective participation, recognition of local authority, community or indigenous leadership, trust among stakeholders, the integration of local and scientific knowledge, the existence of clear rules, adequate external support, and the generation of tangible benefits for communities. These factors do not operate in isolation. On the contrary, they reinforce one another: participation is stronger when rights are recognized; rules are more legitimate when they are based on local knowledge and practices; and tangible benefits strengthen trust, compliance, and the continuity of management agreements.

In this regard, community-based and shared arrangements with bottom-up approaches achieved better results because they tend to be rooted in a closer relationship between communities and the local area. In these cases, conservation is not viewed merely as a legal or technical obligation, but as part of a social, cultural, and economic relationship with the protected area. This gives decisions greater legitimacy and ensures that the rules are more widely accepted by those who live in, use, or care for these territories. Similarly, the most successful cases of co-management show that support from the government, NGOs, academia, or other external actors can be valuable when it strengthens local capacities without supplanting the communities' authority.

Conversely, cases of poor governance show that shared governance can fail when there is a gap between formal design and actual practice. Some arrangements include committees, councils, agreements, or participatory processes, but they still feature centralized decision-making, limited implementation capacity, unresolved territorial conflicts, or an unequal distribution of costs and benefits. In these contexts, co-management can become an incomplete form of participation, in which communities assume responsibilities but do not receive sufficient power, recognition, or

support to influence the management of the protected area. This helps explain why some formally collaborative models achieve low levels of governance quality.

These findings are particularly relevant for Honduras, where co-management agreements have been an important tool for the management and governance of protected areas, but face challenges related to institutional coordination, clarity of roles, political continuity, and operational capacity. The reviewed evidence suggests that strengthening co-management in the country requires going beyond simply signing agreements or creating forums for coordination. It is necessary to ensure that local stakeholders participate effectively in decision-making, that responsibilities are clearly defined, that accountability mechanisms are in place, and that conservation generates tangible benefits for local communities and indigenous peoples. It is also important to more clearly incorporate local knowledge, existing community structures, and financial mechanisms that will enable management actions to be sustained over time.

In conclusion, this review shows that shared and community-based governance can contribute significantly to improving the management and governance of protected areas, but only when it translates into genuine participation, recognition of rights, trust, and effective decision-making capacity. Co-management, in and of itself, does not guarantee good governance. Its quality depends on the parties involved sharing not only responsibilities, but also authority, resources, information, and benefits. In contexts such as Honduras, the challenge is not only to expand co-management schemes but also to improve their institutional, social, and operational quality, so that protected areas can meet their conservation objectives without disconnecting from the needs, rights, and aspirations of the local communities and indigenous peoples who inhabit and use these territories.

Finally, this study has some limitations. The review was based on peer-reviewed articles available in full text and published in English; therefore, some relevant findings documented in gray literature, technical reports, or studies in other languages may have been excluded from the analysis. In addition, the assessment of governance quality depended on the information reported by each study, which may result in differences in the level of detail available across cases. Nevertheless, the combination of a systematic review, a classification of governance arrangements, the development of a comparative index, and qualitative analysis made it possible to identify consistent patterns regarding the conditions that strengthen or weaken governance in protected and conserved areas. Despite these limitations, the use of the PRISMA protocol, the explicit definition of inclusion and exclusion criteria, systematic data extraction, and the combination of quantitative and qualitative analyses enhance the transparency and consistency of the review.

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