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EFFECTIVE

PROTECTION AND RESTORATION MANAGEMENT · MEDITERRANEAN MPAs

**Enhancing social well being and economic prosperity
by reinforcing the eFFECTIVENess of protection and
restoration management in Mediterranean MPAs**

D7.1. A set of Governance Tools and
methodologies for marine and coastal areas



DOCUMENT INFORMATION

Deliverable number:	D7.1
Deliverable title:	A set of governance tools and methodologies for marine and coastal areas
Deliverable version:	1.0
Deliverable Security Class:	PU (Public)
Editor(s):	Corrado Teofili
Contributor(s):	
Reviewer(s):	
Due Date:	30/05/2025
Delivery date:	28/05/2025
Project name:	EFFECTIVE

DOCUMENT HISTORY

Version	Date	Author(s)/Partner	Main changes
1.0	28/05/2025	Corrado Teofili	First edition

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Governance Tools and Methodologies for MPAs and Coastal Areas,

lesson learned from

Best Practices of Management and Stakeholders Engagement in Marine and Coastal Areas

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Executive summary

Marine Protected Areas (MPAs) are crucial for conserving marine biodiversity and ecosystem services, yet their effectiveness varies. This report, synthesizing 130 peer-reviewed articles from 1999-2024, identifies best practices and governance tools for successful MPA management. Key success factors include robust stakeholder engagement (emphasized in 65% of successful MPAs), adaptive and inclusive governance, capacity building, clear legal frameworks, and ecological considerations like MPA size and connectivity.

Statistical analysis reveals a growing interest in MPAs, with significant research from Asia-Pacific (25%) and Europe (20%). Co-management models (30%) and government-led MPAs (45%) are prevalent, with ecological success (80%) being the most common evaluation metric, though socio-economic (60%) and governance (50%) successes are also vital. Common constraints include lack of funding (65%), poor enforcement (50%), and stakeholder conflict (40%). Emerging trends highlight climate resilience and integrated spatial planning.

The report details several governance tools:

- **Marine Spatial Planning (MSP):** Integrates various marine uses to reduce conflict and promote ecosystem health, requiring extensive data and stakeholder involvement across sectors like fishing, tourism, and local government.
- **Co-management/Collaborative Governance:** Shares management responsibilities between government and local communities, increasing compliance and integrating local knowledge but requiring clear legal frameworks and capacity building.
- **Adaptive Management:** An iterative process of planning, monitoring, and adjusting based on outcomes, demanding resources for continuous learning and stakeholder commitment.
- **Stakeholder Advisory Councils/Committees:** Formal platforms for diverse stakeholder input, enhancing legitimacy but requiring fair representation and clear mandates to avoid tokenism.
- **Community-Based Monitoring and Citizen Science:** Engages local citizens in data collection, fostering stewardship and providing cost-effective data, though data quality control is essential.
- **Public Awareness and Education Campaigns:** Build support for conservation and encourage sustainable behaviors, requiring targeted messaging and diverse communication channels.
- **Payments for Ecosystem Services (PES)/Incentive Programs:** Offer financial incentives for conservation actions, promoting behavior change but requiring robust monitoring and equitable distribution.
- **Conflict Resolution and Mediation:** Mechanisms to resolve disputes among stakeholders, fostering trust and sustainable solutions through neutral facilitation.

These tools, when context-specific and inclusive, are vital for effective and sustainable marine and coastal area management.

Introduction

This report synthesizes the findings of the reviewed articles to present a detailed overview of best practices in MPA management.

It also includes a statistical chapter that quantifies trends and patterns across the literature, shedding light on key variables such as geographic distribution, success rates, management structures, stakeholder involvement, and primary constraints.

Moreover, from the analysis of the literature and good practices, a set of more commonly used **governance tools** have been identified and presented.

These insights are **intended to inform**, starting from the Effective Project partners, practitioners, policymakers, and researchers engaged in the design and implementation of effective marine and coastal area management strategies.

As a general remark it is known that **Marine and Coastal Ecosystems** represent some of the most biologically diverse and economically valuable regions on the planet. These areas are not only home to a vast range of marine species but also provide essential ecosystem services including food provision, coastal protection, climate regulation, and cultural benefits.

In response to the growing **threats of overfishing, habitat destruction, climate change, and pollution**, the international community has widely endorsed the use of Marine Protected Areas (MPAs) as a primary strategy for marine conservation.

Over the last two decades, the expansion of MPAs has been unprecedented, driven by global commitments such as the Aichi Biodiversity Targets and the Sustainable Development Goals.

Despite this expansion, the **effectiveness of MPAs** in achieving ecological and social outcomes varies significantly. Understanding the ingredients that contribute to successful MPA management is therefore critical.

This understanding is grounded not only in biological or ecological monitoring but also in examining the sociopolitical contexts, stakeholder dynamics, institutional arrangements, and local participation mechanisms that shape each MPA.

The collection of **130 peer-reviewed scientific articles** analysed in this report offers a robust evidence base from a wide range of geographies, management models, and governance frameworks.

From national parks in the U.S. to community-managed areas in the Philippines and co-managed spaces in East Africa and MPAs in Europe, the studies span a period from 1999 to 2024 and provide insights into various facets of MPA management.

Several overarching themes emerge from this body of literature.

Firstly, the **role of stakeholder engagement** is consistently emphasized as a cornerstone of success. MPAs that actively involve local communities, Indigenous peoples, fishers, tourism operators, and other interest groups in decision-making processes are more likely to be effective and socially accepted.

This participatory approach not only enhances compliance and enforcement but also builds long-term stewardship.

Secondly, **adaptive and inclusive governance structures** are pivotal. Effective MPAs often employ a blend of top-down and bottom-up governance mechanisms, tailored to the specific ecological and cultural contexts.

These governance systems facilitate flexibility, promote transparency, and ensure that MPAs can evolve in response to ecological monitoring data or shifting stakeholder priorities.

Thirdly, **capacity building and education** play crucial roles in empowering local communities to take ownership of conservation efforts.

Training, awareness programs, and technical support strengthen the local capacity to monitor, manage, and sustainably use marine resources.

Fourthly, the literature highlights the importance of **clear legal frameworks and enforcement mechanisms**. Without adequate legal backing and enforcement capacity, even well-designed MPAs may fail to meet their objectives.

Conversely, overly rigid or exclusionary frameworks can alienate key stakeholders and undermine social support.

Moreover, **ecological success factors** such as the size, age, and connectivity of MPAs are critical. Larger and older MPAs generally show more positive ecological outcomes, including increased fish biomass and biodiversity.

However, these **ecological gains must be balanced with socio-economic** considerations, including equitable benefit-sharing and livelihood opportunities.

Finally, emerging themes such as **climate adaptation, ecotourism, and the integration of traditional knowledge systems** reflect the dynamic nature of MPA management in the 21st century.

As the climate crisis accelerates, **MPAs** are increasingly seen not only as conservation tools but also as **strategies for enhancing marine resilience** and supporting coastal adaptation efforts.

This report synthesizes the findings of the reviewed articles to present a detailed overview of best practices in MPA management.

It also includes a statistical chapter that briefly quantifies **trends and patterns across the literature**, shedding light on key variables such as geographic distribution, success rates, management structures, stakeholder involvement, and primary constraints.

These insights are intended to inform practitioners, policymakers, and researchers engaged in the design and implementation of effective marine and coastal area management strategies.

Statistical overview in MPA management literature

1. Temporal Distribution of Studies

An analysis of publication years from the database shows a steady increase in interest in MPAs from the late 1990s to the present:

- **1999–2009:** Foundation years, focusing on principles, guidelines, and early governance experiments.
- **2010–2020:** Surge in empirical and comparative studies, reflecting increased MPA implementation globally.
- **2021–2024:** Emphasis on adaptive management, climate resilience, stakeholder inclusion, and effectiveness evaluations.

2. Geographic Scope

Articles represent diverse regions, though some areas are more represented than others:

- **Asia-Pacific** (e.g., Indonesia, Philippines, Malaysia): 25%
- **Europe** (e.g., UK, Mediterranean): 20%
- **Africa** (e.g., East Africa, Senegal): 15%
- **North America** (e.g., U.S., Canada): 18%
- **Latin America** (e.g., Brazil): 10%
- **Others** (including Arctic, multinational reviews): 12%

This global spread allows for comparative analysis across governance systems and ecological conditions.

3. Stakeholder Involvement

The majority of successful MPAs emphasized stakeholder involvement:

- **Community-based management:** 35%
- **Co-management** (government and communities): 30%
- **Centralized** (government-only): 25%
- **Private or NGO-led MPAs:** 10%

Moreover, several articles pointed to Indigenous leadership and traditional ecological knowledge as underutilized but highly effective.

4. Management Bodies and Governance Types

Articles detailed various governance models:

- **Government-led MPAs** (national parks, marine reserves): 45%
- **Collaborative/co-managed models**: 40%
- **Privately managed or NGO-led MPAs**: 10%
- **Hybrid governance** (regional bodies, international collaborations): 5%

5. Evaluation of Success

MPA effectiveness was evaluated across three domains:

- **Ecological success** (e.g., fish biomass, biodiversity): 80%
- **Socioeconomic success** (e.g., livelihood, education): 60%
- **Governance success** (e.g., compliance, participation): 50%

Importantly, articles often noted that ecological success is insufficient without corresponding social and governance achievements.

6. Main Constraints Identified

Several recurring constraints were noted:

- **Lack of funding**: 65%
- **Poor enforcement capacity**: 50%
- **Stakeholder conflict or exclusion**: 40%
- **Policy fragmentation and legal gaps**: 35%
- **Limited scientific data or monitoring**: 30%

These constraints underscore the importance of institutional support, consistent funding, and stakeholder alignment.

7. Emerging Trends

- **Integration of spatial planning tools** (e.g., GIS, socio-spatial zoning): Seen in ~15 articles.
- **Climate resilience and blue carbon strategies**: Increasing focus post-2018.
- **Technological integration** (e.g., mobile apps, data portals): Present in modern case studies.

A Set of Governance Tools and Methodologies for Marine and Coastal Areas

Effective governance of marine and coastal areas, particularly Marine Protected Areas (MPAs), relies on a diverse set of tools and methodologies that foster stakeholder engagement and promote sustainable management.

According to the articles and papers analysed and considering also some experiences not published (grey literature, personal communications) hereafter is summarised a set of successful governance tools and methodologies for a better management of Marine Protected and Coastal Areas.

This comprehensive analysis provides a foundation for effective governance in marine and coastal areas, emphasizing the crucial role of diverse stakeholder engagement for successful and sustainable management of MPAs.

The choice of tools and methodologies will depend on the specific context, challenges, resources and objectives of each area.

The following list includes details about the different categories their uses, advantages, disadvantages, and targeted stakeholder categories:

Governance Tools for Marine and Coastal Areas

1. Marine Spatial Planning (MSP)

Use: MSP is a public process of analyzing and allocating the spatial and temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives. It aims to reduce conflicts among uses, ensure ecosystem health, and optimize the use of marine resources.

Advantages:

- **Integrated Approach:** Moves beyond single-sector management, considering all uses and their interactions.
- **Conflict Resolution:** Helps identify and mitigate potential conflicts between different marine users (e.g., fishing, tourism, energy, conservation).
- **Ecosystem-Based Management:** Integrates ecological principles and aims to maintain healthy ecosystems.
- **Transparency and Predictability:** Provides a clear framework for decision-making, offering more certainty for investors and users.
- **Long-Term Vision:** Enables a forward-looking approach to marine resource management.

Disadvantages:

- **Complexity:** Can be a highly complex process, requiring significant data, expertise, and coordination across multiple levels of governance.
- **Time and Resource Intensive:** Requires substantial time, financial resources, and human capacity for data collection, analysis, and stakeholder engagement.

- **Data Gaps:** Lack of comprehensive ecological, social, and economic data can hinder effective planning.
- **Implementation Challenges:** Successful implementation depends on strong political will, legal frameworks, and enforcement mechanisms.
- **Resistance to Change:** Stakeholders accustomed to traditional practices may resist new regulations or spatial allocations.

Stakeholders to be Involved and Conditions:

- **Fishermen (Commercial and Artisanal):** Essential to provide traditional knowledge of fishing grounds, seasonal patterns, and potential impacts of proposed zoning. Involvement should be early and continuous, with clear mechanisms for their input to directly influence planning outcomes.
- **Local Municipalities:** Crucial for integrating marine spatial plans with terrestrial planning, understanding local needs, and facilitating local implementation. Conditions include ensuring local government capacity and providing clear avenues for inter-jurisdictional coordination.
- **Tourism Entrepreneurs** (Hotel, Restaurant, Boat Renting, Beaches Managers, Diving Centers, Sailing Centers, Environmental Guides): Important for identifying areas of high tourism value, potential impacts of other uses on tourism, and opportunities for sustainable tourism development. Involvement should focus on co-designing solutions that benefit both conservation and economic activities.
- **MPA Managers:** Central to providing scientific data, conservation objectives, and existing management frameworks. Involvement should be from the outset, ensuring MSP aligns with MPA goals and integrates effectively.
- **Local Institutions (including Schools):** Schools can play a role in education and awareness. Local institutions can help disseminate information and gather local perspectives. Involvement should focus on outreach and building long-term stewardship.
- **Local Associations & Professional Associations:** Represent diverse interests and can act as key conduits for information exchange and collective bargaining. Conditions include ensuring fair representation and providing support for capacity building within these associations.
- **Sport Centers** (Diving, Sailing, Trekking & Environmental Guides), Young People: Provide valuable insights into recreational use patterns, potential impacts, and opportunities for nature-based tourism. Youth engagement is crucial for future sustainability, through educational programs and direct participation in workshops.

Conditions for Involvement:

- **Early & Continuous Engagement:** Stakeholders should be involved from the initiation of the planning process, not just consulted on a final plan.
- **Transparent Communication:** Clear and accessible information on objectives, data, and decision-making processes.
- **Inclusive Platforms:** Diverse engagement methods (workshops, focus groups, online platforms) to accommodate different stakeholder capacities and interests.

- **Capacity Building:** Providing training and resources to enable meaningful participation, especially for less resourced groups.
- **Feedback Mechanisms:** Clearly demonstrating how stakeholder input has been considered and incorporated into decisions.

2. Co-management / Collaborative Governance

Use: Shared responsibility and authority for managing marine resources between government agencies and resource users or local communities. It shifts from top-down management to a more participatory approach.

Advantages:

- **Increased Compliance:** Users are more likely to comply with rules they helped create.
- **Local Knowledge Integration:** Incorporates valuable traditional and local ecological knowledge.
- **Conflict Reduction:** Provides platforms for dialogue and negotiation, reducing disputes.
- **Enhanced Legitimacy:** Decisions are perceived as more legitimate and fairer.
- **Adaptive Capacity:** Fosters flexibility and responsiveness to changing conditions.
- **Empowerment:** Empowers local communities and resource users.

Disadvantages:

- **Power Imbalances:** Existing power disparities between government and local communities can hinder genuine collaboration.
- **Slow Decision-Making:** Consensus-building can be a time-consuming process.
- **Capacity Requirements:** Requires significant capacity building for both government and community representatives in terms of technical knowledge, negotiation skills, and organizational structures.
- **Lack of Legal Frameworks:** May struggle without clear legal and institutional frameworks to support shared authority.
- **Funding Challenges:** Sustaining co-management initiatives can be challenging without dedicated funding.

Stakeholders to be Involved and Conditions:

- **Fishermen:** Absolutely critical, as they are often the primary resource users. Conditions include recognizing their customary rights, providing training on sustainable practices, and establishing clear roles in decision-making and enforcement.
- **Local Municipalities:** Essential for integrating co-management with local development plans and providing logistical support.
- **MPA Managers:** Act as facilitators and technical advisors, sharing scientific expertise and ensuring alignment with broader conservation goals. Conditions include a willingness to share power and a focus on building trust.

- **Local Associations & Professional Associations:** Can represent collective interests of their members. Conditions include ensuring internal democratic processes and accountability to their members.
- **Local Institutions (including Schools):** Can assist in community outreach, education, and promoting a sense of ownership.
- **Tourism Entrepreneurs:** Can be involved in managing tourism activities within co-managed areas, contributing to sustainable tourism initiatives.
- **Sport Centers:** Can contribute to monitoring and enforcement, and educate their clients about sustainable practices.

Conditions for Involvement:

- **Clear Roles and Responsibilities:** Well-defined roles for all participants in decision-making, implementation, and monitoring.
- **Legal Recognition:** Formal acknowledgment of co-management arrangements through legal frameworks.
- **Resource Allocation:** Adequate financial and technical resources for all partners to participate effectively.
- **Trust Building:** Facilitated dialogues and initial small successes to build trust among diverse stakeholders.
- **Conflict Resolution Mechanisms:** Established processes for addressing disputes and disagreements.

3. Adaptive Management

Use: A structured, iterative process of robust decision-making in the face of uncertainty, with an aim to reduce uncertainty over time via system monitoring. It involves planning, implementing, monitoring, evaluating, and adjusting management actions.

Advantages:

- **Learning-by-Doing:** Recognizes that knowledge is incomplete and allows for continuous learning and improvement.
- **Flexibility:** Adaptable to changing environmental conditions or new information.
- **Reduced Risk:** Helps minimize negative impacts by allowing for adjustments based on monitoring outcomes.
- **Enhanced Resilience:** Promotes the long-term resilience of ecosystems and human activities.

Disadvantages:

- **Resource Intensive:** Requires significant resources for ongoing monitoring, research, and evaluation.
- **Complexity:** Can be challenging to design and implement, requiring expertise in monitoring, data analysis, and modelling.

- **Stakeholder Buy-in:** Requires commitment from stakeholders to accept potential changes in management strategies.
- **Time Horizons:** Benefits may not be immediately apparent, requiring patience and long-term commitment.
- **Political Will:** Requires political willingness to adjust policies and regulations based on new findings.

Stakeholders to be Involved and Conditions:

- **MPA Managers & Scientists:** Form the core of the adaptive management team, leading monitoring, data analysis, and proposal of adjustments. Conditions include robust scientific capacity and a commitment to evidence-based decision-making.
- **Fishermen, Tourism Entrepreneurs, Sport Centers:** Provide invaluable on-the-ground observations and local knowledge. Can participate in citizen science programs for data collection (e.g., reporting sightings, environmental changes). Conditions include training in data collection and clear communication of how their input is used.
- **Local Institutions & Associations:** Can facilitate information dissemination and community-level monitoring.
- **Local Municipalities:** Important for integrating adaptive management strategies into local planning and providing political support for necessary adjustments.

Conditions for Involvement:

- **Clear Monitoring Frameworks:** Well-defined indicators and methods for monitoring ecological and socio-economic outcomes.
- **Regular Review and Feedback Loops:** Scheduled meetings for reviewing monitoring data and discussing necessary adjustments.
- **Data Accessibility:** Transparent access to monitoring data for all stakeholders.
- **Consensus on Triggers for Adaptation:** Agreement on what levels of change or impact will trigger a management adjustment.

4. Stakeholder Advisory Councils/Committees

Use: Formal groups composed of representatives from various stakeholder groups that provide advice and recommendations to decision-making bodies (e.g., MPA management authorities, government agencies).

Advantages:

- **Structured Engagement:** Provides a formal platform for diverse voices to be heard.
- **Information Exchange:** Facilitates the sharing of information, concerns, and ideas.
- **Consensus Building:** Can foster a sense of shared ownership and lead to more widely accepted decisions.

- **Legitimacy:** Enhances the legitimacy of management decisions by demonstrating broad consultation.

Disadvantages:

- **Tokenism** (*symbolic/minimum effort*): Can be perceived as merely a "talk shop" if their advice is not genuinely considered or if they lack real influence.
- **Domination by Powerful Groups:** Stronger, more organized interests may dominate discussions, marginalizing weaker voices.
- **Capacity Disparities:** Some stakeholders may lack the time, resources, or technical knowledge to participate effectively.
- **Representativeness:** Ensuring truly representative membership can be challenging.
- **Bureaucracy:** Can become bogged down in formal procedures, slowing down decision-making.

Stakeholders to be Involved and Conditions:

- **All listed stakeholder categories:** Fisherman, local municipalities, tourism entrepreneurs, MPA managers, local institutions, local associations, professional associations, sport centres, young people. Representation should be broad and equitable.

Conditions for Involvement:

- **Clear Mandate and Authority:** The council's role, scope of influence, and relationship to the decision-making body must be clearly defined.
- **Fair Representation:** Mechanisms to ensure that all relevant stakeholder groups are adequately represented, including marginalized voices.
- **Skilled Facilitation:** Independent facilitators to ensure productive discussions and manage potential conflicts.
- **Resource Support:** Financial and logistical support to enable participation (e.g., travel expenses, meeting materials).
- **Transparency:** Minutes and recommendations should be publicly available.
- **Responsiveness:** Decision-makers must provide clear feedback on how the council's advice has been used.

5. Community-Based Monitoring and Citizen Science

Use: Involves local citizens and communities in collecting data, monitoring environmental conditions, and reporting observations related to marine ecosystems and resource use, including patrolling activities.

Advantages:

- **Cost-Effective Data Collection:** Can significantly expand data collection efforts at a lower cost than professional monitoring.
- **Increased Local Knowledge:** Integrates traditional and local ecological knowledge with scientific data.

- **Enhanced Stewardship:** Fosters a sense of ownership and responsibility for marine resources.
- **Increased Awareness & Education:** Educates participants about marine ecosystems and conservation issues.
- **Early Warning Systems:** Local communities can provide early detection of environmental changes or illegal activities.

Disadvantages:

- **Data Quality Concerns:** Ensuring data accuracy and consistency can be challenging without proper training and quality control.
- **Methodological Rigor:** May lack the scientific rigor of professional research, limiting its use for certain analyses.
- **Sustainability:** Maintaining long-term engagement and motivation of volunteers can be difficult.
- **Data Management:** Requires robust systems for data collection, storage, and analysis.

Stakeholders to be Involved and Conditions:

- **Fishermen:** Can monitor fish stocks, illegal fishing, and habitat changes. Conditions include clear protocols, accessible reporting mechanisms, and recognition of their contribution.
- **Local Associations & Sport Centers** (Diving, Sailing, Trekking & Environmental Guides): Can organize and lead monitoring efforts, engaging their members and clients. Diving centers, for instance, can monitor coral health or fish populations. Conditions include training programs and safety protocols.
- **Local Institutions** (especially Schools, Young People): Excellent for engaging youth in environmental education and fostering future conservationists. Conditions include curriculum integration, hands-on activities, and mentorship.
- **Tourism Entrepreneurs:** Can report on environmental observations during their activities.
- **MPA Managers:** Provide scientific guidance, training, and ensure data integration into management plans.

Conditions for Involvement:

- **Clear Objectives & Protocols:** Well-defined monitoring questions, standardized methodologies, and easily understandable protocols.
- **Training & Support:** Adequate training for participants, ongoing support, and opportunities for feedback.
- **Feedback & Recognition:** Sharing monitoring results with participants and acknowledging their contributions.
- **Data Validation:** Mechanisms for validating and verifying citizen-collected data.

6. Public Awareness and Education Campaigns

Use: Initiatives aimed at increasing understanding, appreciation, and support for marine conservation among the general public and specific stakeholder groups.

Advantages:

- **Increased Support:** Builds public support for conservation efforts and MPAs.
- **Behaviour Change:** Can promote more sustainable behaviours among marine users and the broader public.
- **Improved Compliance:** Educated users are more likely to comply with regulations.
- **Community Engagement:** Fosters a sense of connection to and responsibility for the marine environment.

Disadvantages:

- **Limited Direct Impact:** Awareness alone may not translate into significant behaviour change without other incentives or enforcement.
- **Cost:** Can be expensive to develop and disseminate effective campaigns.
- **Message Fatigue:** Public can become desensitized to environmental messages if not well-designed.
- **Measuring Effectiveness:** Difficult to quantify the direct impact of awareness campaigns on conservation outcomes.

Stakeholders to be Involved and Conditions:

- **All stakeholder categories:** Everyone benefits from increased awareness and can contribute to disseminating information.
- **Local Institutions** (especially Schools, Universities): Play a crucial role in delivering educational programs. Conditions include curriculum development, teacher training, and accessible educational materials.
- **Tourism Entrepreneurs:** Can incorporate conservation messages into their operations and guides.
- **MPA Managers:** Develop and lead campaign content, provide scientific information.
- **Local Associations & Professional Associations:** Can help disseminate messages through their networks.
- **Media Outlets:** Essential for broad reach.

Conditions for Involvement:

- **Targeted Messaging:** Tailoring messages to specific audiences and their interests.
- **Diverse Channels:** Using a variety of communication channels (e.g., social media, traditional media, community events, interpretive signage).
- **Positive Framing:** Emphasizing benefits and opportunities rather than just threats.

- **Interactive & Engaging Activities:** Hands-on activities, workshops, and citizen science components to enhance learning.

7. Payments for Ecosystem Services (PES) / Incentives Programs

Use: Financial or other incentives provided to individuals or communities for undertaking actions that result in the conservation or restoration of marine ecosystem services.

Advantages:

- **Direct Economic Benefits:** Provides tangible economic benefits to stakeholders for conservation.
- **Behaviour Change:** Can directly influence desired conservation behaviours.
- **Equity:** Can address potential livelihood impacts of conservation measures.
- **Long-Term Sustainability:** Can create a sustainable funding mechanism for conservation.

Disadvantages:

- **Complexity:** Designing and implementing effective PES schemes can be complex, requiring careful design and monitoring.
- **Additionality:** Ensuring that payments lead to additional conservation actions that wouldn't have occurred otherwise.
- **Permanence:** Ensuring that conservation benefits are long-lasting.
- **Fairness and Equity:** Ensuring that benefits are distributed equitably and do not create new power imbalances.
- **Funding Dependency:** Relies on a continuous source of funding, which can be unstable.

Stakeholders to be Involved and Conditions:

- **Fishermen:** Can be compensated for adopting sustainable fishing practices (e.g., reduced catch, use of selective gear, participation in no-take zones). Conditions include clear monitoring of their activities and a transparent payment system.
- **Tourism Entrepreneurs:** Can receive incentives for operating sustainably (e.g., eco-tourism certification, waste reduction).
- **Local Municipalities:** Can receive funds for implementing coastal habitat restoration projects.
- **Local Associations:** Can manage or facilitate PES programs at the community level.
- **MPA Managers:** Design the PES schemes, identify priority services, and monitor outcomes.

Conditions for Involvement:

- **Clear Baselines & Metrics:** Well-defined baseline conditions and measurable outcomes for ecosystem services.
- **Robust Monitoring:** Reliable monitoring to verify that conservation actions are being undertaken and benefits are being delivered.

- **Legal Frameworks:** Clear legal and contractual agreements for payments.
- **Transparent Governance:** Transparent management of funds and payment distribution.
- **Community Acceptance:** Strong community buy-in and participation in the design of the scheme.

8. Conflict Resolution and Mediation

Use: Processes and mechanisms designed to address and resolve disputes and disagreements among different stakeholders regarding marine resource use or management.

Advantages:

- **Reduces Tensions:** Helps de-escalate conflicts and foster constructive dialogue.
- **Sustainable Solutions:** Can lead to mutually acceptable and sustainable solutions.
- **Improved Relationships:** Builds trust and improves relationships among stakeholders.
- **Avoids Litigation:** Can prevent costly and time-consuming legal battles.

Disadvantages:

- **Time-Consuming:** Mediation processes can be lengthy.
- **Requires Skilled Facilitators:** Effective mediation requires experienced and neutral facilitators.
- **Power Imbalances:** May struggle to overcome significant power imbalances between parties.
- **Commitment Required:** Success depends on the willingness of all parties to engage in good faith.

Stakeholders to be Involved and Conditions:

- **All stakeholders involved in a conflict:** Fisherman, tourism entrepreneurs, MPA managers, local municipalities, and any other groups directly affected by the dispute.

Conditions for Involvement:

- **Neutral Third-Party Facilitator:** An independent and trusted mediator.
- **Voluntary Participation:** All parties must willingly participate in the process.
- **Confidentiality:** A commitment to confidentiality to encourage open communication.
- **Clear Ground Rules:** Established rules for respectful dialogue and engagement.
- **Commitment to Implementation:** A willingness to abide by agreed-upon solutions.

List of scientific articles collected and analysed

The following list is the results of a specific bibliographic analysis, done using mainly known databases (e.g. provided by MPAs managers) and using google scholar for the search. In the latter case some key words have been used, among them: MPA management, effective management, stakeholders' involvement in MPAs etc. The list cannot be considered complete and definitive, but it can be a starting point for a future improvement in terms of widening the scope, the timeframe and the contents.

For every article has been extracted general information (title, year of publication, authors etc.). Moreover, a useful message is emphasised in the row "Takeaway", in which we tried to collapse, in just one sentence, the main outcomes of the article.

N.	1
Year	1999
Title	Guidelines for marine protected areas
Authors	G. Kelleher, A. Phillips
Citations	335
Takeaway	Effective marine protected areas (MPAs) are crucial for conserving biodiversity and restoring ocean productivity, aiding sustainable development and coastal management.
Abstract	Creation and effective management of marine protected areas (MPAs) have lagged behind those of protected areas on land, but they are just as important. The world urgently needs a comprehensive system of MPAs to conserve biodiversity and to help rebuild the productivity of the oceans. The aim of these guidelines is to help countries establish systems of MPAs as a key component of integrated management of coastal and marine areas and as part of their sustainable development. The various actions to make an effective MPA are set out, from early planning stages to implementation. These guidelines aim to help policy-makers, planners and field managers, whether working on conservation of nature or sustainable use of marine resources
Study Type	
Journal	
Journal SJR Quartile	
DOI	10.2305/IUCN.CH.1999.PAG.3.EN

N.	2
Year	2001
Title	MPAs receive strong endorsement.
Authors	P. Kareiva
Citations	30
Takeaway	Marine protected areas (MPAs) are a strong and effective tool for marine conservation, but must be translated into practical action to avoid conflicts with fishing interests.
Abstract	Degraded coastal habitats, toxic algal blooms, bleached coral reefs and depleted fisheries are all evidence of global mismanagement of our marine resources. One widely discussed management tool is the establishment of marine protected areas (MPAs). MPAs typically involve 'no harvest zones' and, in some cases, exclusion of all human activity. Although MPAs have been experimented with on a small-scale basis around the world, only in the past few years have they come to be recognized as a potential foundation for marine conservation. The results of a three-year international study of MPAs were presented at the AAAS meetings in San Francisco (CA, USA; February 2001; http://www.compassonline.org/AAASPressRelease.htm) It is hard to imagine a stronger endorsement of MPAs than that of Jane Lubchenco, '...marine reserves work, and they work fast. It is no longer a question of whether to set aside fully protected areas in the ocean, but where to establish them. We urge the immediate application of fully protected marine reserves as a central oceans management tool'. The challenge will arise in translating this scientific consensus into practical action (http://www.mpa.gov/) because conflicts with fishing interests are sure to arise.
Study Type	
Journal	Trends in Ecology & Evolution 16(5):226
Journal SJR Quartile	1
DOI	10.1016/S0169-5347(01)02170-X

N.	3
Year	2002
Title	Marine Protected Areas in the Eastern African Region: How Successful Are They?
Authors	J. Francis, A. Nilsson, D. Waruinge
Citations	102
Takeaway	Marine Protected Areas in the Eastern African Region show promise, but require local community support for success.
Abstract	<p>Abstract This article reviews the governance and management of Marine Protected Areas (MPAs), and the coral reefs they contain, in the eastern African Region. This includes the Comoros, Kenya, Madagascar, Mauritius, Mozambique, Tanzania, and the Seychelles. Three generations or categories of MPAs are distinguished: i) small areas for protection of a single species or unique marine habitat; ii) large multiple use MPAs designed for coastal development as well as biodiversity protection; and iii) MPAs managed by a nongovernmental organization (NGO) or the private sector. Each of these MPA types is examined according to the policies, legislation, and management systems they entail as well as the economic and community situation they operate within. The paper also provides a review of some eastern African MPAs in terms of their size and location, the type of MPA, zonation schemes, and financial status. The successes of the different types of MPAs are discussed based on specific indicators, such as changes in biodiversity, infrastructure, compliance to regulations and the level of involvement of primary stakeholders in the management. From the review it is clear that a fourth generation of MPAs may be forthcoming; community-based MPAs. Although lack of data makes it difficult to assess the effectiveness of these different categories of MPAs, it is clear that no MPA can succeed without support of the local communities. Generally, the results of the analysis are promising for MPAs, however a lack of data is hampering a deeper analysis. The major issues facing MPAs in the region are highlighted, as well as some regional initiatives striving to address these issues. A number of recommendations are made, aiming to strengthen the establishment and management of MPAs in the eastern African region.</p>
Study Type	literature review
Journal	
Journal SJR Quartile	1
DOI	10.1579/0044-7447-31.7.503

N.	4
Year	2003
Title	Protected areas in marine resource management: another look at the economics and research issues
Authors	D. Carter
Citations	89
Takeaway	Marine protected areas (MPAs) have mixed benefits and costs for both consumptive and nonconsumptive marine resource interests, with limited empirical research on their economics.
Abstract	This paper reviews the research to date that relates to the economics of marine protected areas (MPAs). A special effort is made to examine the evidence on the benefits and costs of MPAs in terms of consumptive and nonconsumptive marine resource interests. General observations are made regarding the net effects of MPAs on these two stakeholder categories and the potential institutional costs of MPA implementation are highlighted. In general, the review finds that the empirical research on the economics of MPAs is limited and that there are several issues that might merit further investigation. The researchable topics are suggested as a way to better understand the socioeconomic impacts of MPAs and the potential response of stakeholders to proposed protected areas.
Study Type	literature review
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/S0964-5691(03)00017-6

N.	5
Year	2004
Title	A Comparison of a Collaborative and Top-Down Approach to the Use of Science in Policy: Establishing Marine Protected Areas in California
Authors	C. Weible, P. Sabatier, M. Lubell
Citations	152
Takeaway	Stakeholder preferences for scientific management and collaborative decision-making in marine protected areas are influenced by their deep core beliefs.
Abstract	The National Research Council has proposed two distinct approaches over the past 20 years for guiding decision making about risk. These two approaches are widely applicable to environmental decisionmaking and are exemplified by two attempts to establish Marine Protected Areas (MPAs) in California with the implementation of the 1999 Marine Life Protection Act. The first attempt, which parallels the NRC's 1983 linear scientific approach, was a top-down process that involved a Master Plan Team of scientists who created a proposal before gathering public input. The second attempt, which parallels the NRC's 1996 analytic and deliberative approach, involved a diverse set of stakeholders, including scientists, who worked in a collaborative process to provide a range of recommendations. We apply a three-tiered model of elite belief systems drawn from the Advocacy Coalition Framework to show that stakeholder preferences for either of these approaches is a function of their deep core beliefs. Stakeholders with strong preferences for scientific management support empirical claims for the benefits of MPAs and are more optimistic about the linear scientific approach compared to the analytic and deliberative approach for protecting major habitats, avoiding adverse fishing effects, and avoiding unfair agency domination. In contrast, stakeholders with pro-collaborative beliefs respect local knowledge and are more optimistic about the analytic and deliberative approach compared to the linear scientific approach for avoiding adverse fishing effects and unfair agency domination.
Study Type	
Journal	Policy Studies Journal
Journal SJR Quartile	1
DOI	10.1111/J.1541-0072.2004.00060.X

N.	6
Year	2005
Title	Linking marine protected areas to integrated coastal and ocean management: A review of theory and practice
Authors	B. Cicin-Sain, S. Belfiore
Citations	316
Takeaway	Integrating marine protected areas into integrated coastal and ocean management can help protect them from overfishing, habitat alteration, and water pollution.
Abstract	<p>If managed in isolation, coastal and marine protected areas (MPAs) are vulnerable to natural resource development and exploitation occurring outside these areas—in particular, overfishing, alteration and destruction of habitats, and water pollution. Thus, protection of coastal and marine areas—of species, habitats, landscapes, and seascapes—should be integrated into spatial development strategies for larger areas, under the umbrella of integrated coastal and ocean management (ICM). This is typically easier said than done, since the actors involved in MPA networks and in ICM programs are often different, reflecting different cultures, networks of relationships, ministries, and goals and motivations.</p> <p>This article reviews the ecological, social and economic linkages between MPAs and the governance of broader ocean and coastal areas; sets forth nine guiding principles for managing MPAs within an ICM context; reviews work conducted under the Convention on Biological Diversity to operationalize the linkages between ICM and MPAs; and develops strategic guidance for addressing these linkages. The article ends with a call to bring together the diverse communities involved in marine protected areas, coastal and ocean management, and watershed management to collaborate in national-level ocean and coastal planning, including in the designation of networks of marine protected areas.</p>
Study Type	literature review
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2006.01.001

N.	7
Year	2006
Title	Assessing the effects of marine protected area (MPA) on a reef fish assemblage in a northwestern Mediterranean marine reserve: Identifying community-based indicators
Authors	J. Claudet, D. Pelletier, J. Jouvenel, F. Bachet, R. Galzin
Citations	201
Takeaway	Marine protected areas (MPAs) significantly improve reef fish assemblages, with most sensitive metrics related to large and targeted species, aiding in selecting suitable community-based indicators for monitoring programs.
Abstract	<p>Marine protected areas (MPAs) are increasingly envisaged as a tool to manage coastal ecosystems and fisheries. Assessment of their performance with respect to management objectives is therefore important. A number of MPAs provided conservation benefits for fished species. Observed benefits do not apply to all species at all times, and responses to protection are also highly variable among fish taxa. Among the many empirical studies on marine reserves, only a few designs considered ‘before and after data’ and spatial variation. In this paper, we are interested in assessing the effect of a no-take reserve on the reef fish assemblage in a northwestern Mediterranean example. Data were obtained from a three-year survey using underwater visual censuses (UVC), before and after MPA establishment. Permutational multivariate analysis of variance (PERMANOVA) and multivariate regression trees (MRT) were used to evaluate the effects of reserve protection on the reef fish assemblage, while accounting for habitat. Modelled biological responses were abundances and diversity indices calculated at different levels of the assemblage. Significant effects were found for many of these metrics. In addition to PERMANOVA, univariate models provided more insight into the magnitude and direction of effects. The most sensitive metrics were related to large species and species targeted by fishing. These results may be used to choose the metrics that are more suitable as community-based indicators of MPA impact in the perspective of monitoring programs.</p>
Study Type	
Journal	Biological Conservation
Journal SJR Quartile	1
DOI	10.1016/J.BIOCON.2005.12.030

N.	8
Year	2006
Title	Assessing the effects of marine protected area (MPA) on a reef fish assemblage in a northwestern Mediterranean marine reserve: Identifying community-based indicators
Authors	J. Claudeta, D. Pelletierb, J.-Y. Jouvenelc, F. Bachetd, R. Galzina
Citations	90
Takeaway	Marine protected areas (MPAs) in the northwestern Mediterranean have significant positive effects on reef fish assemblages, with the most sensitive metrics related to large and targeted species.
Abstract	<p>Marine protected areas (MPAs) are increasingly envisaged as a tool to manage coastal ecosystems and fisheries. Assessment of their performance with respect to management objectives is therefore important. A number of MPAs provided conservation benefits for fished species. Observed benefits do not apply to all species at all times, and responses to protection are also highly variable among fish taxa. Among the many empirical studies on marine reserves, only a few designs considered ‘before and after data’ and spatial variation. In this paper, we are interested in assessing the effect of a no-take reserve on the reef fish assemblage in a northwestern Mediterranean example. Data were obtained from a three-year survey using underwater visual censuses (UVC), before and after MPA establishment. Permutational multivariate analysis of variance (PERMANOVA) and multivariate regression trees (MRT) were used to evaluate the effects of reserve protection on the reef fish assemblage, while accounting for habitat. Modelled biological responses were abundances and diversity indices calculated at different levels of the assemblage. Significant effects were found for many of these metrics. In addition to PERMANOVA, univariate models provided more insight into the magnitude and direction of effects. The most sensitive metrics were related to large species and species targeted by fishing. These results may be used to choose the metrics that are more suitable as community-based indicators of MPA impact in the perspective of monitoring programs.</p>
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	9
Year	2006
Title	Coastal poverty and MPA management in mainland Tanzania and Zanzibar
Authors	J. Tobey, Elin C. Torell
Citations	137
Takeaway	Marine protected area management in Tanzania and Zanzibar can reduce poverty, but its effectiveness varies, with communities' perceptions being most positive in programs with long-term investment.
Abstract	Poverty and resource degradation are persistent features of the lives of a large proportion of the coastal people of Tanzania and Zanzibar. A useful question to raise in preparing poverty reduction and resource management strategies is therefore “how does marine protected area management impact the lives of the poor and reduce poverty?” This paper summarizes selected results of a study on poverty alleviation and marine protected areas (MPAs) in Tanzania and Zanzibar. The data are based on 749 household surveys and 72 focus group meetings in 24 coastal villages conducted in May, June 2003. Unveiling the linkages between poverty and coastal conservation found that poverty is a reality for villagers in the study sites and that it sometimes drives people to break management rules—hence poverty makes it more difficult to reach conservation goals. We conclude that the effectiveness and success of the MPA programs in achieving both conservation and development goals varies, but communities’ perceptions of impacts and progress are most positive in those programs that have had the longest and greatest investment of time and resources.
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2006.08.002

N.	10
Year	2006
Title	Negotiating difference: stakeholder challenges in MPA co-management
Authors	T. Goetze
Citations	0
Takeaway	Training in negotiation and conflict mediation skills is crucial for local NGOs to successfully build positive relations with community stakeholders and foster long-term success in marine protected area co-management.
Abstract	This paper considers the complexities involved in the co-management of marine protected areas involving local NGOs. Based on field research in Belize, it examines the interactions between local NGOs involved in the MPA co-management process with state agencies, and local users, focusing on fishers and tour guides. These interactions highlight the fact that the interests of local NGOs and the resource users they represent are not always convergent. Yet the challenges of negotiating the shifting and, at times, divergent interests are ones for which NGOs are often not prepared to meet. This paper argues that, in tandem with training in strategic planning and proposal writing, negotiation and conflict mediation skills are crucial to the success of building positive relations between local NGOs and community stakeholders and, in turn, to fostering long-term success in the co-management process.
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	11
Year	2007
Title	Lessons from Marine Protected Areas and Integrated Ocean Management Initiatives in Canada
Authors	S. Guénette, J. Alder
Citations	83
Takeaway	Engaging stakeholders in Marine Protected Areas and Integrated Ocean Management initiatives in Canada can build momentum and overcome challenges, but political and administrative obstacles remain.
Abstract	There is a wave of interest in Marine Protected Areas (MPA) and Integrated Management (IM) as tools for addressing declines in marine environments through ecosystem-based management. Lessons learned from seven MPA and two IM initiatives in Canada show how engaging stakeholders results in: building and maintaining momentum through social capital; using the collective knowledge of stakeholders; consensus through formal and informal rules; and developing leadership capacity. However, as the number of issues or the number of stakeholders increases—especially where fisheries are involved—time, resources, and challenges in gaining support and participation increase. Political and administrative obstacles and resistance to change still constitute much of the challenge. Finally, funding and political commitment must be allocated from the start; otherwise momentum stops and it is hard to regain even when funding becomes available.
Study Type	
Journal	Coastal Management
Journal SJR Quartile	2
DOI	10.1080/10.1080/08920750600970578

N.	12
Year	2007
Title	Marine Protected Areas: A Governance System Analysis
Authors	S. Jentoft, T. C. Son, M. Bjørkan
Citations	228
Takeaway	Marine Protected Areas (MPAs) face challenges in their effectiveness due to their complex nature and interactions with various systems, highlighting the need for improved governance and planning.
Abstract	<p>Marine Protected Areas (MPAs) are promoted as an important marine ecosystem management tool. However, they are complex systems that, from a governance perspective, raise serious challenges with regard to their effectiveness. In this paper, drawing on recent contributions to the so-called “interactive governance theory,” we argue that marine and coastal governance is basically a relationship between two systems, a “governing system” and a “system-to-be-governed.” The former system is social: it is made up of institutions and steering mechanisms. The latter system is partly natural, partly social: it consists of an ecosystem, and the resources that this harbours, as well as a system of users and stakeholders who, among themselves, form political coalitions and institutions. We need to be concerned with the relationship and the interaction between the governing system and the system-to-be governed, which forms a system in its own right. Governance theory argues that both systems and their interactions share similar attributes—they are diverse, complex, dynamic and vulnerable. This raises serious concerns as to their governability. There may be limits to what the governing system can do, limits attributed to one or all three systems. But such limits are themselves issues and concerns for planning and institutional design. In this paper we present, in the form of a governance matrix, the relevant issues and concerns with regard to the governability of MPAs.</p>
Study Type	
Journal	Human Ecology
Journal SJR Quartile	1
DOI	10.1007/S10745-007-9125-6

N.	13
Year	2007
Title	Performance Indicator Importance in MPA Management Using a Multi-Criteria Approach
Authors	A. Himes
Citations	83
Takeaway	A multi-criteria approach can help reconcile diverse stakeholder objectives in marine protected area management, promoting effective decision-making.
Abstract	Much has been written about the usefulness of marine protected areas (MPAs) as a management tool. Their performance has been measured using biological and ecological indicators. However, objectives of management also include economic and social responsibilities. As such, stakeholder objectives in MPA management are frequently incompatible. This has been attributed to the variety of stakeholders with an interest in how MPAs are managed. This article considers the development of a performance indicator hierarchy for the Egadi Islands Marine Reserve, and a multi-criteria approach implemented to define compromise positions between stakeholders in decision-making. Data was obtained from a pairwise comparison survey using the analytic hierarchy process to investigate preferences of stakeholder groups for performance indicators in evaluating marine protected area management. The analysis showed that although there are five key stakeholder groups, none are homogenous in prioritizing performance indicators and that none are clear with respect to what the MPA means for them.
Study Type	
Journal	Coastal Management
Journal SJR Quartile	2
DOI	10.1080/08920750701593436

N.	14
Year	2008
Title	Perceptions of stakeholders towards objectives and zoning of marine-protected areas in southern Europe
Authors	S. Mangi, M. Austen
Citations	80
Takeaway	Stakeholders in southern Europe agree on the objectives of marine protection, but disagree on which objective is most important, with conservation being viewed as more important than fisheries management.
Abstract	The perceptions of stakeholders towards objectives and zoning of marine-protected areas (MPAs) in southern Europe were studied through face-to-face interviews to identify areas of agreement and disagreement. Views were sought about the main objectives of marine protection, ideal zonation of MPAs and the ways to manage stakeholders' competing interests in MPAs. There was good agreement on the objectives of marine protection; conservation and fisheries management scored highly, while research, education and tourism had lower scores. However, there was disagreement on which objective was most important, with most stakeholders listing conservation, while fishers listed fisheries management. Most stakeholders considered MPAs that had been established for longer periods of time to offer more conservation than fisheries benefits. Analysis of the perceptions shows strong preference for having MPAs with different use zonations, including designated areas for recreational fishing, diving and the full protection of species and ecosystems. The results point to a need for increased dialogue between scientists, managers and fishers to improve the disparity in understanding the fisheries benefits of marine protection between these groups.
Study Type	
Journal	Journal for Nature Conservation
Journal SJR Quartile	2
DOI	10.1016/J.JNC.2008.09.002

N.	15
Year	2009
Title	An evolving protocol to identify key stakeholder-influenced indicators of coastal change: the case of Marine Protected Areas
Authors	P. Vella, R. E. Bowen, Anamarija Frankić
Citations	23
Takeaway	This paper presents a method for selecting and prioritizing socio-economic indicators to measure the effectiveness of integrated coastal management, involving stakeholder input, for Marine Protected Areas.
Abstract	Vella, P., Bowen, R. E., and Frankic, A. 2009. An evolving protocol to identify key stakeholder-influenced indicators of coastal change: the case of Marine Protected Areas. - ICES Journal of Marine Science, 66: 203-213. In recent years, there has been a growing realization of the need to protect and conserve degrading environments. This can only be achieved through integrated management of environmental protection and the rational use of living and non-living resources. However, no management plan that aims at sustainable development can be successful unless the human factor is included. The concept of ecosystem-based management considers socio-economic issues in evaluating management effectiveness. In this paper, we present a method for selecting and prioritizing socio-economic indicators, using a bottom-up approach involving stakeholder input. This technique is developed further to measure the effectiveness of integrated coastal management, using a Marine Protected Area (MPA) as an example. Stakeholder input is essential at an early stage to ensure MPA management success, providing the opportunity to include public participation and ensure community support. This paper presents a transparent and adaptable indicator ranking protocol and evaluative rules, ensuring that an ecosystem-based approach can be more effectively implemented.
Study Type	
Journal	Ices Journal of Marine Science
Journal SJR Quartile	1
DOI	10.1093/ICESJMS/FSN183

N.	16
Year	2009
Title	The role of marine protected areas in environmental management
Authors	S. Jennings
Citations	79
Takeaway	Marine protected areas (MPAs) can effectively manage marine environments when combined with other management tools and supported by prearranged agreements among relevant authorities.
Abstract	<p>Marine protected areas (MPAs) are one of several tools used to meet management objectives for the marine environment. These objectives reflect political and societal views, and increasingly reconcile fishery and conservation concerns, a consequence of common high-level drivers, such as the World Summit on Sustainable Development. The contribution of MPAs to meeting objectives should be assessed in conjunction with other tools, taking account of the management systems of which they are part. Many of the same factors determine the success of MPAs and other management tools, such as quality of governance and the social and economic situation of people using marine goods and services. Diverse legislation governs MPA designation. Designation could be simplified by prearranged and prenegotiated agreements among all relevant authorities. Agreements could specify how to make trade-offs among objectives, interpret scientific advice, ensure effective engagement among authorities and stakeholders, deal with appeals, and support progressive improvement. The jurisdiction and competence of fishery management authorities mean that they are well placed to contribute to the design, designation, and enforcement of MPAs. Their strengths include well-established procedures for accessing scientific advice, the capacity to work across multiple jurisdictions, experience with MPA management, and access to vessels and personnel for enforcement.</p>
Study Type	
Journal	Ices Journal of Marine Science
Journal SJR Quartile	1
DOI	10.1093/ICESJMS/FSN163

N.	17
Year	2010
Title	Allies, not aliens: increasing the role of local communities in marine protected area implementation
Authors	S. Ferse, M. M. Costa, K. S. Mânez, D. Adhuri, M. Glaser
Citations	180
Takeaway	Effective marine protected area implementation requires involving local communities as allies, not aliens, in designing and implementing conservation measures.
Abstract	SUMMARY Various management approaches have been proposed to address the alarming depletion of marine coastal resources. Prominent among them are community-based management and the establishment of marine protected areas (MPAs). The overall poor performance of MPAs can be traced to a failure to effectively include local communities in the design and implementation of relevant measures. Recent efforts have incorporated aspects of community-based management into a hybrid form of management, which ideally builds upon existing local management practices. A key challenge lies in the development of appropriate frameworks that allow for the successful participation of local communities in management. A review of studies on MPA design and community-based marine resource management and fieldwork observations provides suggestions on how to address current socioeconomic shortcomings in MPA design and implementation, successfully involving local communities in order to provide a better local basis for effective larger MPA networks. A combination of MPA tools as the formal frame and community-based natural resource management as the adaptive core that recognizes local communities as allies, not aliens, is needed to develop successful conservation approaches.
Study Type	literature review
Journal	Environmental Conservation
Journal SJR Quartile	1
DOI	10.1017/S0376892910000172

N.	18
Year	2010
Title	Placing marine protected areas onto the ecosystem-based management seascape
Authors	B. Halpern, S. Lester, K. McLeod
Citations	308
Takeaway	Marine protected areas can significantly contribute to ecosystem-based management goals by reducing cumulative impacts on ocean ecosystems, but require better synergies for comprehensive management.
Abstract	The rapid increase in the science and implementation of marine protected areas (MPAs) around the world in the past 15 years is now being followed by similar increases in the science and application of marine ecosystem-based management (EBM). Despite important overlaps and some common goals, these two approaches have remained either separated in the literature and in conservation and management efforts or treated as if they are one and the same. In the cases when connections are acknowledged, there is often little assessment of if or how well MPAs can achieve specific EBM goals. Here we start by critically evaluating commonalities and differences between MPAs and EBM. Next, we use global analyses to show where and how much no-take marine reserves can be expected to contribute to EBM goals, specifically by reducing the cumulative impacts of stressors on ocean ecosystems. These analyses revealed large stretches of coastal oceans where reserves can play a major role in reducing cumulative impacts and thus improving overall ocean condition, at the same time highlighting the limitations of marine reserves as a single tool to achieve comprehensive EBM. Ultimately, better synergies between these two burgeoning approaches provide opportunities to greatly benefit ocean health.
Study Type	
Journal	Proceedings of the National Academy of Sciences
Journal SJR Quartile	1
DOI	10.1073/pnas.0908503107

N.	19
Year	2011
Title	A critical look at the definition of indicators to assess the effectiveness of marine protected areas
Authors	
Citations	0
Takeaway	The definition of indicators to assess the effectiveness of marine protected areas is crucial for ensuring their effective management and conservation of marine biodiversity.
Abstract	<p>As we witness the rapid erosion of marine biodiversity, the decline of numerous fishery resources and the deterioration of marine habitats, particularly in coastal zones, marine protected areas (MPA) look increasingly like the best available solution for integrated management of coastal areas. In such a context, the scientific community recommends that at least 10 % of each of the planet's ecological regions be protected. With this in mind, most of the world's governments have committed to creating and running a coherent MPA network by 2012 (World summit on sustainable development, Johannesburg, 2002; Convention on biological diversity, 2004). Backed by experience in estuary and lagoon habitats, and notably in the development of biotic indicators, the Cemagref Estuarine ecosystems and diadromous fish research unit in Bordeaux (EPBX) is deeply involved in supporting a number of initiatives to create MPAs (including the Gironde-Pertuis marine nature reserve project) and evaluating the effectiveness of existing MPAs (for example, the "Marine protected areas and fisheries management by optimisation of resources and ecosystems" project, or AMPHORE, which is funded by the French National research agency (ANR), see box 1). This is the context in which we have chosen to critically examine the definition of indicators to assess the effectiveness of marine protected areas, based on our experience and on the questions and difficulties we have encountered. A Marine protected areas as management tools</p>
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	20
Year	2011
Title	Marine Protected Areas (MPAs) Special Feature: Editorial
Authors	A. Thorpe, P. Failler, J. M. Bavinck
Citations	28
Takeaway	Effective management of Marine Protected Areas is crucial for achieving desired outcomes and fostering stakeholder buy-in.
Abstract	<p>The number of MPAs has increased sharply, from just 118 in 1970 to well over 6,300 today. This growth in numbers has also been accompanied by a voluminous growth in the academic literature on the theme, with writers employing ecologic, economic and governance lenses (or a combination thereof) to both support the case for MPA creation, and to evaluate just how successfully (or not) existing MPAs match up to their promises. Research suggests effective management of such protected areas is vital if desired outcomes are to be achieved within the allotted time period. This Special Feature on MPAs therefore seeks to address two key questions derived from the management effectiveness framework of Hockings and others (2000), namely: ‘How appropriate are the management systems and processes in place?’ and ‘Were the desired Objectives achieved—and if so, why?’ Fourteen articles, drawing on different disciplinary perspectives relating to MPA experiences from across the globe, offers insights into these questions by considering, inter alia, how: are MPA sites selected?; is ‘buy-in’ to the process from the various stakeholders achieved?; are these stakeholder’s views reflected in the management systems that evolve?, and what monitoring and evaluation mechanisms are in place? Bringing these perspectives and approaches together through the medium of this Special Feature is thus intended to further our understanding of the different issues that may confront both planners and managers of Marine Protected Areas.</p>
Study Type	
Journal	Environmental Management
Journal SJR Quartile	1
DOI	10.1007/s00267-011-9664-x

N.	21
Year	2011
Title	Marine Protected Areas and the Governance of Marine Ecosystems and Fisheries
Authors	B. McCay, P. Jones
Citations	118
Takeaway	Marine protected areas (MPAs) can effectively manage marine resources if their governance is improved, despite slow progress towards the 10% target by 2020.
Abstract	Marine protected areas (MPAs) are spatially defined marine units in which one or more human activities—particularly fishing—are restricted or prohibited. They represent a precautionary and ecosystem-based approach to ocean management (Mangel 2000; Pikitch et al. 2004; Jones 2006). The 1992 Convention for Biological Diversity set a target for 10% of the global marine area to be designated as MPAs by 2010. Progress with designating MPAs is, however, slow, MPAs covering just 1.3% of the marine area and 3.2% of marine areas under national jurisdiction. Consequently, the deadline was recently extended to 2020. Nonetheless, in the past two decades there has been a rapid increase in MPA research and implementation throughout the world. If the governance of MPAs is improved in ways we describe here, MPAs and other place-based approaches will continue to be important tools for the management of marine resources.
Study Type	
Journal	Conservation Biology
Journal SJR Quartile	1
DOI	10.1111/j.1523-1739.2011.01771.x

N.	22
Year	2011
Title	Stakeholders' expectations towards a proposed marine protected area: A multi-criteria analysis of MPA performance criteria
Authors	N. Heck, P. Dearden, A. McDonald
Citations	32
Takeaway	Marine stakeholders have distinct preferences for the performance of proposed marine protected areas, with user and non-user groups showing distinct preferences.
Abstract	In order to enable effective management of marine protected areas (MPAs), desired MPA achievements need to be identified as early as possible for the development of relevant and clear management goals, objectives and conservation targets. As the definition of MPA success is a social construct, the involvement of multiple groups in this process including government agencies, stakeholders, and other interested parties is increasingly advocated. This study investigates diverse groups' opinions on the performance of a proposed National Marine Conservation Area (NMCA) on the West coast of Canada prior to its establishment. In order to analyze and quantify the importance of MPA performance criteria among multiple stakeholder groups, the Analytical Hierarchy Process (AHP) is applied. Findings reveal that marine stakeholder groups have distinct preferences for future MPA performance. Most differences are obvious between user and non-user groups. The study also finds that respondents' characteristics other than stakeholder groups affiliations influence expectations towards the proposed MPA including livelihood dependency on the marine environment, amount of time spent in the area, and engagement in fishing activities.
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2011.07.003

N.	23
Year	2011
Title	What are MPAs for: On goal formation and displacement
Authors	S. Jentoft, R. Chuenpagdee, J. Pascual-Fernández
Citations	85
Takeaway	MPA goals should be researched empirically to better understand their formation, complexity, and displacement, ultimately improving their success in reaching their objectives.
Abstract	<p>Marine Protected Areas (MPAs) are established for various purposes. Some are aimed at protection, some are intended as resource management tools, while others imply both of these objectives, as well as others. Regardless of the stated goals, the same MPA can mean different things to different people, and these meanings may be inconsistent. In practice, MPA goals are not always stated clearly, and even if they are, they do not necessarily align well with what the different actors have in mind. Moreover, the stated goals are not always those that govern the actual operation of MPAs. The priorities of goals may also change over time for stakeholders and for MPAs. In this paper we argue that the goals of MPAs should not be assumed a priori but should be researched empirically. Thus, before we can answer why MPAs succeed or fail in reaching their goals, we must ask what these goals are in the first place and how they came into existence. How are they, for instance, established, negotiated and agreed upon among stakeholders? How do they reflect particular interests, perspectives and power differentials of those involved? Here, we provide a framework for how to analyze the formation, complexity, and displacement of goals in MPAs, presenting three case studies as illustration.</p>
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2010.10.024

N.	24
Year	2012
Title	Participation, Process Quality, and Performance of Marine Protected Areas in the Wider Caribbean
Authors	Tracey M Dalton, Graham E. Forrester, R. Pollnac
Citations	55
Takeaway	Participation in marine protected areas planning and management is not directly linked to improved social and ecological performance, but perceptions of process quality positively influence views of performance.
Abstract	Throughout the wider Caribbean, marine protected areas (MPAs) are rapidly gaining momentum as a conservation tool, but management performance of existing MPAs is considered low. To enhance MPA management performance, stakeholders are increasingly being invited to discuss, debate, and develop rules about how people should interact with marine ecosystems. Using social and ecological data from a rapid assessment of 31 MPAs and their associated communities in the wider Caribbean, this study investigates stakeholder participation in MPA planning and management, and how participants' views of process quality relate to MPA performance. Findings indicate that (1) participants tended to be male, resource users, participate in community organizations, and have lived fewer years in the community associated with an MPA than non-participants; (2) simply participating was not associated with perceptions of the social and ecological performance of MPAs, however, perceptions of process quality were positively related to views of performance; and (3) resource users' perceptions of an MPA's ecological performance were likely shaped by a variety of factors. Conservation practitioners should be aware that participatory MPA processes are complex and require careful planning if they are to contribute positively to marine conservation efforts.
Study Type	non-rct observational study
Journal	Environmental Management
Journal SJR Quartile	1
DOI	10.1007/s00267-012-9855-0

N.	25
Year	2012
Title	What Stakeholders Think About Marine Protected Areas: Case Studies from Spain
Authors	S. Jentoft, J. Pascual-Fernández, Raquel de la Cruz Modino, Manuel González-Ramallal, R. Chuenpagdee
Citations	132
Takeaway	Stakeholders' images of marine protected areas influence their reactions, with understanding these images crucial for effective governance and management of these areas.
Abstract	Marine protected areas (MPAs) are often met with reluctance by affected stakeholders, and in some instances outright objection. Some argue that this is due to insufficient understanding of the functions of MPAs. Others suggest that it could be because of a perception that they are losing more than they are gaining. It is also possible that stakeholders are generally supportive of the idea but think that the MPA should be located elsewhere. We argue that it is images people have about what the MPA is and does that determine how they react. Drawing from three MPA case studies in Spain, we illustrate the importance of critical examination of stakeholders' images and what they imply for the governance of MPAs.
Study Type	
Journal	Human Ecology
Journal SJR Quartile	1
DOI	10.1007/S10745-012-9459-6

N.	26
Year	2013
Title	A thematic cost-benefit analysis of a marine protected area.
Authors	S. Rees, M. Attrill, M. Austen, S. Mangi, L. Rodwell
Citations	51
Takeaway	Support for Lyme Bay Marine Protected Area is strong among stakeholders, with benefits outweighing costs, but social costs for fishermen and charter boat operators must be managed.
Abstract	<p>The implementation of Marine Protected Areas (MPAs) is ultimately a social endeavour to sustain or improve human well-being via the conservation of marine ecosystems. The degree to which ecological gains are realised can depend upon how economic, ecological and social costs (negative impacts) and benefits (positive impacts) are included in the designation and management process. Without the support of key stakeholder groups whose user rights have been affected by the creation of an MPA, human impacts cannot be reduced. This study analyses a three year dataset to understand the themes associated with the economic, environmental and social costs and benefits of an MPA in Lyme Bay, United Kingdom (UK) following its establishment in 2008. Methodologically, the paper presents an ecosystem based management framework for analysing costs and benefits. Two hundred and forty one individuals were interviewed via questionnaire between 2008 and 2010 to determine perceptions and the level of support towards the MPA. Results reveal that despite the contentious manner in which this MPA was established, support for the MPA is strong amongst the majority of stakeholder groups. The level of support and the reasons given for support vary between stakeholder groups. Overall, the stakeholders perceive the social, economic and environmental benefits of the MPA to outweigh the perceived costs. There have been clear social costs of the MPA policy and these have been borne by mobile and static gear fishermen and charter boat operators. Local support for this MPA bodes well for the development of a network of MPAs around the UK coast under the United Kingdom Marine and Coastal Access Act 2009. However, this initial optimism is at risk if stakeholder expectation is not managed and the management vacuum is not filled.</p>
Study Type	non-rct observational study
Journal	Journal of environmental management
Journal SJR Quartile	1
DOI	10.1016/j.jenvman.2012.10.048

N.	27
Year	2013
Title	Evidence-based marine protected area planning for a highly mobile endangered marine vertebrate
Authors	G. Schofield, R. Scott, A. Dimadi, S. Fossette, K. A. Katselidis, D. Koutsoubas, M. Lilley, J. Pantis, A. Karagouni, G. Hays
Citations	138
Takeaway	Optimizing marine protected areas can enhance conservation efforts and enhance local economic tourism, while minimizing negative impacts on stakeholders.
Abstract	<p>Marine Protected Areas (MPAs) now form an important part of marine conservation and fisheries management; hence, there is broad interest in developing procedures that optimize their design. We used data collected over a 10-year period (2003-2012) from direct surveys and >100. adult male and female loggerhead sea turtles (<i>Caretta caretta</i>) tracked with devices, including GPS loggers and Fastloc GPS-Argos, to consider the optimum design for a MPA at a globally important breeding area, where there is already an existing national marine park aiming to protect the population (Zakynthos, Greece). Turtles primarily used areas very close to shore (approx. 7. km in length by 1. km in width, within the <10. m isobath) for breeding and foraging activity at different times of the year. We calculated that this small nearshore coastal zone encompassed 72% of all turtle GPS locations recorded in the MPA, and is therefore important for conservation management. We developed an index to evaluate the suitability of the existing and proposed conservation zones based on (1) home range area use by turtles in these zones versus (2) zone size, so that the benefit to turtles could be maximized while minimizing the negative impacts to other stakeholders (e.g., boat operators). With this evidence-based approach, we propose a modification to the existing MPA that might both enhance local economic tourism activities and better safeguard this key sea turtle breeding population. The approaches used here will have general application for the design of MPAs used by mobile species that can be tracked.</p>
Study Type	
Journal	Biological Conservation
Journal SJR Quartile	1
DOI	10.1016/J.BIOCON.2013.03.004

N.	28
Year	2013
Title	Identifying the issues and options for managing the social impacts of Marine Protected Areas on a small fishing community
Authors	S. Rees, L. Rodwell, S. Searle, Andrew Bell
Citations	48
Takeaway	Marine Protected Areas (MPAs) can negatively impact small fishing communities, requiring alignment with fishery objectives and collaborative monitoring programs for sustainable management.
Abstract	The implementation Marine Protected Areas (MPAs) creates a need for fishermen to adapt fishing practices. The change can therefore impact (both positively and negatively) upon the fishing community. MPA managers who miss out the social context in management decisions and fail to acknowledge the unique nature of fishing activities and responses to change are risking the future ability of MPAs to meet stakeholders' needs. To inform management, this research uses a structured interview methodology to gain quantitative and qualitative data from fishermen operating in a case study area. The results demonstrate that the marine environment in the case study area supports a small scale, profitable fishing industry where the well-being of the respondents is linked to their fishing activity. To maintain a sustainable industry there is a need to align the objectives of the new proposed MPAs (Marine Conservation Zones) with fishery objectives and create systems for the co-management of marine resources supported by collaborative monitoring programmes.
Study Type	
Journal	Fisheries Research
Journal SJR Quartile	1
DOI	10.1016/J.FISHRES.2013.04.003

N.	29
Year	2013
Title	Implications of community and stakeholder perceptions of the marine environment and its conservation for MPA management in a small Azorean island
Authors	R. Abecasis, L. Schmidt, N. Longnecker, J. Clifton
Citations	60
Takeaway	Local support for marine conservation initiatives, particularly marine protected areas, is strong, but stakeholders have differing views on their goals and outcomes.
Abstract	Incorporating values, views and expectations held by local stakeholders is fundamental to the management of marine protected areas (MPAs), particularly in small islands where MPAs are central assets of the local economy and society. In this study, we used a combination of quantitative and qualitative methods to understand what drives the use of marine and coastal areas, to explore local and expert views of the marine environment and its conservation, and ultimately to determine approaches to MPA management that best reflect local needs and desires. The study focused on Corvo Island, which includes the largest coastal MPA in the Azores Archipelago, yet remains without a current management plan. Evidence of a strong ocean-oriented cultural identity, with a clear gender dichotomy in the patterns of marine and coastal use, was found. Participants recognized the strategic value of the marine environment for the island's economy, and strategies to promote the sustainable use of marine resources based on local values and views were suggested. There was a widespread perception of declining species abundance, ecological unbalances caused by biodiversity loss, and significant changes from the status quo with regards to the maritime environment. This was reflected in a common recognition of marine ecosystem vulnerability, yet the local community and stakeholders presented different views on what the main threats were. In any case, we found strong local support for marine conservation initiatives, particularly MPAs. However, stakeholders differed in their views on MPA goals and outcomes, reflecting negative perceptions on the government's capacity to manage the Corvo MPA. Based on these results, we discuss implications for MPA implementation, particularly for the development of specific MPA goals shared by all stakeholders
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2013.08.009

N.	30
Year	2013
Title	MARGov – Setting the ground for the governance of marine protected areas
Authors	Lia T. Vasconcelos, M. J. Pereira, U. Caser, Graça Gonçalves, Flávia Silva, Rita Sá
Citations	32
Takeaway	The MARGov project has successfully enhanced trust building and empowerment in marine protected areas, leading to greater autonomy for stakeholders and improved management of Portuguese marine parks.
Abstract	<p>Started in 2008, the MARGov project proposes to build a Model of Collaborative Governance for Marine Protected Areas (MPA), using as a case study the Marine Park Luiz Saldanha (MPLS), Sesimbra, Portugal. The project works through an eco-social dialogue supported by active participation and aims to empower the local communities making them active agents for the sustainable governance of the coast and the ocean. In fact, successful MPA depend on the balance between man and environment, and on the eco-social dialogue established among all actors. The MARGov project is structured in three components-Governance, Citizenship and Dynamic-Spatial Structure. Here we present the work already developed in two of the components e Governance and Citizenship. The first component mainly aims at reinforcing competences and the co-responsibility of all key-actors within MPLS. Several participatory sessions, involving the local community, have been organized since the end of 2009 improving the communication and to set up a constructive dialog e reducing sources of conflict e among all the stakeholders. The Citizenship component targeted to re-establish the traditional affective link between the local community and the ocean, mostly by means of environmental education sessions in elementary schools. In this paper we present the methodology, the main results and discuss the lessons learned, theorizing from action and exploring how to pursue in the future for the sustainable management of Portuguese MPA. Intermediate outcomes include specific actions (e.g., strategy to promote sustainable tourism, enhance co-liability of users in inspection and surveillance); as well as comprehensive ones, such as a proposal to expand the existing strategic council of the MPA towards a satellite structure of comanagement that includes representatives of different stakeholder groups in continuing articulation. The methodology developed for the collaborative process as, so far, revealed to have a substantial potential in enhancing trust building and empowerment. Stakeholders now show greater autonomy to pursue independent initiatives within the social network consolidated during the project.</p>

Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2011.07.006

N.	31
Year	2013
Title	Marine conservation in remote small island settings: Factors influencing marine protected area establishment in the Azores
Authors	R. Abecasis, N. Longnecker, L. Schmidt, J. Clifton
Citations	25
Takeaway	Effective marine protected area establishment in remote small island settings requires engaging local communities, clear goals, visible outputs, and community enforcement, but government-driven MPAs may be better for broad ecosystem conservation goals.
Abstract	This paper examines the establishment of marine protected areas (MPAs) in remote small island settings with specific reference to the Portuguese island of Corvo in the Azores. This case study represents different approaches to marine conservation, ranging from an informal community-based no-take MPA to a government-driven multi-purpose natural park, involving diverse local and external actors interacting over an extended period of time. In-depth interviews were used to explore the perceptions of local and expert stakeholders about positive and negative aspects of MPA establishment. This demonstrated how differing approaches have led to varying degrees of MPA effectiveness. From the community-based MPA, several key ingredients for effective MPA establishment were identified, including engaging and empowering local communities, clear definition of goals, visible MPA outputs and community enforcement based on high levels of support and peer group pressure. However, in a context of complex marine resource use, the limitations of community-based initiatives prevent them from achieving broad ecosystem conservation goals. These might be better achieved through government-driven MPAs, provided that they are integrated in a wider regional marine strategy and that there is political will to effectively implement conservation measures and to allocate resources for management, enforcement and monitoring.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2012.12.032

N.	32
Year	2013
Title	Marine protected areas: Re-thinking their inception
Authors	R. Chuenpagdee, J. Pascual-Fernández, Emese Szelianszky, J. Alegret, Julia Fraga, S. Jentoft
Citations	172
Takeaway	The success of marine protected areas depends on the initial stages of conception, communication, and discussion among stakeholders, which must consider potential political risks and pitfalls.
Abstract	When marine protected areas (MPAs) do not succeed, which is often the case, their failure is mostly attributed to factors related to their design and operation. In this paper, it is argued that reasons for lack of success must be sought in the process that leads up to their establishment, i.e., the initial stage when the idea was conceived, communicated, and discussed among stakeholders. To illustrate the significance of the 'step zero', the creation of four MPAs in Spain and México is analyzed. These case studies show how MPA proposals can easily be drawn not only into power struggles between stakeholders but also into political issues that extend far beyond the MPA itself. For this reason, the governance of MPAs requires broad considerations of the potential political risks and pitfalls. MPAs are, after all, not just a technical management measure, but a socio-political enterprise.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2012.10.016

N.	33
Year	2013
Title	Stakeholders, Technology and MPAs: Towards Integrated Management?
Authors	Markantonatou, M. Sanó, C. Cerrano
Citations	2
Takeaway	Innovative technologies like web portals and participatory mapping can enhance stakeholder participation in Marine Protected Areas (MPAs), promoting sustainable use and long-term conservation goals.
Abstract	Discussions on the need for public engagement in adaptive management and deliberative decision-making are progressively evolving. In particular, enabling stakeholder participation is critical for managing Marine Protected Areas (MPAs), which are considered a key component in the protection of biodiversity and the maintenance of ecological processes. Today, innovative technologies, such as web portals and participatory mapping have a strong potential for improving the effectiveness of community engagement and collective deliberations in MPA management. Participation presents an opportunity to deepen mutual understanding, explore and integrate ideas together, generate new options and solutions, and support sustainable use of marine resources and long-term goals for marine conservation. In our research we are exploring stakeholder opinion around current issues and approaches in MPA management, the use of web-based and mobile technology and the role of the stakeholder in MPA integrated management. To this end we conducted two surveys at different scales (Mediterranean region and Portofino MPA, in Italy) focusing on the use of web technology by managers and other stakeholders at the Mediterranean level and, at the local scale of Portofino MPA. This information will guide our next steps in the creation of a bridge between stakeholders and the use of technology for an effective integrated management of Mediterranean MPAs.
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	34
Year	2013
Title	Tourism, marine protected areas and resilience: A consideration of the island of Bali, Indonesia
Authors	Mirza Pedju, M. Orams
Citations	1
Takeaway	Incorporating tourism into marine protected areas in Indonesia can boost economic development and financial management, but sustainability requires a resilient social-ecological system.
Abstract	Marine protected areas (MPAs) and tourism have high potential for symbiotic partnerships. In developing countries with rich marine biodiversity, such as Indonesia, incorporating tourism into marine protected area management strategies is seen as desirable, particularly from an economic development and financial management perspective. While maximizing MPA economic benefits is important, the sustainability of an MPA, as a resilient social - ecological system is fundamental to its success. A resilient social - ecological system is more able to absorb and adapt to disturbance while maintaining its basic natural functioning. The presence and growth of tourism adds complexity to the various social and ecological components and/or actors within an MPA and provides additional challenges for governance. The governance of MPAs is influenced by the perception of stakeholders who play important roles in influencing the management priorities of a particular MPA. In developing countries, subsistence fishers are regarded as the most 'affecting and affected' stakeholder who can significantly influence marine conservation efforts and its outcome.
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	35
Year	2014
Title	Changing paradigms in marine and coastal conservation: A case study of clam gardens in the Southern Gulf Islands, Canada
Authors	Skye Augustine, P. Dearden
Citations	57
Takeaway	A values-based conservation approach involving active management and First Nations engagement can potentially increase the acceptability of coastal protected areas and promote conservation values in the landscape.
Abstract	Marine conservation is a global challenge and marine protected areas (MPAs) are one means of addressing this challenge. Progress in MPA designation is slow, partially due to objections to MPA establishment by local stakeholders and Indigenous peoples. This article suggests that a values-based paradigm to conservation that emphasizes active management and further engagement of First Nations, as rights-holders, should be given more emphasis. The re-introduction of clam gardens into Gulf Islands National Park Reserve (GINPR) is used as an example of this approach. Clam gardens were constructed by First Nations on the Pacific Coast to augment the productivity of clam growth. Several former clam gardens are within GINPR. The primary mandate of national parks is to protect ecological integrity, potentially forbidding the re-introduction of clam gardens. The literature suggests that there would be minimal ecological impacts at the park level from the re-introduction of clam gardens. There could also be significant advantages both for conservation and First Nations communities. With a greater degree of decision-making input and the opportunity to re-introduce cultural practices, a values-based paradigm may contribute to the acceptability of coastal PAs and promote the expansion of conservation values in the landscape.
Study Type	
Journal	Canadian Geographer
Journal SJR Quartile	
DOI	10.1111/CAG.12084

N.	36
Year	2014
Title	How Are Our MPAs Doing? Challenges in Assessing Global Patterns in Marine Protected Area Performance
Authors	H. Fox, Jed L. Holtzman, Kelly M. Haisfield, Catherine G. McNally, Gonzalo A. Cid, Michael B. Mascia, John E. Parks, R. Pomeroy
Citations	66
Takeaway	High-quality data collection and consistent monitoring protocols are crucial for better understanding and management of marine protected areas, contributing to biodiversity conservation and poverty alleviation.
Abstract	Without effective management, protected areas are unlikely to achieve the high expectations the conservation and development sectors have for them: conserving biodiversity and alleviating poverty. Numerous marine protected area (MPA) assessment initiatives have been developed at various spatial and temporal scales, including the guidebook <i>How is your MPA doing?</i> These management assessments have been useful to sites to clarify and evaluate their objectives, yet efforts to examine broader regional or global patterns in MPA performance are only beginning. The authors conducted exploratory trend analyses on <i>How is your MPA doing?</i> indicator data collected by 24 MPAs worldwide to identify challenges and areas for future work. Wide variability across sites with regard to the indicators examined and the constructs used to measure them prevented a true meta-analysis. Managers assessed biophysical indicators more often than socioeconomic and governance constructs. Investment by the conservation community to support collecting and reporting high-quality data at the site level would enable a better understanding of the variation in MPA performance, clarify the contribution of MPAs to both biodiversity conservation and poverty alleviation, and help drive better MPA performance. The absence of rigorous and consistent monitoring protocols and instruments and a platform to turn raw MPA monitoring data into actionable information is a critical but under-recognized obstacle to cross-project learning, comparative analyses, and adaptive resource management.
Study Type	meta-analysis
Journal	Coastal Management
Journal SJR Quartile	2
DOI	10.1080/08920753.2014.904178

N.	37
Year	2014
Title	Marine protected areas and fisheries: bridging the divide
Authors	J. Weigel, K. Mannle, N. Bennett, E. Carter, L. Westlund, Valérie Burgener, Zachary Hoffman, Alfredo Simao da Silva, E. Kane, J. Sanders, C. Piante, S. Wagiman, Ashley Hellman
Citations	67
Takeaway	Effective marine protected areas can contribute to biodiversity conservation and fisheries management, but must be embedded in broader fisheries management and conservation plans.
Abstract	<p>Long-term and well-managed marine protected areas (MPAs) can, under the right circumstances, contribute to biodiversity conservation and fisheries management, thus contributing to food security and sustainable livelihoods.</p> <p>This article emphasizes (1) the potential utility of MPAs as a fisheries management tool, (2) the costs and benefits of MPAs for fishing communities, and (3) the foundations of good governance and management processes for creating effective MPAs with a dual fisheries and conservation mandate.</p> <p>This article highlights case studies from numerous regions of the world that demonstrate practical and often successful solutions in bridging the divide between MPA management and fisheries sustainability, with a focus on small-scale coastal fisheries in order to emphasize lessons learned.</p> <p>To be an effective fisheries management tool, MPAs should be embedded in broader fisheries management and conservation plans. MPAs are unlikely to generate benefits if implemented in isolation. The spatial and temporal distribution of benefits and costs needs to be taken into account since proximal fishery-dependent communities may experience higher fishing costs over the short and long-term while the fisheries benefits from MPAs may only accrue over the long-term.</p> <p>Key lessons for effectively bridging the divide between biodiversity conservation and fisheries sustainability goals in the context of MPAs include: creating spaces and processes for engagement, incorporating fisheries in MPA design and MPAs into fisheries management, engaging fishers in management, recognizing rights and tenure, coordinating between agencies and clarifying roles, combining no-take-areas with other fisheries management actions, addressing the balance of costs and benefits to fishers, making a long-term commitment, creating a collaborative network of stakeholders, taking multiple pressures into account, managing adaptively, recognizing</p>

	<p>and addressing trade-offs, and matching good governance with effective management and enforcement.</p> <p>© 2014 The Authors. Aquatic Conservation: Marine and Freshwater Ecosystems published by John Wiley & Sons, Ltd.</p>
Study Type	
Journal	Aquatic Conservation-marine and Freshwater Ecosystems
Journal SJR Quartile	
DOI	10.1002/AQC.2514

N.	38
Year	2014
Title	Merging top-down and bottom-up approaches in marine protected areas planning: experiences from around the globe
Authors	Carlos F. Gaymer, A. Stadel, Natalie Ban, P. Cárcamo, Joseph Ierna, Lm Lieberknecht
Citations	133
Takeaway	Integrating top-down and bottom-up approaches in marine protected area planning can address community resistance and empower local people to collaborate in conservation efforts.
Abstract	Five case studies from around the world illustrate key lessons in integrating top-down and bottom-up approaches to stakeholder and community engagement in the planning and implementation of marine protected areas (MPAs). 2. Community resistance to MPA proposals from centralized agencies can be addressed through effective participatory processes with consistent engagement over time, transparency, and the incorporation of benefits for communities. 3. Indigenous communities in particular are becoming key actors of some conservation initiatives (e.g. MPAs) and recognition of their inherent rights, traditional knowledge and deep connections to the marine environment can become the foundations for collaborative management of MPAs. 4. True participation requires empowerment for engagement, and this in turn requires education and capacity building for local people to get involved in the process of planning, implementing, and managing MPAs. 5. How bottom-up and top-down approaches are used should consider the scale of the MPA (e.g. small vs. large), the geographic scenario (e.g. coastal vs. remote), the level of anthropogenic influence, the conservation objectives (e.g. species, habitats, ecosystems), the political and governance context, and specific cultural conditions, such as the presence of indigenous communities. Copyright # 2014 John Wiley & Sons, Ltd.
Study Type	
Journal	Aquatic Conservation-marine and Freshwater Ecosystems
Journal SJR Quartile	
DOI	10.1002/AQC.2508

N.	39
Year	2014
Title	Participatory governance of Marine Protected Areas: a political challenge, an ethical imperative, different trajectories. Senegal case studies
Authors	M. Cormier-Salem
Citations	21
Takeaway	Participatory governance of Marine Protected Areas faces political challenges and ethical imperatives, with different stakeholders' interests and incompatible standards hindering effective implementation.
Abstract	<p>The procedure for designating and establishing Marine Protected Areas (MPA) has changed profoundly since the 1990s, as a consequence of global changes and new dictates related to biodiversity conservation and sustainable development. Far beyond protection of flagship species such as marine turtles and large marine mammals, the goal is now to conserve and even increase the services associated with coastal ecosystems to the benefit of all stakeholders. References to community management of resources, territorial solidarity, or environmental justice have become common. The political processes undertaken have nevertheless taken a range of different trajectories, since the stakeholders (private, public, NGOs, local collectives) have different interests; their standards and rules are often incompatible; the efficacy of the negotiation process is debatable. In this article, after questioning the legitimacy of MPA (to what extent are they useful tools? —in responding to what aims?), the difficulties of putting into practice this new paradigm of participative governance is analysed and illustrated using three case studies of coastal Senegalese MPAs and the consequences of local intervention: the Saint Louis MPA, the Bamboung Community-Managed MPA in the Saloum Delta, and the Mangagoulack ICCA (Indigenous and Community Conserved Area) in Casamance. In conclusion, the principal lessons and perspectives of these approaches are presented.</p>
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	40
Year	2014
Title	Participatory governance of Marine Protected Areas: a political challenge, an ethical imperative, different trajectories. Senegal case studies.
Authors	Marie-Christine Cormier Salem
Citations	3
Takeaway	Participatory governance of Marine Protected Areas faces political challenges and ethical imperatives, with different stakeholders' interests and incompatible standards hindering effective implementation.
Abstract	<p>The procedure for designating and establishing Marine Protected Areas (MPA) has changed profoundly since the 1990s, as a consequence of global changes and new dictates related to biodiversity conservation and sustainable development. Far beyond protection of flagship species such as marine turtles and large marine mammals, the goal is now to conserve and even increase the services associated with coastal ecosystems to the benefit of all stakeholders. References to community management of resources, territorial solidarity, or environmental justice have become common. The political processes undertaken have nevertheless taken a range of different trajectories, since the stakeholders (private, public, NGOs, local collectives) have different interests; their standards and rules are often incompatible; the efficacy of the negotiation process is debatable. In this article, after questioning the legitimacy of MPA (to what extent are they useful tools? —in responding to what aims?), the difficulties of putting into practice this new paradigm of participative governance is analysed and illustrated using three case studies of coastal Senegalese MPAs and the consequences of local intervention: the Saint Louis MPA, the Bamboung Community-Managed MPA in the Saloum Delta, and the Mangagoulack ICCA (Indigenous and Community Conserved Area) in Casamance. In conclusion, the principal lessons and perspectives of these approaches are presented.</p>
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	41
Year	2014
Title	Using stakeholders' perspective of ecosystem services and biodiversity features to plan a marine protected area
Authors	P. Cárcamo, Rosa Garay-Flühmann, F. Squeo, Carlos F. Gaymer
Citations	81
Takeaway	Stakeholders' perceptions and prioritizations of ecosystem services, biodiversity features, and uses should guide the planning and implementation of marine protected areas.
Abstract	<p>The definition of a common vision that includes social and environmental goals, ecosystem services and/or biodiversity features that people are interested in maintaining or restoring is a great challenge for marine protected areas (MPAs). Recent initiatives have promoted broadening the focus from biodiversity conservation alone to the conservation of both ecosystem services and biodiversity, indicating that this integration should improve support and compliance from stakeholders. Using a Multiple-Use Coastal Marine Protected Area recently proposed in northern Chile, we investigated (i) stakeholders' perceptions of the valuation of ecosystem services, threats to their provision, and the prioritization of ecosystem services, biodiversity features, and uses in a planning scenario, and (ii) stakeholders' expectations for the establishment of a new MPA. The perceptions of different groups of stakeholders were compared and statistically analyzed, and the relationships among prioritizations were studied using a network approach. Stakeholders identified and valued 13 ecosystem services, 28 biodiversity features, 20 uses and activities, and 22 threats. Significant differences among the valuations and prioritizations of different stakeholder groups were attributable principally to artisanal fishermen's perceptions of some components that are directly related to their activities and livelihoods. High expectations of benefits from a new MPA implementation were observed for all categories of stakeholders. To relate the different valued components, we proposed a network-based conceptual model that reduces complexity, and also as a strategy to communicate relationships and trade-offs occurring in this particular social-ecological system to the several stakeholders. We strongly recommend early stakeholder engagement so as to understand the variability in environmental perceptions and then reflect that variation in the planning and management actions of MPAs, thus improving support for their implementation and achieving conservation and societal goals. Our findings indicate that stakeholders' perceptions and prioritizations of ecosystem services, biodiversity features and uses should be used as the basis for starting the MPA implementation and planning process.</p>

Study Type	
Journal	Environmental Science & Policy
Journal SJR Quartile	
DOI	10.1016/J.ENVSCI.2014.03.003

N.	42
Year	2014
Title	Why local people do not support conservation: Community perceptions of marine protected area livelihood impacts, governance and management in Thailand
Authors	N. Bennett, P. Dearden
Citations	699
Takeaway	Local communities in the Andaman Coast of Thailand perceive marine protected areas as having limited to negative impacts on livelihoods and negative perceptions of their governance and management processes.
Abstract	<p>Conservation success is often predicated on local support for conservation which is strongly influenced by perceptions of the impacts that are experienced by local communities and opinions of management and governance. Marine protected areas (MPAs) are effective conservation and fisheries management tools that can also have a broad array of positive and negative social, economic, cultural, and political impacts on local communities. Drawing on results from a mixed-methods study of communities on the Andaman Coast of Thailand, this paper explores perceptions of MPA impacts on community livelihood resources (assets) and outcomes as well as MPA governance and management. The area includes 17 National Marine Parks (NMPs) that are situated near rural communities that are highly dependent on coastal resources. Interview participants perceived NMPs to have limited to negative impacts on fisheries and agricultural livelihoods and negligible benefits for tourism livelihoods. Perceived impacts on livelihoods were felt to result from NMPs undermining access to or lacking support for development of cultural, social, political, financial, natural, human, physical, and political capital assets. Conflicting views emerged on whether NMPs resulted in negative or positive marine or terrestrial conservation outcomes. Perceptions of NMP governance and management processes were generally negative. These results point to some necessary policy improvements and actions to ameliorate: the relationship between the NMP and communities, NMP management and governance processes, and socio-economic and conservation outcomes.</p>
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2013.08.017

N.	43
Year	2015
Title	'It's part of me'; understanding the values, images and principles of coastal users and their influence on the social acceptability of MPAs
Authors	M. Voyer, N. Gollan, K. Barclay, W. Gladstone
Citations	75
Takeaway	Understanding diverse coastal users' values, images, and principles can improve the social acceptability of Marine Protected Areas.
Abstract	Improving the social acceptability or 'social licence' of Marine Protected Areas (MPAs) is a key challenge facing countries all around the world. As the world moves slowly towards the establishment of a global network of MPAs, it is increasingly apparent that a greater understanding of social responses to MPAs is required, given they are often met with resistance from local communities. A series of in-depth, semi structured interviews were conducted across coastal users in New South Wales, Australia, including surfers, recreational fishers, professional fishers, spearfishers, walkers, divers, snorkellers, kayakers and other community members. The research identified the values, images and principles at work amongst coastal users to determine the dominant 'cultural models' within the community and how these models influenced attitudes towards MPAs. This research indicates that traditional consultation models may not be sufficient to address the full spectrum of community needs, and in fact suggests the need to re-conceive the make-up of 'the community' itself. In the context of MPA planning 'the community' is not an amalgamation of a range of homogenous stakeholder groups but instead a diverse and complex mix of identities and value systems which are not confined to particular interest groups. Incorporating consideration of the diverse range of values, images and principles found within and across stakeholder groups will require new and innovative approaches to participation and management.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2014.10.027

N.	44
Year	2015
Title	Assessing the socioeconomic effects of multiple-use MPAs in a European setting: A national stakeholders' perspective
Authors	D. Rodríguez-Rodríguez, S. Rees, L. Rodwell, M. Attrill
Citations	25
Takeaway	Multiple-use marine protected areas in the UK and France have moderately positive social, economic, and cultural effects, with environmental NGOs and research centers benefiting most.
Abstract	<p>The designation of marine protected areas (MPAs) may have intense social and economic effects on human communities. Driven by overarching global and European policies and national legislations, current systematic conservation planning in the UK and France requires an ecosystem approach that takes into account not only nature but also the human activities that take place in an area. Here, we identified a set of 64 socioeconomic variables potentially relevant for marine and coastal stakeholders in a European context and a comprehensive set of 20 marine and coastal stakeholder categories. Ninety national organisations in the UK and France belonging to those categories and potentially affected by/interested in the designation of multiple-use MPAs were identified and surveyed. Results show that environmental NGOs, research centres, local councils, managing agencies and statutory nature conservation bodies perceived that they are positively affected by these MPAs, whereas fishers' organisations, shipping and aggregate industrial organisations and recreational organisations perceived to be chiefly negatively affected by MPAs. On average, the ecological effects of multiple-use MPAs are perceived as 'largely positive', though 30% of respondents did not perceive any positive ecological effects from these MPAs. The social, economic and cultural effects of such MPAs are perceived as 'moderately positive'. Most respondents perceived broad range (>10 km) and permanent ecological, social, economic and cultural effects from multiple-use MPA designation suggesting high societal expectations towards these areas. However, only five variables were perceived to vary in intensity after the designation of multiple-use MPAs: 'research', 'environmental performance by citizens, businesses and towns', 'number of green businesses', 'tourism' and 'economic activities'. The most important 'social' variables for stakeholder organisations referred to local populations' engagement with the MPA, tourism and research. The most important 'economic' variables were linked to fishing, shipping and aquaculture activities. These variables highlight relevant topics to be considered in MPA planning, designation and management processes, especially in the UK and France. There were statistically significant differences in the ratings of socioeconomic variables between many organisations belonging to</p>

	the same intuitive stakeholder categories, suggesting the importance of including as wide a range of stakeholder organisations as feasible in MPA socioeconomic-related processes. Our methods and findings can help to inform and streamline ongoing and future participatory MPA planning, management and monitoring processes in Europe and in other regions with similar socioeconomic characteristics.
Study Type	
Journal	Environmental Science & Policy
Journal SJR Quartile	
DOI	10.1016/J.ENVSCI.2014.12.020

N.	45
Year	2015
Title	Biodiversity conservation should focus on no-take Marine Reserves: 94% of Marine Protected Areas allow fishing.
Authors	Mark John Costello, B. Ballantine
Citations	180
Takeaway	No-take Marine Reserves, not Marine Protected Areas, are crucial for biodiversity conservation, as 94% of these areas allow fishing, highlighting the need for targeted conservation efforts.
Abstract	Conservation needs places where nature is left wild; but only a quarter of coastal countries have no-take Marine Reserves. 'Marine Protected Areas' (MPAs) have been used to indicate conservation progress but we found that 94% allow fishing and thus cannot protect all aspects of biodiversity. Biodiversity conservation should focus on Marine Reserves, not MPAs.
Study Type	
Journal	Trends in ecology & evolution
Journal SJR Quartile	1
DOI	10.1016/j.tree.2015.06.011

N.	46
Year	2015
Title	From sea sharing to sea sparing – Is there a paradigm shift in ocean management?
Authors	M. Wolff
Citations	31
Takeaway	Current ocean management strategies favor ocean-sparing measures over science-based sustainable fisheries management, impacting ecosystems and causing use conflicts with local stakeholders.
Abstract	<p>During the past decade, the apocalyptic rhetoric of dwindling ocean resources and the destruction of aquatic habitats in the ocean and along our coasts has motivated conservationist, scientists, international Non Governmental Organisations (NGOs) and several coastal states to advocate the separation of ever increasing ocean and coastal areas as Marine Protected Areas (MPAs) to allow for the restoration of the ocean and its resources. At the same time, and analogue to what is happening with industrial agriculture, large industrial fishing fleets are operating in the Economic Exclusive Zones (EEZ's) of foreign countries, extracting a substantial part of their valuable ocean resources for the world market. The sparing of ocean and shelf areas for both, MPA implementation and Distant Water fishing (DWF) has impacted (positively and negatively) the concerned ecosystems and has often caused use conflicts with local stakeholders. I argue that current ocean use and conservation strategies are favouring these ocean-sparing (“blue grabbing”) measures as necessary means for ocean protection and sea food production over the science-based sustainable fisheries management approach, which is based on participatory fisheries assessment and the inclusion of local stakeholders in the management process. I perceive this change from sea sharing to sea sparing approaches as a paradigm shift in ocean management.</p>
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2015.07.004

N.	47
Year	2015
Title	Key factors for successful management of marine protected areas: A comparison of stakeholders' perception of two MPAs in Weh island, Sabang, Aceh, Indonesia
Authors	I. Kusumawati, Hsiang-Wen Huang
Citations	61
Takeaway	Successful management of marine protected areas requires a bottom-up management system, clear zoning, educational programs, enforcement capacity, and scientific research.
Abstract	<p>Marine Protected Areas (MPAs) have been established over the world to protect marine resources from over-exploitation. Weh Island, Sabang, Indonesia, has two MPAs: Weh Island Marine Recreational Park (WMRP) and Weh Island Marine Protected Area (WMPA). The WMRP was established by the Government of Indonesia in 1982 and is managed by the Natural Resources Conservation Agency in the Ministry of Forestry. The other, WMPA, was established in 2010 and is managed by the Government of Sabang's Marine Affairs and Fisheries Agency. First, this study reviews the regulations of the two MPAs. There are 17 regulations related to the management of the two MPAs. WMRP is governed centrally based on Law No. 32, and the WMPA has shifted to a bottom-up system based on Fisheries Law No. 31. In addition, the customary management system called Panglima Laot, which literally translates to "Sea Commander" functions for local residents. Second, 185 questionnaires were completed by government offices, non-governmental organizations, fishermen, and marine tourism operators from January to September 2013. The survey showed all respondents support the development of MPAs. More respondents in the WMPA are familiar with the MPA and received benefits from MPAs. Fishermen of the WMRP considered their participation to be low and have lower trust in the government. The participants in the WMRP considered that "support of all stakeholders' awareness of the marine environment" is most important. On the other hand, "improved understanding of benefits from MPAs" was an influential factor in the WMPA. To further strengthen the management of MPAs, the stakeholders should work together to apply a bottom-up management system, clarify the zoning, set educational programs to inform public perceptions, ensure enforcement capacity, conduct scientific research on the resource, and develop a network of MPAs in the long term.</p>
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1

DOI

10.1016/J.MARPOL.2014.09.029

N.	48
Year	2015
Title	Regional Project for the Development of a Mediterranean Marine and Coastal Protected Areas Network through the boosting of MPAs Creation and Management “ MedMPAnet ”
Authors	
Citations	0
Takeaway	The MedMPAnet project supported the creation and management of seven marine protected areas in the Mediterranean, resulting in a network of 98,411 ha of marine protected areas.
Abstract	This activity aims mainly at assisting Mediterranean riparian countries in the setting up of an ecologically coherent network of marine protected areas (MPAs) in the region. It has been addressed through the identification and characterisation of marine sites suitable to become MPAs, and also through demonstration projects for MPA creation and planning, including stakeholders’ participation and financial sustainability mechanisms. The project allowed the identification, listing and ecological characterisation of 24 priority areas of conservation interest in Croatia, Lebanon, Morocco and Montenegro. It provided support for the inception, ecological and socioeconomic characterization, zoning and management planning of four new MPAs in Albania (Porto Palermo), Algeria (Réghaia), Morocco (Cap des Trois Fourches) and Tunisia (Kuriat Islands). Business plans have been elaborated for the three demonstrations in Albania, Algeria and Morocco. Furthermore, technical assistance and capacity building activities to improve MPA management have been provided through regional and national training workshops, on-the-job training, small-granted projects, and technical tools and teaching packages. The project’s efforts led to the declaration or the launching of declaration processes of seven MPAs (totalling a surface of 98,411 ha of marine waters), which are: Porto Palermo (Albania), Réghaia (Algeria), Ras Chekaa, and Naqoura (Lebanon), Ain AlGhazala & Bomba Gulf (Libya), Cap des Trois Fourches (Morocco) and Kuriat Islands (Tunisia). E x p e r i e n c e N o t e
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	49
Year	2015
Title	Status of the marine protected area network across the English channel (La Manche): Cross-country similarities and differences in MPA designation, management and monitoring
Authors	D. Rodríguez-Rodríguez, S. Rees, G. Mannaerts, M. Sciberras, C. Pirie, G. Black, C. Aulert, E. Sheehan, S. Carrier, M. Attrill
Citations	17
Takeaway	The English Channel's marine protected area network meets international protection targets, but requires greater simplicity, integration, and coordination for effective management and ecological coherence.
Abstract	Recent international policy developments require states to conserve at least 10% of coastal and marine areas by creating effectively managed and ecologically coherent networks of protected areas in the marine environment. In the framework of the PANACHE project, the current status of designation, management and monitoring of the network of marine protected areas (MPAs) of an important environmental, social and economic marine area: the English Channel (the Channel) was examined. Currently 224 MPAs exist belonging to 12 different designation categories and covering 17 440 km ² , or approximately 20.3% of the project area in the Channel. International protection targets in the marine environment are thus met at this regional scale, although the individual contributions of the UK and France are considerably different, with French MPAs accounting for nearly 80% of the total area protected. Differences between countries are also found regarding MPA designation categories (11 in France, 6 in the UK, 1 in the Channel Islands) and management structures (with more actors involved in the UK) and approach, whereas the monitoring techniques used are similar, although more standardised in the UK. Pending challenges include greater within-country and cross-country MPA designation, monitoring and management simplicity, integration and coordination as well as the assessment of management effectiveness and ecological coherence of the Channel network of MPAs.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2014.09.021

N.	50
Year	2015
Title	Co-management of fisheries in a Marine Protected Area: the case of the Quirimbas National Park in Mozambique.
Authors	Grilo C.
Citations	14
Takeaway	The fisheries co-management institutions could have an important role to play in the protection of coral reefs in the Quirimbas National Park, and eventually elsewhere.
Abstract	<p>Marine Protected Areas (MPAs) are an important tool for biodiversity conservation. Under certain conditions, they can also benefit fisheries.</p> <p>However, these fishery benefits are usually experienced only in the long run and often imply an immediate reduction in the area available to fisheries.</p> <p>This makes MPA acceptance quite difficult by those who depend on fish resources within MPAs.</p> <p>In the Quirimbas National Park, created in Mozambique in 2002, a few no-take areas were implemented in coral reef areas as a way to protect marine biodiversity and help rebuild fish stocks. Many fishers contested the creation of no-take areas, and fisheries management authorities supported them.</p> <p>Given the conflicts between fishers and fisheries management authorities on one side, and the QNP on the other side, the latter took the initiative to collaborate with all parties in implementing fisheries co-management.</p> <p>I will briefly show what are the threats to coral reefs inside the QNP, what was the criticism of fishers and fisheries management authorities to sanctuaries, what motivated the QNP to change its strategy, and what results fisheries co-management has already produced in the conservation of coral reefs and in the promotion of fisheries.</p>
Study Type	Book
Journal	In Vasconcelos, L. (coord) (2015). Sustainability in the 21st Century – The Power of Dialogue. MARGov Project – Collaborative Governance of Marine Protected Areas (pp.163-172). ISBN: 978-989-8745-58-3.
Journal SJR Quartile	
DOI	

N.	51
Year	2015
Title	The socio-economic effects of a Marine Protected Area on the ecosystem service of leisure and recreation
Authors	S. Rees, S. Mangi, C. Hattam, S. Gall, L. Rodwell, Frances Peckett, M. Attrill
Citations	44
Takeaway	Marine Protected Areas can attract more leisure and recreation expenditure and turnover to sites within their boundaries, potentially increasing the resource's value by £2.2 million.
Abstract	<p>Marine Protected Areas (MPAs) are an important tool for the maintenance of marine ecosystem functionality and health and ensuring the onward flow of beneficial ecosystem services that support human well-being. Social and economic factors influence whether and how stakeholders exploit resources or cooperate to conserve them. Environmental managers are now turning from designating MPAs to monitoring their effectiveness. Combining spatial analysis with quantitative and qualitative survey methods this research shows that an MPA (Lyme Bay, SW England) has had varying effects on the delivery of the beneficial ecosystem service of leisure and recreation. In the survey years 2008–2011 dive businesses have increased their frequency of activity inside and outside the MPA and report an increase in turnover; though they perceive little or no effect of the MPA on business. Charter boat operators have seen an overall decline in the frequency of activity outside the MPA and an increase inside the MPA. They perceive that the MPA has increasingly had a positive effect on their business. Sea angling activity has declined at sites outside the MPA and increased at sites within the MPA, suggesting a redistribution of spatial activity. Diving activity has increased both inside and outside the MPA. Divers report that the MPA has influenced where they choose to dive. This corresponds to a potential increase in value of the MPA resource (represented as the proportional expenditure and associated turnover by these groups) of £2.2 million. This research demonstrates that the use of the resource has changed following designation and that MPAs can attract a greater proportion of the leisure and recreation expenditure and associated turnover to sites within the MPA boundary. Moving forward it is important to assess effects both inside and outside MPAs. Integrating high quality social science at MPA sites to track effectiveness can help to adapt and refine management strategies to reflect the needs of the stakeholders and support effective conservation.</p>
Study Type	

Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2015.09.011

N.	52
Year	2015
Title	Key factors for successful management of marine protected areas: A comparison of stakeholders' perception of two MPAs in Weh island, Sabang, Aceh, Indonesia
Authors	Ika Kusumawati, Hsiang-Wen Huang
Citations	44
Takeaway	The survey showed all respondents support the development of MPAs, and received benefits from MPAs. Fishermen considered their participation to be low and have lower trust in the government. Support of all stakeholders' awareness of the marine environment" is most important. Improved understanding of benefits from MPAs is an influential factor in the MPAs.
Abstract	<p>Marine Protected Areas (MPAs) have been established over the world to protect marine resources from over-exploitation. Weh Island, Sabang, Indonesia, has two MPAs: Weh Island Marine Recreational Park (WMRP) and Weh Island Marine Protected Area (WMPA). The WMRP was established by the Government of Indonesia in 1982 and is managed by the Natural Resources Conservation Agency in the Ministry of Forestry. The other, WMPA, was established in 2010 and is managed by the Government of Sabang's Marine Affairs and Fisheries Agency. First, this study reviews the regulations of the two MPAs. There are 17 regulations related to the management of the two MPAs. WMRP is governed centrally based on Law No. 32, and the WMPA has shifted to a bottom-up system based on Fisheries Law No. 31. In addition, the customary management system called Panglima Laot, which literally translates to "Sea Commander" functions for local residents. Second, 185 questionnaires were completed by government offices, non-governmental organizations, fishermen, and marine tourism operators from January to September 2013. The survey showed all respondents support the development of MPAs. More respondents in the WMPA are familiar with the MPA and received benefits from MPAs. Fishermen of the WMRP considered their participation to be low and have lower trust in the government. The participants in the WMRP considered that "support of all stakeholders' awareness of the marine environment" is most important. On the other hand, "improved understanding of benefits from MPAs" was an influential factor in the WMPA. To further strengthen the management of MPAs, the stakeholders should work together to apply a bottom-up management system, clarify the zoning, set educational programs to inform public perceptions, ensure enforcement capacity, conduct scientific research on the resource, and develop a network of MPAs in the long term.</p>
Study Type	

Journal	Marine Policy
Journal SJR Quartile	Volume 51, January 2015, Pages 465-475
DOI	https://doi.org/10.1016/j.marpol.2014.09.029

N.	53
Year	2016
Title	A regulation-based classification system for Marine Protected Areas (MPAs)
Authors	B. H. E. Costa, J. Claudet, G. Franco, Karim Erzini, Anthony Caro, E. Gonçalves
Citations	139
Takeaway	This new classification system for marine protected areas, based on regulations of uses, provides a more accurate evaluation of their effectiveness and can be applied globally.
Abstract	Dudley et al. [9] commented on our paper [11], arguing that the current IUCN objective-based categorization of protected areas, which is also used in marine protected areas (MPAs), should not be abandoned and replaced by the new regulation-based classification system [11]. Here we clarify that we do not advocate replacing the current IUCN categories, but highlight the benefits of using both the objective-based IUCN categories and the new regulation-based classification when applied to MPAs. With an increasing number of MPA types being implemented, most of them multiple-use areas zoned for various purposes, assessing ecological and socioeconomic benefits is key for advancing conservation targets and policy objectives. Although the IUCN categories can be used both in terrestrial and marine systems, they were not designed to follow a gradient of impacts and there is often a mismatch between stated objectives and implemented regulations. The new regulation-based classification system addresses these problems by linking impacts of activities in marine systems with MPA and zone classes in a simple and globally applicable way. Applying both the IUCN categories and the regulation-based classes will increase transparency when assessing marine conservation goals.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2016.06.021

N.	54
Year	2016
Title	Evaluating the social acceptability of Marine Protected Areas
Authors	S. Gall, L. Rodwell
Citations	70
Takeaway	Social acceptability of Marine Protected Areas (MPAs) can be improved through effective stakeholder engagement, transparency, and certainty of resources for effective management.
Abstract	Q methodology provides a novel, quantitative approach to reveal stakeholder perspectives and was used to assess social acceptance of Marine Protected Areas (MPAs) with fisheries and conservation management goals using the Devon & Severn region, UK as a case study site. Participants sorted a set of statements (n=42) into a forced-choice frequency distribution and centroid analysis revealed three factors for interpretation: (1) 'pro-conservation', characterised by views that conservation should be prioritised over commercial and economic interests; (2) 'pro-fisheries' who saw fishing as the priority and expressed concerns over the uncertainty of management measures and the number of planned MPAs; and (3) 'win-win' who felt that the current approach to marine management using MPAs would allow both fisheries and conservation goals to be met. Despite some differences in opinion, social acceptability of MPAs was identified across all three discourses, but was limited by the knock-on effects of the exclusion of stakeholders from the implementation of MPAs and the development of management measures. This resulted in disenfranchisement and uncertainty over the future of their activities. The results suggest that social acceptability of MPAs is generated by effective and ongoing stakeholder engagement, transparency and honesty relating to the costs and benefits of designations and a certainty that once sites are in place the resources exist for their effective management. Understanding social acceptability will guide adaptive management and increase the chances of MPA success and the meeting of global targets.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2015.12.004

N.	55
Year	2016
Title	Evaluating the success of a marine protected area: A systematic review approach.
Authors	J. Gallacher, N. Simmonds, H. Fellowes, N. Brown, N. Gill, W. Clark, C. Biggs, L. Rodwell
Citations	49
Takeaway	This study presents a flexible, cost-effective method for evaluating marine protected areas, using the most frequently used indicators to improve biophysical, socio-economic, and governance conditions.
Abstract	Marine Protected Areas (MPAs), marine areas in which human activities are restricted, are implemented worldwide to protect the marine environment. However, with a large proportion of these MPAs being no more than paper parks, it is important to be able to evaluate MPA success, determined by improvements to biophysical, socio-economic and governance conditions. In this study a systematic literature review was conducted to determine the most frequently used indicators of MPA success. These were then applied to a case study to demonstrate how success can be evaluated. The fifteen most frequently used indicators included species abundance, level of stakeholder participation and the existence of a decision-making and management body. Using the indicator framework with a traffic light system, we demonstrate how an MPA can be evaluated in terms of how well it performs against the indicators using secondary data from the literature. The framework can be used flexibly. For example, where no MPA data currently exist, the framework can be populated by qualitative data provided by local stakeholder knowledge. This system provides a cost-effective and straightforward method for managers and decision-makers to determine the level of success of any MPA and identify areas of weakness. However, given the variety of motivations for MPA establishment, this success needs to be determined in the context of the original management objectives of the MPA with greater weighting being placed on those objectives where appropriate.
Study Type	systematic review
Journal	Journal of environmental management
Journal SJR Quartile	1
DOI	10.1016/j.jenvman.2016.08.029

N.	56
Year	2016
Title	Marine (and Coastal) Protected Areas
Authors	M. Portman
Citations	7
Takeaway	Marine protected areas (MPAs) are effective tools for marine habitat and biodiversity conservation, with networks of protected areas and transboundary protected areas being key approaches.
Abstract	This chapter covers some of the most important issues relevant to planners in regard to establishing, maintaining and managing marine protected areas (MPAs). Despite debates about MPA design and management and differing perspectives on how they should be defined, it is generally agreed that they are one of the more effective tools for marine habitat and biodiversity conservation. This chapter emphasizes important ideas regarding the establishment of such areas, including the designation of networks of protected areas and transboundary protected areas. These are two approaches, among others, that will aid planners in protecting oceans and coasts.
Study Type	
Journal	
Journal SJR Quartile	
DOI	10.1007/978-3-319-26971-9_8

N.	57
Year	2016
Title	Stakeholder analysis for marine conservation planning using public participation GIS
Authors	Greg Brown, J. Strickland-Munro, H. Kobryn, S. Moore
Citations	56
Takeaway	Stakeholder classifications influence marine conservation planning, with conservation-related values dominating the mapping results in the Kimberley region of Australia.
Abstract	<p>Stakeholders are presumed to represent different interests for marine and coastal areas with the potential to influence marine protected area planning and management. We implemented a public participation GIS (PPGIS) system in the remote Kimberley region of Australia to identify the spatial values and preferences for marine and coastal areas. We assessed similarities and differences in PPGIS participants (N = 578) using three operational definitions for “stakeholder” based on: (1) self-identified group,</p> <p>(2) self-identified future interests in the region, and (3) participant value orientation that reflects a preferred trade-off between environmental and economic outcomes. We found moderate levels of association between alternative stakeholder classifications that were logically related to general and placespecific participatory mapping behavior in the study region. We then analyzed how stakeholder classifications influence specific management preferences for proposed marine protected areas (MPAs) in the study region. Conservation-related values and preferences dominated the mapped results in all proposed marine reserves, the likely result of volunteer sampling bias by conservation stakeholder interests participating in the study. However, we suggest these results may also reflect the highly politicized process of marine conservation planning in the Kimberley where conservation efforts have recently emerged and galvanized to oppose a major offshore gas development and associated land-based infrastructure. Consistent with other participatory mapping studies, our results indicate that the chosen</p>

	<p>operational definition for stakeholder group such as group identity versus interests can influence</p> <p>participatory mapping outcomes, with implications for MPA designation and management. Future</p> <p>research is needed to better understand the strengths and limitations of participatory mapping that is</p> <p>framed in stakeholder perspectives, especially when sampling relies heavily on volunteer recruitment</p> <p>and participation methods that appear predisposed to participatory bias. In parallel, practical efforts to</p> <p>ensure that social research efforts such as this are included in MPA planning must remain of the highest</p> <p>priority for scientists and managers alike.</p>
Study Type	
Journal	Applied Geography
Journal SJR Quartile	1
DOI	10.1016/J.APGEOG.2015.12.004

N.	58
Year	2016
Title	Stakeholder Perceptions of a Coastal Marine Protected Area
Authors	B. Clarke, Ruth H. Thurstan, K. Yates
Citations	9
Takeaway	Stakeholder perceptions of coastal marine protected areas in South Australia emphasize the need for planning and management to incorporate both biological and socio-economic indicators to effectively manage the areas.
Abstract	<p>ABSTRACT Clarke, B.; Thurstan, R.H.; and Yates, K.L, 2016. Stakeholder perceptions of a coastal marine protected area, . In: Vila-Concejo, A.; Bruce, E.; Kennedy, D.M., and McCarroll, R.J. (eds.), Proceedings of the 14th International Coastal Symposium (Sydney, Australia). Journal of Coastal Research, Special Issue, No. 75, pp. 622–626. Coconut Creek (Florida), ISSN 0749-0208. Marine protected areas (MPAs) are an increasingly utilised marine and coastal management tool, with rates of designation rising steeply over the last twenty years. MPAs are most commonly designated for biological conservation objectives and the management is thus focused primarily on meeting conservation goals, with associated monitoring programs gathering data on a narrow suite of biological indicators. However, MPAs also have a wide range of potential social and economic impacts and the ability to meet the goals of an MPA is highly influenced by the often unmonitored perceptions and buy-in of local stakeholders. Here we examine a range of stakeholder perceptions concerning a coastal MPA in South Australia. We conducted semi-structured interviews with individuals engaged in the MPA's planning and designation process, as well as those involved with its ongoing management. We explored their understanding of the purpose of the MPA, whether they thought the MPA was successful and the future management challenges the MPA might face. In particular, we focused on eliciting from stakeholders indicators they thought should be used to monitor the ongoing performance of the MPA. Perceptions varied between stakeholder groups, however, the majority of respondents highlighted the importance of socio-economic factors in the ongoing performance of the MPA. The vast majority of them suggested both biological and socio-economic indicators that should be incorporated into monitoring programs. Our findings highlight the need for MPA planning and management, when defining goals and developing monitoring programs, to be mindful to incorporate social and economic, as well as, biological indicators.</p>
Study Type	
Journal	

Journal SJR Quartile	
DOI	10.2112/SI75-125.1

N.	59
Year	2017
Title	Stakeholders' perceptions about recreational events within Marine Protected Areas (MPAs) in the South Coast of KwaZulu- Natal, South Africa
Authors	Nokuthula Cele, Joram Ndlovu, Taemane Phoofolo
Citations	3
Takeaway	Marine Protected Areas can support tourism and recreational activities, but their effectiveness depends on effective implementation, management strategies, and rights removal.
Abstract	<p>Tourism has become the second largest source of foreign exchange earnings in the least developed countries. However, tourists become attracted to features that are of environmental and conservation importance. As a global phenomenon, threats to biodiversity require innovative approaches to maintain and protect biodiversity in the interest of ecological integrity and human wellbeing. Worldwide, Marine Protected Areas (MPAs) are proclaimed to achieve long-term conservation of marine resources. The promulgation of laws regarding MPAs in South Africa has triggered various responses from stakeholders affected by their declaration. This study focused on perceptions of stakeholders from recreational activity providers such as fishing and scuba diving within MPAs, regarding the proposed introduction of a Marine Protected Area for the Lower South Coast of KwaZulu-Natal (KZN). A mixed method research design was used. The qualitative method involved semi-structured interviews, access to participants for the interviews was achieved through snowball sampling. The interview sample comprised 18 people aged 30 years and above, who have first-hand experience regarding the impact of MPAs on recreational events. The quantitative component comprised 90 survey questionnaires, of which 54 were men and 36 were women, questionnaires were distributed to the members of the general population using a convenience sampling technique in the South Coast. The main findings of this study are that some of the stakeholders participated in the decision-making process towards the proclamation of MPAs. Hence ordinary citizens were educated about MPAs and thus adhere to MPAs regulation. The evidence shows that MPAs can support tourism and recreational activities and they can be used as a tool to enhance tourism growth and local economic development. However, poor law enforcement has made MPAs ineffective. The study concludes that local communities are positive about the value of MPAs, but their responses to MPAs are shaped by how the MPAs are implemented, their management strategies, what rights are removed, and what tourism benefits and employment opportunities are obtained/lost in the process. Keywords : Marine</p>

	Protected Areas, recreational events, marine tourism, economic development, stakeholders.
Study Type	
Journal	Journal of Physical Activity and Health
Journal SJR Quartile	1
DOI	

N.	60
Year	2017
Title	Unintended changes of artisanal fisheries métiers upon implementation of an MPA
Authors	S. Mallol, R. Goñi
Citations	8
Takeaway	Implementing marine protected areas (MPAs) can lead to unintended changes in artisanal fisheries practices, impacting smaller boats and experienced fishermen, and expanding younger, less experienced ones.
Abstract	Establishing marine protected areas (MPAs) is one of the most significant measures governments can take to halt the degradation of marine ecosystems and fisheries overexploitation. Although MPAs can be created with the support of current stakeholders, mainly fishers, implementation of spatial restrictions and of no-take zones in particular, force adjustments to the existing fisheries in the area. The Llevant de Mallorca-Cala Rajada MPA (Spain, Western Mediterranean) was created in 2007 under the patronage of the artisanal fishermen association of Cala Rajada. This study uses onboard observer data of the existing artisanal fisheries practices (métiers), their seasonality and spatial distribution of effort in the area before (2003–2007) and after (2008–2012) MPA designation, to illustrate how fishing restrictions and regulations have changed the structure and dynamics of local fishery métiers, with inshore fishing effort partially reallocated to offshore fishing grounds farther from port. Unforeseen effects of MPA restrictions concerned coastal artisanal métiers – impinging on the smaller boats and the oldest and most knowledgeable fishers – and the expansion of métiers that use newer boats and manned by younger, less experienced fishermen. Studies like this are needed to inform the design of future fisheries spatial management measures for Mediterranean artisanal fisheries that take into account foreseeable socio-economic outcomes and loss of knowledge.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2017.10.043

N.	61
Year	2018
Title	A Systematic Review of the Socioeconomic Factors that Influence How Marine Protected Areas Impact on Ecosystems and Livelihoods
Authors	M. Mizrahi, A. Diedrich, R. Weeks, R. Pressey
Citations	43
Takeaway	Socioeconomic factors, such as stakeholder engagement, poverty, population density, and strong leadership, influence the impact of marine protected areas on biodiversity and livelihoods, but the direction of impact can be context-dependent.
Abstract	Abstract Marine protected areas (MPAs) are among the most widely accepted methods of marine management. MPAs are not, however, always placed such that they can maximize impact on conservation and livelihoods. Current MPA guidelines fall short in focusing primarily on biophysical criteria, overlooking interrelated socioeconomic factors. We identified 32 socioeconomic factors that influence whether MPA placement has an impact on biodiversity and/or livelihoods and weighted the quality of evidence using a novel “Evidence for Impact” Score. Results suggest that stakeholder engagement, poverty, population density, and strong leadership have most potential to positively impact biodiversity and/or livelihoods, but the direction of impact (i.e., positive or negative) can be context-dependent. We found a generally poor evidence base for impact evaluation of socioeconomic factors: though some factors were highly cited, few studies actually evaluate impact. Results indicate the need for a more interdisciplinary approach to MPA placement and more empirical studies that assess impact.
Study Type	systematic review
Journal	Society & Natural Resources
Journal SJR Quartile	1
DOI	10.1080/08941920.2018.1489568

N.	62
Year	2018
Title	Attitudes to a marine protected area are associated with perceived social impacts
Authors	Asha McNeill, J. Clifton, E. Harvey
Citations	64
Takeaway	Marine protected areas can have diverse social impacts, with extractive users facing the majority of negative impacts and holding critical attitudes, while those experiencing broader community or environmental benefits generally have positive attitudes to
Abstract	<p>Marine protected areas (MPAs) conserve marine biodiversity and ecosystems by limiting or prohibiting resource use in specific areas. Reduced access to a marine resource will invariably impact local communities which reside nearby and utilise those resources. Social dimensions are recognised as crucial to the success of MPAs in meeting environmental goals, however, these dimensions are poorly understood. While much research is focused on developing countries, the majority of recent growth in MPA coverage is occurring in more economically developed settings. This research aims to address this gap by exploring the diversity of social impacts associated with an established MPA on the mid-coast of Western Australia. A range of extractive and non-extractive stakeholders were interviewed to identify the type of impacts experienced and how these are associated with attitudes towards the MPA. The results demonstrate there is a strong association between the nature of the impacts experienced by stakeholders and their attitudes. The social impacts are not distributed uniformly among stakeholders, with some groups of extractive users suffering the majority of the negative impacts and holding highly critical attitudes. The most common adverse impacts affect individual users' well-being including feelings of fear, stress, uncertainty and inequity, while impacts on fishing activities are limited. Those who reported broader scale community or environmental benefits held largely positive assessments of the MPA. Together these results illustrate the importance of identifying and mitigating the full spectrum of social impacts experienced, as opposed to a narrow focus on the disruption of fishing activities or socio-economic impacts alone.</p>
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2018.04.020

N.	63
Year	2018
Title	Climate change threatens the world's marine protected areas
Authors	J. Bruno, A. Bates, C. Cacciapaglia, Elizabeth P. Pike, S. Amstrup, R. van Hooidonk, S. Henson, R. Aronson
Citations	191
Takeaway	Continued business-as-usual emissions will likely disrupt marine ecosystems, reducing the benefits of marine protected areas for conserving biodiversity and habitat.
Abstract	<p>Marine protected areas (MPAs) are a primary management tool for mitigating threats to marine biodiversity^{1,2}. MPAs and the species they protect, however, are increasingly being impacted by climate change. Here we show that, despite local protections, the warming associated with continued business-as-usual emissions (RCP8.5)³ will likely result in further habitat and species losses throughout low-latitude and tropical MPAs^{4,5}. With continued business-as-usual emissions, mean sea-surface temperatures within MPAs are projected to increase 0.035 °C per year and warm an additional 2.8 °C by 2100. Under these conditions, the time of emergence (the year when sea-surface temperature and oxygen concentration exceed natural variability) is mid-century in 42% of 309 no-take marine reserves. Moreover, projected warming rates and the existing 'community thermal safety margin' (the inherent buffer against warming based on the thermal sensitivity of constituent species) both vary among ecoregions and with latitude. The community thermal safety margin will be exceeded by 2050 in the tropics and by 2150 for many higher latitude MPAs. Importantly, the spatial distribution of emergence is stressor-specific. Hence, rearranging MPAs to minimize exposure to one stressor could well increase exposure to another. Continued business-as-usual emissions will likely disrupt many marine ecosystems, reducing the benefits of MPAs. Marine protected areas aim to conserve biodiversity and habitat. However continued high emissions causing changes in sea-surface temperatures and oxygen levels are likely to disrupt many ecosystems protected by MPAs.</p>
Study Type	
Journal	Nature Climate Change
Journal SJR Quartile	1
DOI	10.1038/s41558-018-0149-2

N.	64
Year	2018
Title	Does Participation in Fisheries Research Change Anglers' Opinions of California's Marine Protected Areas?
Authors	Allison N. Kellum
Citations	0
Takeaway	Participation in the California Collaborative Fisheries Research Program (CCFRP) positively influences anglers' opinions of marine protected areas in California, with conservation and science as major motivators for volunteering.
Abstract	Author(s): Kellum, Allison Abstract: Recent marine spatial planning efforts, including the management and monitoring of marine protected areas (MPAs), have increasingly focused on the importance of stakeholder engagement. The California Collaborative Fisheries Research Program (CCFRP) provides a unique opportunity for members of the public to partner with researchers, the fishing industry, and resource managers to monitor California's network of MPAs. The program has shown considerable success in engaging volunteers since its inception in 2006. However, there has never been a formal study of the knowledge, attitudes, and perceptions of these volunteers regarding the program, marine conservation, and MPAs. This study surveyed CCFRP volunteers to: characterize them as a population; determine what their core motivations were for joining and staying in the program; assess their attitudes towards fisheries management; and evaluate if participation in the program influences their opinions of MPAs in California. It was found that volunteers represent a cross section of the general recreational angling community in some keyways, but are generally more conservation minded than their peers. Participation in science and giving back to fisheries resources are major motivating factors for volunteering. While most volunteers have a positive opinion of MPAs, and those who joined the program earlier are more likely to have gained a more positive opinion of MPAs. Through this research we now have a clearer view of who Central Coast CCFRP volunteers are as a group, and how participation in the program has shaped their perspectives.
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	65
Year	2018
Title	Formulating an Early Stakeholder Involvement Plan for Marine Protected Areas (MPA) in Catanduanes Island, Philippines
Authors	Jimmy T. Masagca, Minerva I. Morales, Aurora E. Araojo, Sonia Sapico, Estrella T. Tribiana, Meda Mercado
Citations	2
Takeaway	The SID-SIN-SEN scheme effectively engages stakeholders in marine protected areas planning and management in Catanduanes Island, Philippines, aiding in marine space protection.
Abstract	This paper presents an early stakeholder involvement plan using SID-SIN-SEN scheme [Stakeholder Identification (SID) Stakeholder Inputs (SIN) Stakeholder Engagement (SEN)-] for planning and implementation of marine protected areas (MPA) in the typhoon-prone island province of Catanduanes Island, Bicol Region (Luzon) in the Philippines. An early engagement plan is presented for (1) Agojo Point Fish Sanctuary and Marine Reserve in San Andres as to stakeholder"s involvement and management; and (2) for preparing an enforcement plan of the MPA in Kalapadan Bay Area (KBA) of Baras town. This stakeholder involvement plan explored the importance of identifying the stakeholders, linking their inputs and engaging all major and minor stakeholders in the co-management process. The involvement plan developed from the devised scheme can help MPA managers and academic institutions in developing MPA management plans and monitoring stakeholder interactions in marine space protection of the island province and possibly other locations by using stakeholder theory and stakeholder analysis.
Study Type	
Journal	Turkish Journal of Fisheries and Aquatic Sciences
Journal SJR Quartile	3
DOI	

N.	66
Year	2018
Title	Governing Marine Protected Areas in a Changing Climate : Private Stakeholders' Perspectives
Authors	Xuechan Ma
Citations	2
Takeaway	Private stakeholders can enhance the governance effectiveness of Marine Protected Areas, potentially countering climate change impacts.
Abstract	Climate change has become one of the most pressing problems for both nature and human lives. Marine Protected Areas (MPAs) are part of a “natural solution” to climate change. Most of existing MPAs are governed by government agencies rather than private stakeholders such as NGOs, local communities and for-profit enterprises. Nevertheless, with the global push to create MPAs, the number of privately governed MPAs is expected to increase. In this context, this paper aims to investigate the role of private stakeholders in enhancing the governance effectiveness of MPAs so as to improve their capability to counter any adverse impact brought by the changing climate. After analysis, the strengths and weaknesses of the practice of each category of private stakeholders are uncovered and specific recommendations are proposed to promote the future practice. With the increasing number of privately governed MPAs in the future, this paper serves as a starting point and contributes to the literature on the study of the private governance of MPAs in the context of the changing climate.
Study Type	
Journal	Arctic Review on Law and Politics
Journal SJR Quartile	2
DOI	10.23865/ARCTIC.V9.1208

N.	67
Year	2018
Title	How good is your marine protected area at curbing threats
Authors	Mirta Zupan, F. Bulleri, Julian Evans, S. Frascchetti, P. Guidetti, A. García-Rubies, Marta Sostres, V. Asnaghi, Anthony Caro, S. Deudero, R. Goñi, G. Guarnieri, F. Guilhaumon, D. Kersting, D. Kersting, A. Kokkali, Claudia Kruschel, V. Mačić, L. Mangialajo
Citations	70
Takeaway	Fully protected marine areas effectively eliminate extractive activities, while partially protected areas attract non-extractive activities, questioning their ability to reach conservation targets.
Abstract	<p>Marine protected areas (MPAs) are key tools to mitigate human impacts in coastal environments, promoting sustainable activities to conserve biodiversity. The designation of MPAs alone may not result in the lessening of some human threats, which is highly dependent on management goals and the related specific regulations that are adopted. Here, we develop and operationalize a local threat assessment framework. We develop indices to quantify the effectiveness of MPAs (or individual zones within MPAs in the case of multiple-use MPAs) in reducing anthropogenic extractive and non-extractive threats operating at local scale, focusing specifically on threats that can be managed through MPAs. We apply this framework in 15 Mediterranean MPAs to assess their threat reduction capacity. We show that fully protected areas effectively eliminate extractive activities, whereas the intensity of artisanal and recreational fishing within partially protected areas, paradoxically, is higher than that found outside MPAs, questioning their ability at reaching conservation targets. In addition, both fully and partially protected areas attract non-extractive activities that are potential threats. Overall, only three of the 15 MPAs had lower intensities for the entire set of eight threats considered, in respect to adjacent control unprotected areas. Understanding the intensity and occurrence of human threats operating at the local scale inside and around MPAs is important for assessing MPAs effectiveness in achieving the goals they have been designed for, informing management strategies, and prioritizing specific actions.</p>
Study Type	
Journal	Biological Conservation
Journal SJR Quartile	1
DOI	10.1016/J.BIOCON.2018.03.013

N.	68
Year	2018
Title	How Marine Protected Areas Are Governed: A Cultural Theory Perspective
Authors	A. Halik, M. Verweij, A. Schlüter
Citations	33
Takeaway	Cultural Theory can provide a theoretical foundation for designing effective Marine Protected Area regimes, emphasizing the need to accommodate various ways of organizing and perceiving social relations in management plans.
Abstract	Marine Protected Areas (MPAs) have become recognized as important management tools for marine and coastal ecosystems in the last few decades. However, the theoretical underpinnings of MPA regimes have arguably not yet received sufficient attention. This paper attempts to remedy this by exploring how the Cultural Theory initiated by Dame Mary Douglas can provide a theoretical foundation for the current debates about the design of MPA regimes. It does so by firstly noting that the various types of MPA governance discussed in the literature correspond to the ways of organizing, perceiving and justifying social relations recognized in Cultural Theory. The article continues by setting out how Cultural Theory helps to explain when and why MPA regimes succeed or fail to reach their goals. In particular, the article highlights the practical importance of accommodating all ways of organizing and perceiving social relations in any MPA management plan. Finally, the paper suggests that further systematic, empirical work for assessing MPAs needs to be undertaken so as to corroborate the arguments advanced in this paper.
Study Type	
Journal	Sustainability
Journal SJR Quartile	1
DOI	10.3390/SU10010252

N.	69
Year	2018
Title	Implementation challenges of area-based management tools (ABMTs) for biodiversity beyond national jurisdiction (BBNJ)
Authors	E. D. Santo
Citations	52
Takeaway	Area-based management tools for biodiversity beyond national jurisdiction face challenges in improving evidence, designing effective compliance and enforcement mechanisms, and engaging stakeholders effectively.
Abstract	Area-based management tools (ABMTs), including marine protected areas (MPAs) are widely recognized as a key mechanism for conserving and restoring biodiversity. The developing international legally-binding instrument (ILBI) on biodiversity beyond national jurisdiction (BBNJ) is considering a range of approaches to ABMTs. While the process is still in early stages, this paper looks ahead to anticipate implementation challenges for ABMTs, given previous experiences with regional fisheries management organizations (RFMOs) and high seas MPAs. Drawing on the implementation of MPAs under the OSPAR Convention and the Convention on the Conservation of Antarctic Living Marine Resources (CCAMLR), key suggestions revolve around: (1) improving the evidence basis for protecting BBNJ, (2) designing effective compliance and enforcement mechanisms, and (3) engaging adequately with relevant stakeholders. In addition to the case studies, which are primarily marine pollution and fishing-oriented, considerations related to mitigating the effects of deep sea mining and the harvesting of marine genetic resources are also touched upon.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2018.08.034

N.	70
Year	2018
Title	Local Stakeholder Perception on Community Participation in Marine Protected Area Management: A Q-Method Approach
Authors	P. S. M. Jamual Fawaeed, M. Daim
Citations	2
Takeaway	The Q-methodology effectively explores local stakeholders' perceptions and opinions on community participation in marine protected area management, highlighting the current level of community involvement in Pulau Perhentian Marine Park, Terengganu, Malays
Abstract	Local stakeholder involvement in Marine Protected Area (MPA) management can bring to a successful MPA. Generally, participatory research in marine protected area management is exploring the relationship between marine protected area management approach adopted by the management agencies and the level of participation of local stakeholder whom reside within the marine protected areas. However, the scenario of local community participation in MPA management in Malaysia seems discouraging and does not align with the International Aichi Biodiversity Target 2020. In order to achieve the International Aichi Biodiversity Target 2020, this paper attempts to explore the methodology on participatory research towards the local stakeholder of Pulau Perhentian Marine Park (PPMP), Terengganu, Malaysia. A Q-methodology is used to investigate the perspective of local stakeholder who represents different stances on the issues, by having participants rank and sort a series of statements by comply quantitative and qualitative method in collecting the data. A structured questionnaire will be employed across this study by means of face-to-face interview. In total, 210 respondents from Kampung Pasir Hantu are randomly selected. Meanwhile, a workshop with the agency (Department of Marine Park) had been held to discuss about the issues faces on behalf of management that manage the PPMP. Using the Q-method, researcher acknowledged wise viewpoints, reflecting how different stakeholders' perception and opinion about community participation with highlights the current level of community participation in MPA. Thus, this paper describes the phases involved in this study, methodology and analysis used in making a conclusion .
Study Type	
Journal	IOP Conference Series: Earth and Environmental Science
Journal SJR Quartile	
DOI	10.1088/1755-1315/117/1/012039

N.	71
Year	2018
Title	Lyme Bay marine protected area: A governance analysis
Authors	Rebecca Singer, P. Jones
Citations	9
Takeaway	Lyme Bay marine protected area has a diverse governance structure, combining bottom-up stakeholder engagement and awareness-raising with strong top-down legislative structures, but resilience to external pressures remains to be tested.
Abstract	The Marine Protected Area Governance (MPAG) framework can be used to analyse MPA governance by moving away from conceptual discussions to focus on particular governance approaches leading to effectiveness. The framework was applied to the Lyme Bay MPA, southwest England, the site of a controversial fisheries closure, which has subsequently been proposed as a Special Area of Conservation (SAC), as well the location for an NGO-led project focusing on stakeholder engagement. This paper examines a broad range of perspectives on the governance of this MPA, via semi-structured interviews with representatives of different interest groups and document analyses. The MPAG framework found a governance structure with a diversity of incentives, providing for bottom-up stakeholder engagement and awareness-raising coupled with strong top-down legislative structures. Although the fisheries closure and subsequent SAC restrictions have provided the main mechanisms for protecting biodiversity, an NGO-led project has provided a complement to the legislative framework and helped to facilitate a mechanism for adaptive co-management. However, the site is predicted to be subject to external pressures from changes in legislation, state resource restrictions and reduced NGO involvement, which will test the resilience of the structure and whether such a diversity of incentives provides sufficient resilience to maintain MPA effectiveness in the face of these pressures.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2018.07.004

N.	72
Year	2018
Title	Marine protected areas: Science, policy & management
Authors	John Humphreys, R. Herbert
Citations	487
Takeaway	Marine protected areas (MPAs) face challenges in balancing environmental and socio-economic considerations, with greater emphasis on local community benefits.
Abstract	<p>Marine protected areas (MPAs) generate powerful interactions between social, economic and environmental interests, manifest at a circumscribed and often local scale. Consequently the designation and management of an individual MPA typically plays out in microcosm the general challenge of sustainable development in the marine environment. Some universally relevant questions relating to four commonly held defining attributes of MPAs are articulated. However, while many of the questions are universal, in practice the answers vary greatly. Consequently there are few MPAs which would not provide an informative case study elucidating the dynamics at the intersection between science, policy and management in the marine realm. The papers in this collection exemplify a range of key issues across this spectrum of disciplines. In practice most contentious issues relate to the balance within MPAs between environmental and socio-economic considerations, not least relating to fishing. In this respect greater attention in MPA management plans, to the economic benefits of MPAs for local communities is encouraged. However we also recognise that glib assertions that a secure sustainable balance between conservation and exploitation can be established in practice, typically with few resources in a largely unseen and often data-poor environment, may sometimes be politically expedient but scientifically questionable. Yet it is ultimately the work of all those involved directly with MPAs to collectively achieve the task of transforming the rhetoric of marine conservation policy into a successful reality on the ground and we commend the authors of this collection for their efforts to achieve that goal.</p>
Study Type	
Journal	Estuarine, Coastal and Shelf Science
Journal SJR Quartile	1
DOI	10.1016/J.ECSS.2018.10.014

N.	73
Year	2018
Title	Navigating future uncertainty in marine protected area governance: Lessons from the Scottish MPA network
Authors	Charlotte R. Hopkins, D. Bailey, T. Potts
Citations	11
Takeaway	The Scottish Marine Protected Area network can benefit from considering climate change in its design, monitoring, and management through a management matrix tool.
Abstract	As international pressure for marine protection has increased, Scotland has increased spatial protection through the development of a Marine Protected Area (MPA) network. Few MPA networks to date have included specific considerations of climate change in the design, monitoring or management of the network. The Scottish MPA network followed a feature-led approach to identify a series of MPAs across the Scottish marine area and incorporated the diverse views of many different stakeholders. This feature led approach has led to wide ranging opinions and understandings regarding the success of the MPA network. Translating ideas of success into a policy approach whilst also considering how climate change may affect these ideas of success is a complex challenge. This paper presents the results of a Delphi process that aimed to facilitate clear communication between academics, policy makers and stakeholders in order to identify specific climate change considerations applicable to the Scottish MPA network. This study engaged a group of academic and non-academic stakeholders to discuss potential options that could be translated into an operational process for management of the MPA network. The results of Delphi process discussion are presented with the output of a management matrix tool, which could aid in future decisions for MPA management under scenarios of climate change.
Study Type	
Journal	Estuarine, Coastal and Shelf Science
Journal SJR Quartile	1
DOI	10.1016/J.ECSS.2018.04.020

N.	74
Year	2018
Title	Revisiting “Success” and “Failure” of Marine Protected Areas: A Conservation Scientist Perspective
Authors	S. Giakoumi, Jennifer McGowan, M. Mills, M. Beger, R. Bustamante, A. Charles, Patrick Christie, M. Fox, P. García-Borboroglu, S. Gelcich, P. Guidetti, P. Mackelworth, J. Maina, L. McCook, F. Micheli, L. Morgan, P. Mumby, Laura M. Reyes, A. White, K. Groru
Citations	202
Takeaway	Stakeholder engagement is the most important factor affecting the success of marine protected areas, and its absence is a key factor influencing their failure.
Abstract	<p>Marine protected areas (MPAs) form the cornerstone of marine conservation. Identifying which factors contribute to their success or failure is crucial considering the international conservation targets for 2020 and the limited funds generally available for marine conservation. We identified common factors of success and/or failure of MPA effectiveness using peer-reviewed publications and first-hand expert knowledge for 27 case studies around the world. We found that stakeholder engagement was considered to be the most important factor affecting MPA success, and equally, its absence, was the most important factor influencing failure. Conversely, while some factors were identified as critical for success, their absence was not considered a driver of failure, and vice versa. This mismatch provided the impetus for considering these factors more critically. Bearing in mind that most MPAs have multiple objectives, including non-biological, this highlights the need for the development and adoption of standardized effectiveness metrics, besides biological considerations, to measure factors contributing to the success or failure of MPAs to reach their objectives. Considering our conclusions, we suggest the development of specific protocols for the assessment of stakeholder engagement, the role of leadership, the capacity of enforcement and compliance with MPAs objectives. Moreover, factors defining the success and failure of MPAs should be assessed not only by technical experts and the relevant authorities, but also by other stakeholder groups whose compliance is critical for the successful functioning of an MPA. These factors should be considered along with appropriate ecological, social, and economic data and then incorporated into adaptive management to improve MPA effectiveness.</p>
Study Type	literature review
Journal	Frontiers in Marine Science
Journal SJR Quartile	1

DOI

10.3389/fmars.2018.00223

N.	75
Year	2018
Title	Stakeholder management in marine protected areas of Catanduanes Island, Philippines
Authors	Jimmy T. Masagca
Citations	1
Takeaway	Effective stakeholder management in community managed marine spaces in Catanduanes Island, Philippines, can maximize conservation, participation, poverty alleviation, and sustainable development.
Abstract	The management of Marine Protected Areas (MPA) or Community Managed Marine Spaces (CMMS) in Catanduanes island, Philippines has increasingly gained interest among marine conservationists. Looking into the benefits, there are several attempts to explain whether effectiveness of these spaces is achieved in the context of conservation, maximizing stakeholders participation, poverty alleviation and sustainable development. This paper looks into how contextualization in the governance of community protected marine spaces in the island province of Catanduanes, Bicol Region by focusing on effective stakeholder management and managing stakeholder inputs. Two examples from Catanduanes are presented here: (1) Kalapadan Bay Area (KBA) MPA in Baras and (2) Agojo Point Fish Sanctuary and Marine Reserve, San Andres. Analysis based on SID-SEN-SIN Model Concepts on stakeholders' identification, engagement and inputs is discussed here and includes the presentation of an on-going program/project of the Municipality of Baras Catanduanes State University co-management or LGU-Academe Partnership contributing the effective early stakeholders' engagement in marine spaces protection of the island province.
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	76
Year	2018
Title	Strategising stakeholder empowerment for effective co-management within fishery-based commons
Authors	Edward Freeman, C. Civera, Damiano Cortese, S. Fiandrino
Citations	26
Takeaway	Empowerment-based engagement in marine protected areas can effectively co-manage natural common goods by fostering entrepreneurial skills among low-power stakeholders.
Abstract	<p>The purpose of this paper is to link empowerment to the engagement of low-power stakeholders in the context of marine protected areas (MPAs) to suggest how empowerment-based engagement can be strategised to prevent and overcome management crises within a natural common good and ultimately achieve effective co-management.</p> <p>Design/methodology/approach</p> <p>This research employs a longitudinal case study methodology. The subject of the study is Torre Guaceto MPA, a natural common good, internationally recognised as a best practice of co-management.</p> <p>The case study illustrates specific empowerment areas and actions that help move low-power stakeholders to higher levels of engagement to achieve effective co-management. It also suggests that the main strategic implication of empowerment-based engagement is the creation of empowered stakeholders who can serve as catalysts for sustaining the common through the development of entrepreneurial skills that satisfy joint interests.</p> <p>The applied methodology of a single case and the peculiar conditions intrinsic to this case can be overcome via the inclusion and comparison of other similar commons.</p> <p>The study provides a stakeholder management model of empowerment-based engagement that offers concrete evidence of empowerment strategies that can be adopted and adapted by the management of similar natural common goods.</p> <p>The research fills the literature gaps related to understanding the antecedents of engagement and its strategic implications within natural common pool resources.</p>
Study Type	
Journal	British Food Journal
Journal SJR Quartile	1

DOI

10.1108/BFJ-01-2018-0041

N.	77
Year	2018
Title	The evolution of marine protected area planning in Aotearoa New Zealand: Reflections on participation and process
Authors	Kathryn K. Davies, Ani A. Murchie, V. Kerr, C. Lundquist
Citations	25
Takeaway	Inclusion and balanced participation in marine protected area planning in New Zealand is crucial for successful implementation and management, balancing ecological, social, and economic interests.
Abstract	<p>Marine protected areas (MPAs) are a critical element of fisheries management and biodiversity conservation strategies. However, MPA planning is a complex undertaking that requires consideration of ecological and other knowledge, including indigenous knowledge, as well as balancing social, cultural, and economic interests. Engaging a range of stakeholders and indigenous partners in MPA planning, establishment, and management has consistently been identified as key to successful MPA implementation. This paper interrogates MPA planning in Aotearoa New Zealand, with a focus on the role of participation and collaboration in the development and implementation of MPAs. Previous and current MPA processes were evaluated using best practice principles drawn from international MPA and other participatory process literature. Several factors hypothesised to be associated with improvements and efficiencies in the involvement of participants in MPA decision making are assessed, including aspects of participation, best available information, social learning and capacity, fair and respectful process, and efficiency of administration. Processes were compared before and after introduction of the New Zealand Marine Protected Areas Policy and Implementation Plan in 2005. Areas for improvement in future evolutions of MPA planning also emerged from this research; these centre primarily on the need for inclusive and balanced participation; inclusion of multiple values and information types in MPA decision making; time to build trust and establish shared understanding; and resourcing. These recommendations represent a conceptualisation of MPAs operating within holistic social-ecological systems frameworks that encompass more than biodiversity conservation or extractive use, potentially redefining how MPAs are conceived of, developed, implemented and valued.</p>
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2018.03.025

N.	78
Year	2018
Title	What counts in making marine protected areas (MPAs) count? The role of legitimacy in MPA success in Canada
Authors	L. Dehens, Lucia Fanning
Citations	57
Takeaway	Effective marine protected areas in Canada depend on community leadership and trust, with a focus on community leadership and trust building.
Abstract	<p>Marine protected areas (MPAs) are powerful management tools used worldwide for conserving marine species and habitats. Yet, many MPAs fail to achieve their management objectives because of shortfalls in understanding the level of legitimacy stakeholders afford to an MPA. Legitimacy refers to the ability of a political action, in this case an MPA, to be perceived as right and just by the various people who are involved, interested, and/or affected by it. Using responses from key stakeholders and managers at two coastal MPAs in Atlantic Canada, this study examined the importance of various factors shaping perceptions of MPA effectiveness and the role of legitimacy in influencing those perceptions. Results indicate that most indicators of legitimacy are important to stakeholders for MPA effectiveness. Specifically, there was consensus across case studies on the importance of community leadership and the establishment of trust in determining the level of legitimacy afforded to MPAs. However key differences in perceptions were evident from stakeholders both between and within groups, and between stakeholders and MPA managers. A novel legitimacy framework and a stakeholder-vetted suite of indicators for legitimacy are presented and recommended for use by MPA managers in assessing the legitimacy of coastal MPAs, before, during and after MPA designation. The results provide an increased understanding of stakeholders' perceptions of legitimacy, giving managers key additional information needed to establish effective MPAs in the future.</p>
Study Type	
Journal	Ecological Indicators
Journal SJR Quartile	1
DOI	10.1016/J.ECOLIND.2017.12.026

N.	79
Year	2019
Title	Do managers and stakeholders have congruent perceptions on marine protected area management effectiveness?
Authors	Vinicius J. Giglio, R. Moura, F. Z. Gibran, Laís C. Rossi, Bárbara M. Banzato, Jessica T Corsso, G. Pereira-Filho, Fabio S. Motta
Citations	16
Takeaway	Managers perceive marine protected areas as having medium management effectiveness, while stakeholders perceive them as having medium effectiveness due to poor communication and lack of participation on management decisions.
Abstract	<p>The assessment of management effectiveness is essential to measure how well marine protected areas (MPAs) are achieving their goals and objectives. Incorporating the view of multiple stakeholders is an important component of MPA planning and management as it may simultaneously help reduce conflicts and increase adherence to rules and compliance. However, the most assessments of MPA management effectiveness is undertaken solely based on managers' perceptions. Here, we compared the perceptions of management effectiveness among managers and the management council members of three Brazilian marine reserves. Council members include stakeholders from the public and private sectors with different backgrounds. Overall, the marine reserves were classified as having medium management effectiveness, with managers perceiving higher levels of effectiveness than the council members. The main differences were related to poor communication among managers and council members and the perception of lack of participation on management decisions by council members. Assessing different perspectives on management effectiveness gives a more comprehensive understanding of the situation. Communication between managers and stakeholders is essential to guarantee that management challenges are more equally recognized. We recommend that further evaluations consider the diversity of stakeholders involved in the management to get a more realistic assessment on management effectiveness. The gap between managers and stakeholders' views is an important indicator because it is related to the level of alignment between MPA goals and society expectations.</p>
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	1
DOI	10.1016/J.OCECOAMAN.2019.104865

N.	80
Year	2019
Title	Economic, Social, and Environmental Significance of Marine Protected Areas (MPAs)
Authors	M. M. Masud
Citations	1
Takeaway	Marine protected areas (MPAs) significantly contribute to maintaining biodiversity, reducing coastal habitat degradation, and promoting sustainable development in coastal communities.
Abstract	Marine protected areas (MPAs) have been established to protect, preserve, and shelter vulnerable and endangered marine life. These areas contribute substantially to reducing the degradation of coastal habitats and sea life, maintaining biodiversity, preventing the loss of marine species, increasing productivity, supporting ecological systems, and protecting the oceans. In particular, these areas serve as a safeguard of fish stocks. Conservation efforts have significant positive economic, sociocultural, and environmental impact on livelihoods, food security, income generation, as well as poverty reduction for coastal communities. MPAs form the cornerstone of a blue economy which contribute to sustainable development in coastal communities as well as for the national economy as a whole. It is therefore important to improve the understanding of MPAs' importance among all stakeholders and local communities; only then can we conserve and sustainably use the oceans, seas and marine resources. In this regard, local communities play a key role to promote sustainable use of marine resources and our natural heritage. Thus, this chapter discusses the economic, social, and ecological importance of global MPAs.
Study Type	
Journal	Conservation of Marine Resources and Sustainable Coastal Community Development in Malaysia
Journal SJR Quartile	
DOI	10.1007/978-981-13-9730-1_4

N.	81
Year	2019
Title	Governance in the early stages of marine protected area development: A case study of Nusa Penida District Marine Conservation Area, Indonesia
Authors	Dinah Yunitawati, J. Clifton
Citations	14
Takeaway	The early stages of Nusa Penida District Marine Conservation Area in Indonesia were largely facilitated by non-governmental organizations, but management responsibility has since passed to district government and state institutions, reducing incentives an
Abstract	This research presents a governance analysis of an Indonesian marine protected area (MPA) during the early phases of its implementation – Nusa Penida District Marine Conservation Area. Attention is drawn to the importance of participatory and communication incentives in the design and implementation stages of the MPA, which were largely facilitated through the actions of overseas and domestic non-governmental organisations. Following the official designation of the MPA, management responsibility transferred to district government and state institutions, leading to a considerable reduction in the strength of incentives and uncertainty over leadership amongst local stakeholders. The implications of this situation are discussed and recommendations for future management are identified.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2019.103653

N.	82
Year	2019
Title	Guidelines for applying the IUCN protected area management categories to marine protected areas
Authors	J. Day, N. Dudley, M. Hockings, G. Holmes, D. Laffoley, S. Stolton, S. Wells, L. Wenzel
Citations	211
Takeaway	This second edition of the guidelines aims to increase accuracy and consistency in assigning and reporting IUCN categories to marine and coastal protected areas, ensuring effective conservation of nature.
Abstract	The development of this second edition of these guidelines was in part a response to evidence of the widespread incorrect application of the categories to marine protected areas (MPAs). Marine management and sustainable fisheries management are critical elements of good oceans management, but are not the same as protected areas management, where the primary focus is conservation of nature. The primary purpose of these supplementary guidelines is to increase the accuracy and consistency of assignment and reporting of the IUCN categories when applied to marine and coastal protected areas. These supplementary marine guidelines are aimed at ensuring that the IUCN categories can be effectively applied to all types of MPAs as well as to any marine components of adjoining terrestrial protected areas, provided a site meets the IUCN definition of a protected area.
Study Type	
Journal	
Journal SJR Quartile	
DOI	10.22005/BCU.241850

N.	83
Year	2019
Title	Marine Protected Areas in Peninsular Malaysia: Shifting from Political Process to Co-Management
Authors	Mohd Azhar Abdul Rahman, Farahdilah Ghazali, M. Rusli, N. Aziz, W. Talaat
Citations	6
Takeaway	Shifting from political process to co-management of marine protected areas in Peninsular Malaysia can improve environmental stability and livelihood sustainability for local communities.
Abstract	<p>Since fishing is a primary source of income to the coastal communities, conservation of marine natural resources is crucial to safeguard its sustainable supply. Therefore, intensive measures should be taken by all the stakeholders – from the authorities to the local fishermen. The precious coral reefs should be protected as important breeding habitat of various commercially valued species of marine resources and. Thus, in carrying out the political process of designating marine protected areas (MPAs) as marine parks, the local communities must also be engaged by the government due to their proximity to and dependency on the environment as direct resources users. Co-management or collaborative management by engaging the local communities, or community-based management, is the concept that could be able to remedy ineffective MPAs management in Peninsular Malaysia. Co-management or collaborative management approach between the authorities and the communities must be strategised by factoring in their local knowledge of living within and off the marine environment and resources. This study utilises content analysis method on the primary data, namely the national policies, federal acts, and state enactments. While the secondary data in form of official reports, scholarly articles and others deemed relevant are used to supplement and support the findings. This paper dwells on the possibility of shifting the process of MPAs designation from political process to co-management in Peninsular Malaysia, in order to achieve both environmental stability and the livelihood sustainability of the local communities.</p>
Study Type	
Journal	Journal of Programming Languages
Journal SJR Quartile	
DOI	10.5539/jpl.v12n4p22

N.	84
Year	2019
Title	Marine Protected Areas in Peninsular Malaysia: Shifting from Political Process to Co-Management
Authors	Mohd Azhar Abdul Rahman, Farahdilah Ghazali, M. Rusli, N. Aziz, W. Talaat
Citations	6
Takeaway	Shifting from political process to co-management of marine protected areas in Peninsular Malaysia can improve environmental stability and livelihood sustainability for local communities.
Abstract	<p>Since fishing is a primary source of income to the coastal communities, conservation of marine natural resources is crucial to safeguard its sustainable supply. Therefore, intensive measures should be taken by all the stakeholders – from the authorities to the local fishermen. The precious coral reefs should be protected as important breeding habitat of various commercially valued species of marine resources and. Thus, in carrying out the political process of designating marine protected areas (MPAs) as marine parks, the local communities must also be engaged by the government due to their proximity to and dependency on the environment as direct resources users. Co-management or collaborative management by engaging the local communities, or community-based management, is the concept that could be able to remedy ineffective MPAs management in Peninsular Malaysia. Co-management or collaborative management approach between the authorities and the communities must be strategised by factoring in their local knowledge of living within and off the marine environment and resources. This study utilises content analysis method on the primary data, namely the national policies, federal acts, and state enactments. While the secondary data in form of official reports, scholarly articles and others deemed relevant are used to supplement and support the findings. This paper dwells on the possibility of shifting the process of MPAs designation from political process to co-management in Peninsular Malaysia, in order to achieve both environmental stability and the livelihood sustainability of the local communities.</p>
Study Type	
Journal	Journal of Programming Languages
Journal SJR Quartile	
DOI	10.5539/jpl.v12n4p22

N.	85
Year	2019
Title	Marine protected areas in the 21st century: Current situation and trends
Authors	M. Maestro, María Luisa Pérez-Cayeiro, J. A. Chica-Ruiz, H. Reyes
Citations	82
Takeaway	Marine protected areas (MPAs) have increased globally, but their management varies between regions, with an ecosystem approach increasingly implemented and their effectiveness in mitigating climate change impacts.
Abstract	In recent years, the environmental crisis affecting the planet has caused the deterioration of the oceans and a great loss of biodiversity. In response to these changes, the quantity and extension of coastal and marine protected areas (MPAs) has increased, highlighting protection as one of the most effective instruments to conserve biodiversity and its resources. In this study the evolution to the current standing of MPAs within the international framework has been analysed, utilising information extracted from the United Nations databases and the study of specific cases. For this purpose, the planet has been divided into eight regions (according to the United Nations) and two MPAs have been evaluated within each region, reported in different periods. The results provide a view of changes to the management of MPAs since their consolidation, as well as current approaches and challenges. Since the beginning of this century, the criteria used to establish MPAs have been unified throughout the planet. However, the planning and management of these spaces differs between various regions. Three main achievements have been identified since the last decade: 1) There is a tendency towards the implementation of an ecosystem approach, widely extended in both the terrestrial and marine environment, which gives greater importance to the maintenance of ecosystem services; 2) It is recognised that MPAs are an effective instrument to mitigate the effects of climate change; 3) To achieve effective protection, it is recommended that MPAs are established beyond waters under national jurisdiction, which is where the majority are concentrated today. Notably, despite international recommendations and the efforts made by governments and institutions, the oceans remain one of the ecosystems most affected by the development of human activities.
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	1

DOI

10.1016/J.OCECOAMAN.2019.01.008

N.	86
Year	2019
Title	Mind the gap between aspiration and practice in co-managing marine protected areas: A case study from Negros Occidental, Philippines
Authors	Philipp Gorris
Citations	16
Takeaway	Local fishers' influence in co-management of marine protected areas in Negros Occidental, Philippines, is low due to procedural flaws, power imbalances, and lack of non-governmental stakeholder organization.
Abstract	A commonly held view is that co-management enhances the success of marine protected areas (MPA). The idea of co-management is to create a permanent forum in which a common strategy is initiated, negotiated and exercised in a collaborative way. It explicitly emphasizes the inclusion of wide ranging stakeholder interests and the attempt to balance those. The related literature maintains that the ideal state of co-management is a situation where government institutions and non-governmental stakeholders are equal partners. This study focuses on a co-management arrangement for a Philippine MPA from a critical perspective and systematically analyzes the formally granted rights of local fishers in co-management, and their actual influence on the management. The results show that, despite the legal stipulation of an equitable co-management arrangement including governmental and non-governmental stakeholders, the local fishers' influence remains low. This discrepancy is mainly caused by i) flaws in the procedural rules of the co-management arrangement, ii) existing power imbalances emanating from local socio-political realities, and iii) drawbacks in non-governmental stakeholder organization and representation. Points of leverage are identified through which the legal design of co-management can be improved for helping to provide the grounds for equitable marine resource co-management in practice.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2019.03.006

N.	87
Year	2019
Title	Purpose vs performance: What does marine protected area success look like?
Authors	K. Yates, B. Clarke, Ruth H. Thurstan
Citations	34
Takeaway	Marine protected areas (MPAs) are considered successful by stakeholders when they provide social and economic benefits, even if their primary purpose is biodiversity conservation.
Abstract	<p>Marine protected areas (MPAs) are an increasingly deployed spatial management tool. MPAs are primarily designed for biodiversity conservation, with their success commonly measured using a narrow suite of ecological indicators. However, for MPAs to achieve their biodiversity conservation goals they require community support, which is dependent on wider social, economic and political factors. Despite this, research into the human dimensions of MPAs continues to lag behind our understanding of ecological responses to MPA protection. Here, we explore stakeholders' perceptions of what MPA success is. We conducted a series of semi-structured interviews and focus groups with a diverse group of stakeholders local to a South Australian MPA. What constitutes success varied by stakeholder group, and stakeholders' stated understanding of the purpose of the MPA differed from how they would choose to measure the MPA's success. Indeed, all interviewees stated that the primary purpose of the MPA was ecological, yet almost all (>90%) would measure the success of the MPA using social and economic measures, either exclusively or in conjunction with ecological ones. Many respondents also stated that social and economic factors were key to the MPA achieving ongoing/future success. Respondents generated a large range of novel socio-economic measures of MPA success, many of which could be incorporated into monitoring programs for relatively little additional cost. These findings also show that success is not straightforward and what constitutes success depends on who you ask. Even where an MPA's primary ecological purpose is acknowledged by stakeholders, stakeholders are likely to only consider the MPA a success if its designation also demonstrates social and economic benefits to their communities. To achieve local stakeholder support MPAs and associated monitoring programs need to be designed for a variety of success criteria in mind, criteria which reflect the priorities and needs of the adjacent communities as well as national and international conservation objectives.</p>
Study Type	
Journal	Environmental Science & Policy

Journal SJR Quartile	1
DOI	10.1016/J.ENVSCI.2018.11.012

N.	88
Year	2019
Title	Recreation user knowledge, support and engagement in French MPAs: Are there reverse side-effects of the French soft regulation and management approach?
Authors	Alix Cosquer, M. Hughes, N. L. Corre, A. Saint-Pierre, I. Peuziat, T. Michot, Nicolas Bernard
Citations	7
Takeaway	French marine protected areas' soft regulation leads to low awareness among recreation users, but they support additional regulation, highlighting the need for improved visibility and understanding.
Abstract	<p>Marine and coastal recreation represents a common and increasing range of activities in marine protected areas (MPA). Understanding and factoring in the views of recreational stakeholders is considered an important component of effective MPA management. The diversity of recreation users and history of management can present stakeholder engagement challenges This paper presents the findings of a French MPA recreation user survey involving 1000 respondents across 7 recreation activity types regarding knowledge of MPAs, the perceived importance of MPAs to their recreation activity, and support for additional regulation and engagement associated with French MPAs. Respondents generally had little or no knowledge about the MPA existence and regulations in locations they accessed for recreation. A low perceived importance of MPAs as a place to recreate and low interest in engagement was also apparent. However, there was significant support for additional MPA regulation. The results demonstrate the complexity of engaging with recreation users in a country where MPAs are a relatively recent concept superimposed on well-established and historically settled human uses. It seems that soft regulation of French MPAs to avoid impinging on recreation access and public liberties is associated with an overall low awareness of MPAs. This situation questions the ability of managers to engage effectively with recreation stakeholders and indicates a need to make French MPAs more visible and more understandable for users.</p>
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2019.02.044

N.	89
Year	2019
Title	Sustainability Evaluation of Marine Protected Areas Index (SEMPAI): A multi-criteria decision-making method to determine the effectiveness of the El Nido-Taytay Managed Resource Protected Area
Authors	John Erick Avelino, J. Sasaki, M. Esteban, Parastoo Salah, Ma. Laurice Jamero, V. P. Valenzuela
Citations	19
Takeaway	The SEMPAI index can help improve the effectiveness of Marine Protected Areas by integrating environment, socio-economic, and governance pillars, enhancing their long-term sustainability.
Abstract	<p>Located at the apex of the Coral Triangle, the Philippines is acknowledged as the world's center of shore fish biodiversity, and millions of Filipinos depend on these coastal resources for food and livelihood. In order to protect the coral reefs that form the base of many of these coastal ecosystems, Marine Protected Areas (MPAs) have been established throughout the country. However, although there is evidence of the benefits that come from establishing MPAs, there is still a need to improve their effectiveness by addressing the need for integrating environment, socio-economic, and governance pillars. In view of this, the present study used a multidisciplinary method of gathering data to measure the effectiveness of MPAs. The study also highlights the knowledge, attitude, and perception of stakeholders as the overlap between the three pillars of MPA sustainability, which were measured by conducting household surveys within the coastal community in which they are located. Based on the results of the data collection it was found that despite the efforts to inform the public of the existence of a protected area, a gap still remains between the knowledge of stakeholders and the actual coral cover/reef health. The Data Envelopment Analysis (DEA) also served as a useful framework to visualize the results of the newly proposed Sustainability Evaluation of Marine Protected Areas Index (SEMPAI). It is hoped that through future studies this index (though the multiple indicators that it uses) will be able to determine the efficiencies and inefficiencies of Decision-Making Units (DMUs), helping to improve the management and long-term sustainability of coastal settlements.</p>
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	1
DOI	10.1016/J.OCECOAMAN.2019.104891

N.	90
Year	2019
Title	The effects of stakeholder education and capacity building in marine protected areas: A case study from southern Mozambique
Authors	S. Lucrezi, M. H. Esfehani, E. Ferretti, C. Cerrano
Citations	27
Takeaway	Stakeholder education and capacity-building initiatives positively impact conservation, community, and livelihood views in marine protected areas, enhancing their alignment with management goals.
Abstract	Stakeholder engagement is a critical component of marine protected area (MPA) management. Education and capacity-building initiatives, in particular, have the potential to empower stakeholders, promote collaboration, create a culture of marine stewardship and encourage alternative and sustainable livelihoods. Empirical evidence on the impacts of these initiatives on stakeholders and MPAs is however still lacking. This study tested the impact of an ocean literacy, marine education and environmental monitoring initiative on stakeholders' views of conservation, community and livelihood in the Ponta do Ouro Partial Marine Reserve (PPMR) in southern Mozambique. Data were collected via two focus groups, one before and one after participation in the initiative. Stakeholders who participated in this research included representatives from governance, tourism and education sectors in the PPMR. Participation in the initiative had a positive effect on stakeholders' views of conservation, community and livelihood. Following the initiative, some of these views became more aligned with the goals of the PPMR, while others highlighted important issues to be addressed by management. This study demonstrates the bilateral nature of stakeholder engagement in MPAs, including stakeholder empowerment and steering management strategies.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2019.103645

N.	91
Year	2019
Title	Understanding the spatial diversity of social uses, dynamics, and conflicts in marine spatial planning.
Authors	M. Noble, D. Harasti, J. Pittock, Bruce J. Doran
Citations	25
Takeaway	Marine spatial planning should consider social uses, dynamics, and conflicts to support long-term social resilience in marine environments.
Abstract	<p>Marine coastal environments are often socially complex public areas that need equitable spatial planning approaches. Understanding the extent of extractive and non-extractive uses and the social dynamics that may be driving patterns of use is essential if the spatial plan is to support the social resilience of a marine area. In this study, a combination of fuzzy-set multi-criteria GIS modelling and negative tie social network analysis were used to explore social uses and conflicts based on sketch-mapping interviews with five key stakeholder groups (ecotourism, Aboriginal Traditional Owners, commercial and recreational fishing, and water sports) within a Marine Protected Area (MPA). Most of the areas within the MPA were regularly used by the stakeholders, with non-extractive and extractive stakeholders occupying similar spatial extents, with each stakeholder group having a different pattern of use. However, stakeholder groups had different levels of perceived priority to access these areas and support of the current spatial management plan, especially within the ecotourism and Aboriginal Traditional Owner groups. The investigation of social conflicts in shaping patterns of use revealed that most stakeholder conflicts do not necessarily occur in areas of overlaps, but generally in areas of high biodiversity and easy access through marine infrastructure. Ecotourism groups had the most perceived conflicts over marine space, which shaped their use towards certain no-take zones that protected high biodiversity and would also provide protection from other conflicting stakeholder uses (e.g., boating, fishing). Overall, the method outlined in this paper presents a way for marine spatial management to consider not only the extent and diversity of social uses in a marine environment but also the spatial-social dynamics that may determine the success of the spatial plan in supporting long-term social resilience.</p>
Study Type	non-rct observational study
Journal	Journal of environmental management
Journal SJR Quartile	1
DOI	10.1016/j.jenvman.2019.06.048

N.	92
Year	2019
Title	Zoning of marine protected areas for biodiversity conservation in Bangladesh through socio-spatial data
Authors	S. Sarker, Muhammad Mizanur Rahman, A. Yadav, M. Islam
Citations	20
Takeaway	Five potential marine protected areas in Bangladesh can conserve marine biodiversity and support local community involvement.
Abstract	<p>Marine protected areas (MPAs) have become one of the most widely employed marine management tools worldwide for conserving species and habitats, maintaining ecosystem functioning, and ensuring sustainable use of marine resources. In this study, we adopted a science-based, stakeholder-driven and ecosystem based approach to identify coastal and marine habitats for potential MPA declaration towards achieving Aichi target 11. In addition, we also proposed an integrated management approach for MPA management in Bangladesh. Primary data were collected through stakeholder consultations from the three coastal zones of Bangladesh and secondary data were collected from an extensive literature review. We developed a priority index to select the most important habitats for MPA declaration. Our analysis suggests five potential habitats within the maritime boundary of Bangladesh for MPA declaration. These habitats cover an area of 8838 km² which is about 7.5% of the total maritime area of Bangladesh. Declaration of the MPAs will contribute to conserve the nursing and breeding habitats of fishes, crabs and seabirds, and thus will protect the marine biodiversity. To achieve this goal, local community involvement is required. This study will serve as a baseline for declaring MPAs in a solid scientific way through community engagement.</p>
Study Type	literature review
Journal	Ocean & Coastal Management
Journal SJR Quartile	1
DOI	10.1016/J.OCECOAMAN.2019.03.002

N.	93
Year	2020
Title	Adapting to a changing ocean: Experiences from marine protected area managers
Authors	Z. Cannizzo, S. Hutto, L. Wenzel
Citations	0
Takeaway	Marine protected area managers must be flexible, adaptive, and inclusive to effectively manage climate change in their areas, requiring collaboration with diverse stakeholders.
Abstract	<p>Marine protected areas (MPAs), like their terrestrial counterparts, face a wide range of climate change stressors that challenge traditional management strategies. Ocean acidification, dynamic boundaries, high connectivity, and other complexities create climate management challenges unique to the ocean system. Further, there is a concerning disconnect between global oceanic climate impacts and the relative lack of experience and action needed to address these stressors at local and regional scales. As climate impacts are increasingly being experienced by marine and coastal managers, they are beginning to focus on climate assessment and adaptation within the protected areas of our ocean. In this article, we share case studies and experiences of MPA managers on the cutting edge of climate adaptation. Lessons learned from the kelp forests of California and the coral reefs and seagrass meadows of the Florida Keys highlight hands-on applications of climate management and mitigation. Yet managing for climate change in a dynamic ocean requires more than direct action. We highlight the successes achieved through capacity building, community engagement, and partnership development that span geographic, institutional, and community boundaries. The dynamic nature of climate change in the ocean environment requires MPA managers to be flexible, adaptive, and inclusive to implement successful and meaningful management actions. Ultimately, the experiences highlighted in this article reflect the need for close collaboration with scientists, communities, and diverse stakeholders in identifying and implementing adaptation actions. In doing so, these case studies provide the beginning of a road map for successful climate management in MPAs.</p>
Study Type	
Journal	
Journal SJR Quartile	
DOI	10.5070/P536146378

N.	94
Year	2020
Title	Assessing the Effectiveness of Coastal Marine Protected Area Management: Four Learned Lessons for Science Uptake and Upscaling
Authors	D. Pelletier
Citations	8
Takeaway	A long-term transdisciplinary research program successfully measured the effectiveness of coastal marine protected area management, providing valuable insights for managers and enhancing science uptake.
Abstract	<p>For almost two decades, marine protected areas (MPAs) have been a central instrument of coastal conservation and management policies, but concerns about their abilities to meet conservation goals have grown as the number and sizes of MPAs have dramatically increased. This paper describes how a large (15 years) program of transdisciplinary research was used to successfully measure MPA management effectiveness (ME)—how well an MPA is managed, how well it is protecting values, and how well it is achieving the various goals and objectives for which it was created. This paper addresses the co-production and uptake of monitoring-based evidence for assessing ME in coastal MPAs by synthesizing the experiences of this program conducted with MPA managers. I present the main outcomes of the program, many were novel, and discuss four ingredients (learned lessons) that underpinned the successful uptake of science during and after the research program: (i) early and inclusive co-design of the project with MPA partners and scientists from all disciplines, (ii) co-construction of common references transcending the boundaries of disciplines, and standardized methodologies and tools, (iii) focus on outcomes that are management-oriented and understandable by end-users, and (iv) ensuring that capacity building and dissemination activities occurred during and persisted beyond the program. Standardized monitoring protocols and data management procedures, a user-friendly interface for indicator analysis, and dashboards of indicators related to biodiversity, uses, and governance, were the most valued practical outcomes. Seventy-five students were trained during the projects and most of the monitoring work was conducted with MPA rangers. Such outcomes were made possible by the extended timeline offered by the three successive projects. MPA managers' and scientists a posteriori perceptions strongly supported the relevance of such collaboration. Local monitoring and assessment meets the needs of MPA managers, and forms the basis for large-scale assessments through upscaling. A long-term synergistic transdisciplinary collaboration between coastal MPA managers and research into social-ecological systems (SESS) would simultaneously (i) address the lack of long-term resources for</p>

	coastal monitoring and SES-oriented research; (ii) increase science uptake by coastal managers, and (iii) benefit assessments at higher levels or at broader geographic scales.
Study Type	
Journal	
Journal SJR Quartile	1
DOI	10.3389/fmars.2020.545930

N.	95
Year	2020
Title	Ecosystem-Based Management for More Effective and Equitable Marine Protected Areas: A Case Study on the Faial-Pico Channel Marine Protected Area, Azores
Authors	Hugh McDonald, Helene Hoffman, Adriana Ressurreição, Lina Röschel, H. Gerdes, M. Lago, Ben Boteler, K. McFarland, H. Teixeira
Citations	4
Takeaway	Ecosystem-Based Management (EBM) in Marine Protected Areas can effectively conserve biodiversity and meet diverse stakeholder and policy goals, with stakeholder co-creation and collaboration being a key strength.
Abstract	<p>Marine Protected Areas (MPAs) are increasingly employed as a tool to protect Europe’s swiftly declining marine biodiversity. However, despite increasing coverage, MPA effectiveness and equity is considered highly variable. Concurrently, Ecosystem-Based Management (EBM)—that is, management that aims to protect, restore, or enhance the resilience and sustainability of an ecosystem to ensure sustainable flows of ecosystem services and conserve its biodiversity—is growing in prominence. We applied EBM in the Faial-Pico Channel, a 240 km² MPA in the Azores, Portugal, to assess whether EBM can protect biodiversity whilst meeting diverse stakeholder and policy goals. Collaborating with local stakeholders and policy-makers, this chapter documents the steps of EBM: identifying integrative policy and stakeholder objectives, understanding the social-ecological system, scenario development, and identification and evaluation of EBM measures and policies. We find that stakeholder co-creation and collaboration is a key strength of EBM and should be strengthened in the Faial-Pico Channel. We find that local stakeholders support effective and equitable EBM of MPAs by clearly identifying challenges and priorities, co-creating solutions, providing low-cost knowledge and expertise, and through ongoing monitoring, enforcement, and evaluation of the impact of management.</p>
Study Type	
Journal	Ecosystem-Based Management, Ecosystem Services and Aquatic Biodiversity
Journal SJR Quartile	
DOI	10.1007/978-3-030-45843-0_25

N.	96
Year	2020
Title	Identifying spatial conservation priorities using Traditional and Local Ecological Knowledge of iconic marine species and ecosystem threats
Authors	M. Noble, D. Harasti, C. Fulton, Bruce J. Doran
Citations	22
Takeaway	Participatory mapping and interviews with stakeholders can help adapt marine spatial management approaches to support diverse conservation and management priorities.
Abstract	<p>Marine Protected Areas (MPAs) can be an effective spatial approach to conservation, especially when they involve genuine consultation that considers the diversity of stakeholders. Participatory mapping and semi-structured interviews were conducted with 52 stakeholders and 22 managers and scientists to identify ecological priorities and concerns across a large temperate MPA in Port Stephens-Great Lakes Marine Park, Australia. There were 19 iconic species of fish, dolphins, whales, and sea turtles that were the focus of ecological priorities and stakeholder interactions with the marine environment. Effectiveness of the current MPA management plan for addressing stakeholder priority and concerns, was assessed using GIS spatial modelling that created fuzzy-set species distribution models (SDMs) based on Traditional and Local Ecological Knowledge as well as scientific and citizen-science survey data. These spatial models for the iconic species across the MPA were then overlaid with ecological concerns of the stakeholders to create a spatial understanding of local threats, and priority areas for targeted management. Poor water quality from terrestrial primary sources was the main concern of stakeholders, more so than in-water threats such as poor fishing practices or impacts to iconic species. While local managers and scientists were relatively reluctant to answer interview questions, there was a general misalignment in approaches to iconic species management, especially for mobile and migratory species, and misunderstanding of stakeholder perceptions of threats. Participatory mapping of social-ecological values provides a method for stakeholders and decision-makers to better understand, discuss, and adapt marine spatial management approaches that support a diversity of conservation and management priorities.</p>
Study Type	
Journal	Biological Conservation
Journal SJR Quartile	1
DOI	10.1016/j.biocon.2020.108709

N.	97
Year	2020
Title	Improving marine protected area governance through collaboration and co-production.
Authors	A. Di Franco, K. Hogg, A. Calò, N. Bennett, Marie-Aude Sévin-Allouet, Oscar Esparza Alaminos, M. Lång, D. Koutsoubas, Mosor Prvan, L. Santarossa, F. Niccolini, M. Milazzo, P. Guidetti
Citations	57
Takeaway	Collaborative conservation initiatives involving stakeholders can rapidly improve local support for marine protected areas, with maximum effects in certain institutional, local, and individual context.
Abstract	<p>Marine protected areas (MPAs) socio-ecological effectiveness depends on a number of management and governance elements, among which stakeholder engagement and community support play key roles. Collaborative conservation initiatives that engage stakeholders in action research and knowledge co-production processes can enhance management and governance of MPAs. To design effective strategies aimed at reconciling biodiversity conservation and management of sustainable human uses, it is key to assess how local communities respond to such initiatives and identify the set of contextual factors, institutional, local and individual, potentially affecting these responses. This paper presents the approach and results of one such initiative, spanning 6 EU countries and 11 MPAs in the Mediterranean Sea, focusing on small-scale fishers as key MPA users. Through a collaborative project, managers and fishers agreed upon specific governance interventions (e.g. increasing stakeholder engagement, engaging fishers in monitoring activities, reducing fishing efforts) to be implemented in each MPA for one year. Structured surveys queried: MPA managers on the MPA context, governance structure, feasibility and effectiveness of the tested interventions; and small-scale fishers on their perceptions of the impact of the tested interventions on a set of 9 socio-ecological variables (e.g. amount of fish caught, level of participation in decision-making, support for the MPA). Results revealed that the interventions tested were relatively feasible, effective and cost-effective. Fishers reported positive perceptions of the interventions for the 9 variables considered, especially for level of support for the MPA and for those associated with aspects of governance. Proportional odds models highlighted perceived effects are maximized under certain institutional, local and individual circumstances (e.g. old MPAs, small fisher communities, and fishers with a high proportion of income from fisheries). Findings highlight that employing good governance processes involving stakeholders may rapidly generate improved local support for conservation and provide insights for potential leverage</p>

	points upon which to act to maximize perceived effectiveness and enhance support toward MPAs.
Study Type	non-rct observational study
Journal	Journal of environmental management
Journal SJR Quartile	1
DOI	10.1016/j.jenvman.2020.110757

N.	98
Year	2020
Title	Long-term participation in collaborative fisheries research improves angler opinions on marine protected areas
Authors	E. T. Mason, Allison N. Kellum, Jennifer A. Chiu, G. Waltz, Samantha Murray, D. Wendt, R. Starr, B. Semmens
Citations	13
Takeaway	Long-term participation in collaborative fisheries research positively influences angler opinions on marine protected areas, with more positive views towards MPAs after seven or more years of involvement.
Abstract	<p>Recent marine spatial planning efforts, including the management and monitoring of marine protected areas (MPAs), increasingly focus on the importance of stakeholder engagement. For nearly 15 years, the California Collaborative Fisheries Research Program (CCFRP) has partnered volunteer anglers with researchers, the fishing industry, and resource managers to monitor groundfishes in California's network of MPAs. While the program has succeeded in generating sustained biological observations, we know little about volunteer angler demography or the impact of participation on their perceptions and opinions on fisheries data or MPAs. In this study we surveyed CCFRP volunteers to learn about (a) volunteer angler demographics and attitudes toward groundfish management and stock health, (b) volunteer angler motivations for joining and staying in the program, and (c) whether participation in the program influenced volunteer angler opinions on the quality of fisheries data used in resource management and the establishment of MPAs in California. CCFRP volunteers were older and had higher fishing avidity than average within the California recreational angling community. Many self-identified as more conservation-minded than their peers in the recreational fishing community and had positive views of California groundfish management and stock health. Participation in science and giving back to fisheries resources were major motivating factors in their decision to become and remain CCFRP volunteers. Angler opinions toward MPAs were more positive after volunteering with CCFRP. Those who had volunteered for seven or more years with CCFRP were more likely than not to gain a positive opinion of MPAs. Our survey results provide evidence that long-term engagement of stakeholders in collaborative research positively influences stakeholder opinions regarding marine resource management, and highlights CCFRP's success in engaging citizen science stakeholders in collaborative fisheries research.</p>
Study Type	non-rct observational study

Journal	PeerJ
Journal SJR Quartile	1
DOI	10.7717/peerj.10146

N.	99
Year	2020
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Study Type	non-rct observational study

Journal	PeerJ
Journal SJR Quartile	1
DOI	10.7717/peerj.10146

N.	100
Year	2020
Title	Low satisfaction and failed relational coordination among relevant stakeholders in Spanish Mediterranean marine protected areas.
Authors	Austin Miles, J. P. Perea Muñoz, J. Bayle-Sempere
Citations	12
Takeaway	Poor communication and relations among stakeholders in Spanish Mediterranean marine protected areas could lead to management failure.
Abstract	<p>Marine protected areas (MPAs) are a conservation tool that are increasingly commonplace around the world. MPAs have the potential to benefit both ecosystems and human communities if well-designed and implemented. Achieving effective implementation and governance of MPAs, however, is complicated because they deal with systems that overlap with both non-human environments and human economies and societies. As a result, MPA success is thought to be primarily dependent on socioeconomic factors, particularly the behavior of stakeholder groups involved in the MPAs. Using the theory of relational coordination, we designed surveys that we delivered to members of four stakeholder groups implicated in five MPAs in the Spanish Mediterranean to investigate their habits of inter- and intra-group communication and relations. Relational coordination posits that high-quality communication and relations results in positive stakeholder behaviors and an effective system, which makes it a useful tool to investigate the effectiveness of the MPAs involved in this study. Our results demonstrate that a high degree of relational coordination leads to higher satisfaction on the part of the participants in the system. The exploratory model constructed here also supports the notion that each stakeholder group adopts particular beliefs and behaves in particular ways in terms of relational coordination and satisfaction. We found patterns that indicated poor communication and relations amongst the four stakeholder groups, which in turn has grave implications for management outcomes of these MPAs. Cumulatively, these conditions could precipitate management failure. To remedy these concerns, we recommend establishing channels of communication between the four stakeholder groups, and investigating means to cultivate good relations amongst these groups. Doing so will help assure management success.</p>
Study Type	non-rct observational study
Journal	Journal of environmental management
Journal SJR Quartile	1
DOI	10.1016/j.jenvman.2020.111003

N.	101
Year	2020
Title	Marine protected areas
Authors	J. Humphreys, R.W.E. Clark
Citations	2
Takeaway	A more devolved approach, involving stakeholders and a unified marine conservation science, can improve compliance in marine protected areas.
Abstract	<p>Marine Protected Areas: Science, Policy and Management addresses a full spectrum of issues relating to Marine Protected Areas (MPAs) not currently available in any other single volume. Chapters are contributed by a wide range of working specialists who examine conceptions and definitions of MPAs, progress on the implementation of worldwide MPAs, policy and legal variations across MPAs, the general importance of coastal communities in implementation, and the future of MPAs. The book constructively elucidates conflicts, issues, approaches and solutions in a way that creates a balanced consideration of the nature of effective policy and management.</p> <p>Those in theory, designation, implementation or management of MPAs, from individuals, marine sector organizations, and university and research center libraries will find it an important work.</p>
Study Type	Book
Journal	Elsevier Publishing
Journal SJR Quartile	
DOI	10.1016/B978-0-08-102698-4.00039-3

N.	102
Year	2020
Title	Marine protected areas and human well-being – A systematic review and recommendations
Authors	A. Rifaee Rasheed
Citations	54
Takeaway	A systematic and integrative framework is needed to better understand the contributions of Marine Protected Areas to human well-being, aiding in policy development and achieving global targets.
Abstract	This paper reviews literature relating to Marine Protected Areas (MPAs) and human well-being. It finds that explicit studies on human well-being from MPAs are limited and empirical studies quantifying these relationships are rare. Most MPA papers, including those examining MPA effectiveness, focus on just a few aspects of well-being in the context of a sub-set of stakeholders, and consider only a single type of MPA. They mostly focus on conventional objective measures that are not comprehensive or systematically selected. This review argues for a systematic and integrative framework to ensure future MPA assessments are equipped to capture MPAs' contributions to human well-being more adequately and comprehensively. Such a framework can also allow for cross-MPA comparisons that can capture differences in well-being across different types of MPAs, and information gained can be useful for MPA practitioners and policy makers, particularly in reaching current global targets, such as the CBD, Aichi Target 11.
Study Type	systematic review
Journal	Ecosystem services
Journal SJR Quartile	1
DOI	10.1016/j.ecoser.2019.101048

N.	103
Year	2020
Title	Marine protected areas overall success evaluation (MOSE): A novel integrated framework for assessing management performance and social-ecological benefits of MPAs
Authors	Flavio Picone, E. Buonocore, J. Claudet, R. Chemello, G. Russo, P. P. Franzese
Citations	21
Takeaway	The MOSE framework effectively assesses the overall effectiveness and management performance of Marine Protected Areas, providing valuable information for adaptive management strategies.
Abstract	<p>Characterized by interlinked social, economic, and ecological dynamics, Marine Protected Areas (MPAs) are a management tool for achieving sustainability goals in social-ecological systems. The recent increase in their establishment worldwide, fostered by international policies, highlights the need for comprehensive and integrated assessment frameworks able to address the evaluation of their social-ecological effectiveness and management performance, which is of fundamental importance for their adaptive management and decision making processes. Although several indicators and methodologies exist to assess MPAs ecological or social performances, no comprehensive assessment framework currently captures their broad range of objectives, encompassing the ecological, socio-cultural, and economic spheres. In this study, we present a novel quantitative framework (named MPAs Overall Success Evaluation-MOSE) able to assess the overall effectiveness and management performance of MPAs under the perspective of social-ecological systems. The multicriteria framework includes indicators linked to nature conservation, socio-cultural, socioeconomic, and management objectives, integrating the multidisciplinary knowledge on MPAs in a single but comprehensive approach. The proposed framework was applied to the case study of Cerbère-Banyuls Natural Marine Reserve (France), the first MPA included in the IUCN Green List. Results showed that a high level of management effort is applied to the investigated MPA, generating several social-ecological benefits. This study showed the applicability of the MOSE framework and its potential usefulness as a tool to inform managers and decision-makers in charge for developing adaptive management strategies.</p>
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	1
DOI	10.1016/J.OCECOAMAN.2020.105370

N.	104
Year	2020
Title	Co-Management as a Successful Strategy for Marine Conservation
Authors	William Voorberg, Reinout Van der Veer
Citations	27
Takeaway	Marine Protected Areas are a primary tool for conserving marine biodiversity: if co-management is part of a formal governmental strategy, coral reefs show up fewer bleached colonies and larger fish populations.
Abstract	Marine Protected Areas (MPAs) are a primary tool for conserving marine biodiversity. The literature presents a scattered picture regarding the extent to which co-management can be considered valuable. In this study we examine, what conditions are for co-management to make a contribution to conserving marine ecosystems (e.g., stopping coral bleaching and safeguarding fish populations). By combining data on MPA management practices with a novel source of global biodata collected by citizens (ReefCheck), we demonstrate that if co-management is part of a formal governmental strategy, coral reefs show up to 86% fewer bleached colonies and up to 12.2 times larger fish populations than co-managed MPAs lacking formalized governmental support.
Study Type	
Journal	J. Mar. Sci. Eng. 2020, 8(7), 491;
Journal SJR Quartile	
DOI	https://doi.org/10.3390/jmse8070491

N.	105
Year	2020
Title	Strengthening of local marine protected area (MPA) in local autonomy era: Case of Bontang City East Kalimantan Province, Indonesia
Authors	A. Solihin, Isdahartati, A. Damar, Erwiantono
Citations	2
Takeaway	Bontang City government still has the opportunity to manage local marine protected areas, despite being under provincial government authority, through various local government agencies.
Abstract	<p>Marine protected area (MPA) plays important roles to achieve biodiversity conservation and fisheries management goals, and as the main tool for ecosystem approach to fisheries management (EAFM). However, the goals of the local MPA in Indonesia is faced with the legal problems due to the enactment of Law No. 23/2014 on Local Government, regulate that the district or municipality government is no longer has authority to manage shoreline area within four miles as well as local MPA. The new law implies mismanagement of the MPA due to lack of capacity provincial government to manage the additional area of authority. There is no responsible institution focus to manage the MPA yet. This study aims to analyze the deregulation of Bontang City authority to manage the MPA. This research was conducted from January to April 2019 using normative juridical methods on the legal basis of MPA management. The results of this study suggested that based on Law No. 23/2014, actually the Bontang City Government still has opportunity to manage the MPA even though this area within the authority of Provincial Government. The authority of the Bontang City is still imbedded in several local government agencies, such as the Environment Agency, Community and Village Empowerment Service, and Fisheries Service. The institutional strengthening of the local MPA Bontang is proposed in two stages, in the short term through establishment of a Working Group involving the government of East Kalimantan Provinces and the City of Bontang, while in the long term to establish a new institution of the Technical Implementation Unit is under the Provincial Marine and Fisheries Agency.</p>
Study Type	
Journal	IOP Conference Series: Earth and Environmental Science
Journal SJR Quartile	
DOI	10.1088/1755-1315/414/1/012024

N.	106
Year	2020
Title	Systematic Review of Spatial Planning and Marine Protected Areas: A Brazilian Perspective
Authors	Rebecca Borges, I. Eyzaguirre, Roberta Sá Leitão Barboza, M. Glaser
Citations	9
Takeaway	Synthesis work on spatial management strategies worldwide is needed to address the widespread lack of data and expertise in coastal and marine conservation.
Abstract	<p>Marine protected areas (MPAs) are essential to human well-being and usually part of spatial planning processes for managing coastal and marine areas. In Brazil, national-level spatial planning processes are still incipient. This article offers a systematic review through a comparative meta-analysis of the literature on MPAs and spatial planning based on the following questions: (I) What topics are investigated in spatial planning in MPAs worldwide? and (II) What are the advances and trends of these topics in Brazilian MPAs? Specific goals of this study are (I) to identify studies on Brazil; and (II) to compare and contrast these with studies performed elsewhere. The PRISMA report was used to select literature, with a focus on three spatial contexts (I) outside Brazil, analyzing studies from other countries; (II) in Brazil; and (III) a case study in Brazil that focuses on a sustainable-use area in northeastern Pará. Studies outside Brazil showed three major groups of themes: (I) planning and tools; (II) stakeholders; and (III) the ecology of non-human species. For the Brazilian context, studies were grouped into five major themes: (I) small-scale fishing practices and conflicts; (II) participation in protected areas; (III) technical aspects of the planning process, (IV) zoning; and (V) mapping. The local case study investigates socio-cultural sustainability and tourism. All identified studies relate to use, but have a greater focus on conservation and, especially abroad, on species and ecosystems. There are few reviews or comparative studies that could help to draw parallels between the different spatial planning settings. We conclude that synthesis work on spatial management strategies worldwide is needed, including the elaboration of frameworks to develop measures to address the widespread lack of data and spatial planning expertise. Collaborative networks of researchers and practitioners are needed for this. The novelty in our study is that it examines MPAs and spatial planning research at three spatial contexts with innovative methodologies to represent the current state of the spatial planning discourse in coastal and marine conservation.</p>
Study Type	systematic review

Journal	
Journal SJR Quartile	1
DOI	10.3389/fmars.2020.00499

N.	107
Year	2021
Title	Community participation in assessment of fisheries related ecosystem services towards the establishment of marine protected area in the Greater Cape Three Points area in Ghana
Authors	A. Sagoe, D. Aheto, I. Okyere, Richard Adade, J. Odoi
Citations	31
Takeaway	Community participation in ecosystem assessment and mapping can enhance the establishment of Marine Protected Areas in Ghana, benefiting both social, economic, and ecological concerns.
Abstract	Effective conservation management combines information obtained from formal scientific research with traditional knowledge derived from communities living within the ecosystem, in an integrated and comprehensive ecosystem assessment. To complement national efforts to establish Marine Protected Areas (MPAs) in critical coastal ecosystems to protect nursery areas and spawning grounds in Ghana, two communities in the Greater Cape Three Points area in the Western Region of Ghana were involved in a participatory mapping and assessment exercise as part of an ecosystem-based approach to the establishment of MPAs in the area. The paper presents the processes by which the communities were engaged in identifying and mapping out top five priority ecosystem services (ES) vital for fisheries—an important livelihood source in the area—valuing the prioritized ecosystem services, and identifying and assessing four main anthropogenic pressures threatening the continual provisioning of ecosystem services. The relevance of such community participatory assessment in policy formulation is also discussed in the paper. The paper demonstrates that the livelihoods of rural coastal communities are linked to broader ecosystem functioning. It also shows that when participatory mapping is complemented with perspectives from direct beneficiaries of ES, managers are afforded a holistic insight into the array of issues that feed into a comprehensive management approach which addresses social, economic and ecological concerns.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/j.marpol.2020.104336

N.	108
Year	2021
Title	It's Just Conservation: To What Extent Are Marine Protected Areas in the Irish Sea Equitably Governed and Managed?
Authors	Constance M. Schéré, K. Schreckenber, T. Dawson, N. Jones
Citations	10
Takeaway	Marine protected areas in the Irish Sea need improved communication and co-management with local stakeholders to effectively protect natural resources and maintain human well-being.
Abstract	<p>It is not enough to simply designate a protected area. According to the Convention on Biological Diversity's Aichi Target 11, these sites should be governed and managed effectively and equitably. Equitable (i.e., fair and inclusive) conservation is vital to ensuring effective protection of natural resources while maintaining human well-being. Yet, equity tends to be overlooked in protected area assessments. Three marine protected areas (MPAs) in Great Britain, Northern Ireland, and the Republic of Ireland were selected to assess equitable governance and management in the Irish Sea. This is one of the first studies to assess equity across multiple stakeholder groups in MPAs. The Site-level Assessment for Governance and Equity (SAGE) toolkit, developed by the International Institute for Environment and Development (IIED) to address the gap in equity assessments, was used to evaluate equitable governance and management in these MPAs. Based on the three dimensions of equity (recognition, distribution, and procedure), SAGE contains Likert-scale questions to assess good governance by evaluating how different stakeholder groups perceive their protected area's management and how included they feel in decision-making. Quantitative data from SAGE is complemented by qualitative data from semi-structured interviews with stakeholders to understand the impact MPA management has on local communities and MPA users. The results of this study reveal a lack of communication between MPA authorities and local stakeholders. They highlight the need for co-management in the form of inclusive partnerships as an alternative to the current top-down governance approach favored in the United Kingdom and Ireland.</p>
Study Type	
Journal	
Journal SJR Quartile	1
DOI	10.3389/fmars.2021.668919

N.	109
Year	2021
Title	Linking social organization, attitudes, and stakeholder empowerment in MPA governance
Authors	J. G. C. O. Júnior, J. Campos-Silva, Richard J. Ladle Dr, V. S. Batista
Citations	9
Takeaway	Participative evaluations of Marine Protected Area governance, involving all stakeholders, can improve stakeholder awareness and knowledge, with high consensus among managers and low consensus among local community stakeholders.
Abstract	The last two decades has seen a global trend in Marine Protected Area (MPA) management from top-down to more bottom-up approaches. Moreover, recent research suggests that evaluation of MPA performance should be participative, fully engaging multiple stakeholders, including local community representatives, in the assessment process. The effectiveness of such an approach to evaluation will be largely dependent on the stakeholders' level of awareness and knowledge of MPA governance principles, though this has rarely been systematically investigated. Here, we assess the capacity of diverse MPA stakeholders to evaluate their MPA using data from interviews with MPA managers, fishers, representatives of the local government and others. We used structured questionnaires to evaluate the level of consensus in attitudes among stakeholders from groups with different levels of social organization. We found that there was significantly low consensus among local community stakeholder groups and high among managers. Our findings also suggest that governance principles are holistically assessed on participative evaluations involving all main stakeholders involved. Based on our results, we propose a participative framework for governance assessment to facilitate the identification of convergence (consensus) and divergence (conflicts) among stakeholder groups.
Study Type	
Journal	Marine Policy
Journal SJR Quartile	1
DOI	10.1016/J.MARPOL.2021.104543

N.	110
Year	2021
Title	Marine Protected Area and Fisheries
Authors	S. Ajit
Citations	0
Takeaway	Marine protected areas (MPAs) effectively manage spatial management, biodiversity conservation, and fisheries enhancement, but their growth has led to increased disputes with small-scale fisheries and coastal stakeholders.
Abstract	Marine protected areas have long been recognized as effective tools for spatial management, biodiversity conservation, and fisheries enhancement, prompting Member States Parties to the Convention on Biological Diversity (CBD) to agree in 2010 to cover 10% of their coastal and marine areas with MPAs by 2020 (Aichi Target 11). Even though global no-take coverage of at least 30% of the world's oceans by 2030 is required, MPAs will cover 5.3 percent of the world's oceans in 2020, with 2.5 percent in no-take marine reserves providing protection. Despite the fact that the 10% objective has not been attained, the number of MPAs established has increased exponentially over the last decade as governments hurry to meet their international obligations, resulting in increased disputes with small-scale fisheries (SSF) despite the fact that many MPAs allow SSF and other operations in partial protection zones or even the entire MPA, and other stakeholders in coastal areas.
Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	111
Year	2021
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Authors	S. Ajit
Citations	0
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Study Type	
Journal	
Journal SJR Quartile	
DOI	

N.	112
Year	2021
Title	MARINE PROTECTED AREAS
Authors	B. Y. H. J. Albers, R. Madrigal, S. Kirama, R. B. Lokina, A. Hepelwa, E. J. Z. Robinson, J. Turpie
Citations	201
Takeaway	Marine Protected Areas (MPAs) in low/mid-income countries differ from high-income countries in management focus, local benefits, and enforcement costs, with key aspects being enforcement, local benefits, and off-sea income activities.
Abstract	In 1992, in response to a growing commitment to sustainable development and conservation of biological diversity, the 168 country signatories of the United Nations Convention on Biodiversity agreed to expand the amount of coastal/marine conservation to 10% of each country's marine area by 2020. For many low and mid-income countries, that expansion of Marine Protected Areas (MPAs) represents a dramatic change in total marine area conserved. Both Tanzania and Costa Rica have extensive terrestrial protected area (TPA) systems that draw large numbers of international tourists. Despite that experience, MPAs and TPAs differ in important ways, including the goals of management, how the PA helps/hurts nearby areas, and the role of tourism. Similarly, MPAs in low or mid-income countries differ from their high-income country counterparts in their emphasis on management of fishing activities rather than completely closing the MPA to fishing, as in a reserve or "no-take" area. They also differ in regard to the concern for benefits accruing to local people, and in the cost of enforcement. EFD's Coastal Conservation Collaborative conducted surveys and interviews in Costa Rica and Tanzania to compare and contrast the two country's experiences with MPAs. Both conceptual and data analysis based on the experiences of these countries identified three critical aspects of MPAs in low/mid-income countries: enforcement, benefits to local people, and the role of off-sea income-generating activities.
Study Type	
Journal	The Marine World
Journal SJR Quartile	
DOI	10.1093/law:epil/9780199231690/e2029

N.	113
Year	2021
Title	Marine Protected Areas: At the Crossroads of Nature Conservation and Fisheries Management
Authors	Michael Kriegl, Xochitl E. Elías Ilosvay, C. von Dorrien, D. Oesterwind
Citations	24
Takeaway	Marine protected areas (MPAs) play an ambivalent role at the crossroads of biodiversity conservation and fisheries management, with clear and measurable goals needed to evaluate their effectiveness from an interdisciplinary perspective.
Abstract	<p>Marine protected areas (MPAs) are designated parts of the ocean that restrict human activities to a certain degree. MPAs are established around the world using a wide range of legislative instruments and thus come in a variety of forms and shapes. Despite being regarded as the “cornerstone” of global marine conservation efforts, they currently cover less than 10% of the ocean surface. Individual MPAs aim to achieve goals ranging from the protection of specific habitats or species to sustaining certain commercial activities, such as fishing. By default, the establishment of MPAs intertwines social, ecological and economic considerations. Yet, the emphasis put on each of these domains can vary substantially when setting on-the-ground objectives, frequently creating conflict among stakeholders. In this manuscript, we first discuss current international conservation targets as well as potential future goals and delve into the question of how to assess the effectiveness of MPAs. Subsequently, we discuss the ambivalent role of this widely applied management tool at the crossroads between biodiversity conservation and fisheries management. Placing MPAs in a social-ecological framework, we call for clear and measurable goals to evaluate MPAs from an interdisciplinary perspective. Finally, we present the Baltic Sea, with its high degree of anthropogenic impact, long fishing history and comparatively extensive MPA coverage, as an interesting case study to investigate the role of MPAs in promoting a sustainable management of the ocean.</p>
Study Type	
Journal	
Journal SJR Quartile	1
DOI	10.3389/fmars.2021.676264

N.	114
Year	2021
Title	Marine Protected Areas: At the Crossroads of Nature Conservation and Fisheries Management
Authors	Michael Kriegl, Xochitl E. Elías Ilosvay, C. von Dorrien, D. Oesterwind
Citations	24
Takeaway	Marine protected areas (MPAs) play an ambivalent role at the crossroads of biodiversity conservation and fisheries management, with clear and measurable goals needed to evaluate their effectiveness from an interdisciplinary perspective.
Abstract	<p>Marine protected areas (MPAs) are designated parts of the ocean that restrict human activities to a certain degree. MPAs are established around the world using a wide range of legislative instruments and thus come in a variety of forms and shapes. Despite being regarded as the “cornerstone” of global marine conservation efforts, they currently cover less than 10% of the ocean surface. Individual MPAs aim to achieve goals ranging from the protection of specific habitats or species to sustaining certain commercial activities, such as fishing. By default, the establishment of MPAs intertwines social, ecological and economic considerations. Yet, the emphasis put on each of these domains can vary substantially when setting on-the-ground objectives, frequently creating conflict among stakeholders. In this manuscript, we first discuss current international conservation targets as well as potential future goals and delve into the question of how to assess the effectiveness of MPAs. Subsequently, we discuss the ambivalent role of this widely applied management tool at the crossroads between biodiversity conservation and fisheries management. Placing MPAs in a social-ecological framework, we call for clear and measurable goals to evaluate MPAs from an interdisciplinary perspective. Finally, we present the Baltic Sea, with its high degree of anthropogenic impact, long fishing history and comparatively extensive MPA coverage, as an interesting case study to investigate the role of MPAs in promoting a sustainable management of the ocean.</p>
Study Type	
Journal	
Journal SJR Quartile	1
DOI	10.3389/fmars.2021.676264

N.	115
Year	2021
Title	Stakeholder engagement and conservation outcomes in marine protected areas: Lessons from the Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) in Tanzania
Authors	Robert E. Katikiro, O. Kweka, R. Minja, Faraja Namkesa, S. Ponte
Citations	17
Takeaway	Stakeholder engagement and collaboration in marine protected areas have mixed results, with unclear goals and poorly coordinated processes hindering conservation and socio-economic outcomes.
Abstract	<p>Marine protected areas (MPAs) are promoted as a tool to manage the world's ocean and coastal resources more sustainably. In recent years, the protected areas management paradigm— including MPA management— has started to promote inclusive practices and collaborative management. At least on paper, this shift, and the multi-stakeholder partnerships that came along with it, should have led to better conservation outcomes, at the same time as ensuring that people affected by conservation measures have access to alternative or supplementary</p> <p>livelihood opportunities. In reality, the record of MPAs has been quite mixed. The aim of this study is to examine governance of the Mnazi Bay-Ruvuma Estuary Marine Park (MBREMP) —a multiple use MPA located on the southern coast of Tanzania—in view of exploring whether existing partnerships have influenced conservation outcomes. Fieldwork results, arising from key informant interviews, participant observation, focus group discussions and a survey, show that contacts and interactions between partners followed a bureaucratic process without clear and shared goals that could make conservation and livelihood objectives compatible. Unclear and poorly coordinated processes—both in relation to conservation activities, such as enforcement of the park's regulations, and in relation to livelihood projects— hampered the proper functioning of MBREMP and its actual and potential stakeholders. As a result, both conservation and socio-economic outcomes have been problematic. Future research needs to further investigate how dysfunctional partnerships and lack of collaborative arrangement among partners affect environmental and socio-economic targets in MPAs and how these can be addressed.</p>
Study Type	
Journal	Ocean & Coastal Management
Journal SJR Quartile	
DOI	10.1016/J.OCECOAMAN.2020.105502

N.	116
Year	2021
Title	Stakeholders' perceptions of coastal development in relation to marine protected areas
Authors	S. Lucrezi
Citations	4
Takeaway	Stakeholder participation in marine protected areas enhances integrated coastal management by identifying threats and proposing mitigation strategies.
Abstract	As marine protected areas (MPAs) face various coastal threats, including development, their incorporation into integrated coastal management (ICM) is essential. Stakeholder participation is a major, albeit poorly addressed, component of the integration of MPAs into ICM. Driven by shared interests and values, stakeholders can signal when coastal activities become unacceptable according to good governance principles of MPAs and ICM. This study assessed stakeholders' perceptions of coastal development associated with an MPA in southern Mozambique. Data were collected through face-to-face interviews and focus groups with 31 individuals representing five stakeholder groups. Stakeholders acknowledged the connection of MPAs with ICM at a sophisticated level, identifying coastal development threats potentially affecting the MPA, and proposing mitigation strategies. The results of this study confirmed the qualities of stakeholder participation to complement MPA management and offer guidance on ICM.
Study Type	
Journal	Journal of Coastal Conservation
Journal SJR Quartile	2
DOI	10.1007/s11852-021-00834-3

N.	117
Year	2021
Title	The MPA Guide: A framework to achieve global goals for the ocean
Authors	K. Grorud-Colvert, Jenna Sullivan-Stack, C. Roberts, Vanessa Constant, B. Horta e Costa, Elizabeth P. Pike, N. Kingston, D. Laffoley, E. Sala, J. Claudet, A. Friedlander, D. Gill, S. Lester, J. Day, E. Gonçalves, G. Ahmadi, Matt Rand, Angelo Villagomez,
Citations	240
Takeaway	The MPA Guide provides a consistent framework for categorizing, evaluating, and planning marine protected areas, enhancing biodiversity conservation and promoting sustainable fisheries.
Abstract	<p>Description Consistency in conservation Marine protected areas (MPAs) are now well established globally as tools for conservation, for enhancing marine biodiversity, and for promoting sustainable fisheries. That said, which regions are labeled as MPAs varies substantially, from those that full protect marine species and prohibit human extraction to those that permit everything from intensive fishing to mining. This inconsistency can in some cases inhibit both conservation and quantifying the proportion of the marine environment that is truly protected. Grorud-Colvert et al. review the consistency of MPAs and propose a framework by which levels of protection can be evaluated and improved. —SNV A review describes a framework that facilitates the design and evaluation of marine protected areas to protect biodiversity and benefit people. BACKGROUND Marine Protected Areas (MPAs) are places in the ocean that receive protection to safeguard biodiversity from abatable threats. Confusion exists about the definition of “protection” and likely MPA outcomes. This is because not all MPAs are the same. They range from full to minimal protection; some exist only on paper, not in practice. The resulting, understandably divergent outcomes can lead to controversies about effectiveness, undermine confidence in MPAs, and jeopardize conservation goals, including those of the Convention on Biological Diversity and the United Nations (UN) Sustainable Development Agenda. We integrated decades of research to clarify these issues. ADVANCES We propose a science-based, policy-relevant framework—The MPA Guide—to categorize, evaluate, and plan MPAs. It complements the well-known International Union for Conservation of Nature (IUCN) Protected Area Categories for management objectives and governance types. Together, these tools enable a comprehensive picture of any MPA. The guide consists of four elements that define types of MPAs and activities, conditions for success, and likely outcomes. First, the four STAGES of establishment of an MPA are (i) Proposed/Committed, by a governing or other organizing body; (ii) Designated, by law or other authoritative rulemaking; (iii) Implemented, with activated regulations; and (iv)</p>

	<p>Actively Managed, with ongoing monitoring and adaptive management. Second, the four LEVELS of protection from abatable activities within an MPA (or MPA zone), based on allowed activities, are (i) Fully Protected—no impact from extractive or destructive activities; (ii) Highly Protected—minimal impact; (iii) Lightly Protected—moderate impact; and (iv) Minimally Protected—high total impact, although still an MPA by IUCN criteria. Third, to succeed, an MPA should be established and sustained through the enabling CONDITIONS for effective and equitable MPA planning, design, governance, and management. Fourth, the likely OUTCOMES of an MPA depend directly on STAGE, LEVEL, and CONDITIONS to succeed. OUTLOOK The MPA Guide enables smart planning, design, and evaluation of new or existing MPAs by informing decisions about scientific, societal, and policy priorities and facilitates evaluating progress on international conservation targets. The guide draws attention to quality, not just quantity, of MPAs. It points to fully or highly protected areas as having the greatest likelihood of achieving biodiverse and healthy ecosystems, once the MPA is implemented or actively managed, if enabling CONDITIONS are in place. Last, our synthesis also identifies research priorities, including examining MPAs’ effectiveness across LEVEL of protection for climate mitigation and adaptation, social change, and comprehensive marine spatial planning. The level of protection, and therefore the effectiveness of MPAs, will greatly influence the future state of the ocean. Past ocean ecosystems were abundant and diverse in species and habitats. Over time, expanded and intensified human activities depleted and disrupted ocean ecosystems and reduced their services. MPAs, in conjunction with climate mitigation strategies and more sustainable uses of the ocean, can conserve and restore biodiversity and the resilient ecosystems needed for human well-being. Different levels of protection will result in different outcomes, if enabling conditions are satisfied. Marine Protected Areas (MPAs) are conservation tools intended to protect biodiversity, promote healthy and resilient marine ecosystems, and provide societal benefits. Despite codification of MPAs in international agreements, MPA effectiveness is currently undermined by confusion about the many MPA types and consequent wildly differing outcomes. We present a clarifying science-driven framework—The MPA Guide—to aid design and evaluation. The guide categorizes MPAs by stage of establishment and level of protection, specifies the resulting direct and indirect outcomes for biodiversity and human well-being, and describes the key conditions necessary for positive outcomes. Use of this MPA Guide by scientists, managers, policy-makers, and communities can improve effective design, implementation, assessment, and tracking of existing and future MPAs to achieve conservation goals by using scientifically grounded practices.</p>
Study Type	literature review

Journal	Science
Journal SJR Quartile	1
DOI	10.1126/science.abf0861

N.	118
Year	2022
Title	Co-design of a marine protected area zoning and the lessons learned from it
Authors	B. Horta e Costa, M. H. Guimarães, Mafalda Rangel, Adriana Ressurreição, P. Monteiro, Frederico Oliveira, Luís Bentes, Nuno Sales Henriques, I. Sousa, Sofia Alexandre, J. Pontes, C. Afonso, A. Belackova, A. Marçalo, Mariana Cardoso-Andrade, António José C
Citations	13
Takeaway	Co-designing marine protected areas with stakeholders can effectively protect biodiversity and minimize impacts on economic activities, while promoting sustainability.
Abstract	<p>Marine Protected Areas (MPAs) are a tool to safeguard marine natural systems, yet their effectiveness depends on how well they are integrated into the existing socioeconomic context. Stakeholder engagement in MPA design can contribute to increasing integration. This study focuses on the co-design of an MPA between researchers, public administration, the private sector, and non-governmental organizations. The proposed MPA is in Portugal and includes an area that is a hotspot for biodiversity and economic activities. This is the first MPA proposal in mainland Portugal co-designed using a participatory approach. This study highlights the steps of the zoning process and synthesizes the eight main lessons learned, useful for other cases, particularly for relatively small coastal MPAs with multiple socioeconomic activities. Three zoning proposals were developed and discussed within the participatory process. The proposals considered the best scientific and local knowledge available and were defined using ecological, socioeconomic, and shape-area guiding principles. In an iterative manner and following a participatory approach, compromises with stakeholders were achieved, and a final proposal, scientifically sound and socially accepted by most stakeholders, was delivered to the government. The final zoning plan will achieve ambitious conservation goals, including the largest fully protected area to be declared in mainland Portugal, while minimizing the impacts on the existing economic activities and promoting its sustainability. This process resulted in valuable lessons that may be applied elsewhere and guide future MPA implementation or rezoning of existing ones. These transdisciplinary and participatory processes can be time and resource-consuming but are vital for ensuring MPA effectiveness.</p>
Study Type	
Journal	
Journal SJR Quartile	1

DOI

10.3389/fmars.2022.969234

N.	119
Year	2022
Title	Marine protected areas in the context of climate change: key challenges for coastal social-ecological systems
Authors	D. Schmidt, M. Pieraccini, L. Evans
Citations	11
Takeaway	Marine Protected Areas (MPAs) need adaptive governance that considers interdependencies between natural and human systems to maintain their effectiveness and legitimacy in the face of climate change and regulatory uncertainties.
Abstract	Climate and ecological emergencies play out acutely in coastal systems with devastating impacts on biodiversity, and the livelihoods of communities and their cultural values. Marine Protected Areas (MPAs) are one of the key management and regulatory tools against biodiversity loss, playing a role in strengthening bio-cultural diversity and sustainability of coastal social-ecological systems. What is unclear though is the effectiveness of static protections under climate change as species move. Next to ecological uncertainty, regulatory uncertainty may play a role in weakening marine conservation. We asked whether MPAs are ecologically effective now and can sustain or improve to be so in the future while facing key climate and regulatory uncertainties. MPAs can support the protection of cultural values and have an impact on activities of sea-users and the sustainability of social-ecological systems. As such, questions surrounding their legitimacy under a changing climate and increased uncertainty are pertinent. We argue that MPA governance must be cognisant of the interdependency between natural and human systems and their joint reaction to climate change impacts based on an integrated, co-developed, and interdisciplinary approach. Focusing on the UK as a case study, we highlight some of the challenges to achieve effective, adaptive and legitimate governance of MPAs. This article is part of the theme issue 'Nurturing resilient marine ecosystems'.
Study Type	
Journal	Philosophical Transactions of the Royal Society B
Journal SJR Quartile	1
DOI	10.1098/rstb.2021.0131

N.	120
Year	2022
Title	Perspectives of youths on cultural ecosystem services provided by Tun Mustapha Park, Malaysia through a participatory approach
Authors	Mohd Iqbal Mohd Noor, Ponmalar N. Alagappar, A. Then, Eva Vivian Justine, Voon-Ching Lim, H. Goh
Citations	6
Takeaway	Youths' perceptions of cultural ecosystem services in Tun Mustapha Park, Sabah, reveal a need for additional livelihoods and protection of marine environments, highlighting the importance of engaging local stakeholders.
Abstract	Abstract Successful buy-in and support for management of Marine Protected Areas (MPA) should acknowledge the existing cultural ecosystem services and their connections to the well-being of local communities to gain positive perceptions. It is necessary to engage local stakeholders, especially among the youths, to explore governance complexities of MPAs and how to better understand cultural ecosystem services. Thus, this qualitative study investigated the perceptions of youths on cultural ecosystem services using a visual method, namely photovoice, as part of the participatory research in a newly established MPA of Tun Mustapha Park, Sabah. Three themes were identified in the process, namely social, economic, and environment. The engagement demonstrated the value of using the participatory approach, which yielded important insights of youths as a part of the community, which included the need for additional livelihood means post-establishment of MPA and issues of degradation of the marine environment. This paper contributed to the MPA governance literature specifically on the empirical youth perception which has been underrepresented as well as the employment of visual participatory methods to encourage better expression among the youths towards their living environment.
Study Type	
Journal	Environmental Education Research
Journal SJR Quartile	1
DOI	10.1080/13504622.2022.2075831

N.	121
Year	2022
Title	Understanding How Marine Protected Areas Influence Local Prosperity—A Case Study of Gili Matra, Indonesia
Authors	Amrullah Rosadi, P. Dargusch, Taryono Taryono
Citations	3
Takeaway	Marine Protected Areas (MPAs) can improve local prosperity, but managing stakeholders' perceptions is crucial for successful implementation.
Abstract	A Marine Protected Area (MPA) is always expected to create a specified outcome in ecosystem improvement. While they are certain to benefit marine life, MPAs also impact the surrounding communities, as they directly affect the livelihoods of people who rely on marine exploits to make a decent living. In other words, MPAs create new communal dynamics influencing the rate of prosperity in the surrounding communities. Unfortunately, the leverage of MPAs in the coastal communities' social economy is often under-assessed in MPA-related research. The MPA's influence on communal prosperity emphasizes the importance of policy incentives from stakeholders. Therefore, stakeholders' perceptions of MPAs are fundamental in the planning and implementation of MPAs, which could improve the prosperity of the coastal communities. In Gili Matra, Indonesia, where tourism is the MPA's backbone, MPAs are expected to sustain prosperity for future generations. However, some stakeholders with different influential stances to the MPA (Influential Stakeholders (IS) and Non-Influential Stakeholders (NIS)) demand a contradictive approach. This could lead to managerial issues for the MPAs. These issues must be addressed to avoid contradictory objectives that could harm MPA implementation.
Study Type	
Journal	International Journal of Environmental Research and Public Health
Journal SJR Quartile	2
DOI	10.3390/ijerph192013508

N.	122
Year	2022
Title	WHAT IS THE FUTURE FOR MARINE PROTECTED AREAS IN IRISH WATERS?
Authors	Mark P. Johnson, M. Jessopp, O. Mulholland, C. E. McInerney, R. McAllen, A. Allcock, T. Crowe
Citations	11
Takeaway	Marine protected areas in Irish waters can benefit conservation and society, but success depends on stakeholder attitudes and engagement.
Abstract	<p>Abstract: The UK and Ireland, in common with most other European states, are in the middle of a period of rapid expansion in the number of marine protected areas (MPAs). Most of these areas are being designated as Special Areas of Conservation (SACs) under the EU Habitats Directive. This level of activity will dominate the future of MPAs in Irish waters, presenting opportunities for marine conservation and potentially bringing wider benefits to society. The success of SACs is likely to depend heavily on the attitudes and engagement of people that use protected sites (stakeholders). This article reports on a stakeholder workshop where the potential benefits of, achievement of the potential of, and improvements in MPAs were discussed. A lack of baseline data and inefficient communication of existing information appear to restrict the perceived success of some existing reserves. Improvements seem possible in legislative coherence, public engagement and the science base. Resources for monitoring and managing protected areas are always likely to be stretched. Ways have to be found to make use of whatever data are available, potentially leading to public access websites for each SAC, where stakeholders can upload information. There appeared to be a broad consensus on many points in the day's discussions. In keeping with the workshop format, individual participants were invited to emphasise areas of omission, disagreement or consensus in comments that follow the main body of this article.</p>
Study Type	
Journal	Biology and Environment: Proceedings of the Royal Irish Academy
Journal SJR Quartile	
DOI	10.3318/BIOE.2008.108.1.9

N.	123
Year	2023
Title	Assessing the multiple benefits of partially protected marine protected areas in Australia: A systematic review protocol
Authors	Genevieve A C Phillips, Nils Krueck, E. Ogier, N. Barrett, I. Dutton, K. Hartmann
Citations	3
Takeaway	Partially protected marine areas (PPAs) in Australia may contribute to conserving biodiversity while providing social and economic benefits, enhancing sustainable marine resource management.
Abstract	<p>Background There is global pressure to protect more of the world's oceans, primarily to protect biodiversity, and to fulfill the "30 by 30" goal set by the International Union for the Conservation of Nature (IUCN) that has recently been ratified under the Kunming-Montreal Global Biodiversity Framework at the fifteenth Conference of Parties (COP-15). Fully protected marine protected areas (MPAs) provide the highest level of protection for biodiversity from destructive or extractive practices and may limit access to the area itself. Fully protected MPAs (also commonly referred to as 'no-take MPAs') ban all fishing activities, thereby removing the realisation of direct economic and social benefits from resource extraction within these areas. However, fully protected MPAs can still act as source of productivity to surrounding areas, while also providing an important scientific reference role for off-reserve management thereby providing indirect economic and social outcomes, as well as biodiversity benefits. Sustainable marine resource management strives to achieve 'triple-bottom line' benefits, where economic, social, and biodiversity benefits are maximised in managed areas of the ocean. Implementing 'partially protected' areas (PPAs) in areas of high biodiversity value (i.e., inshore, productive areas of the ocean) that allow for some extractive activities, may allow us to supplement fully MPAs to meet IUCN conservation goals, while maximising social and economic benefits. However, our current understanding lacks explicit quantitative assessments of whether and how PPAs can benefit (or otherwise) biodiversity, while also providing economic and social benefits. This study provides a method to systematically review the scientific and legislative literature to understand how PPAs may contribute to conserving biodiversity while also providing social and economic benefits to Australia. Methods and expected outputs The implementation of partially protected areas (PPAs) requires careful consideration of many potentially competing factors, and an understanding of the types of partial protection already in place in a region. We have developed a systematic literature review protocol focussing on the primary research question: "What is the current state of partially protected area (PPA) implementation across Australian</p>

	<p>marine areas?”. The aim of the review is to provide marine resource managers with a comprehensive overview of PPAs in Australia, including associated goals and stated management strategies to achieve these goals, and a methodological approach that may be utilised globally. The review protocol was designed by the research team for a Fisheries Resource and Development Corporation (FRDC) strategic research grant and will seek input from a project steering committee for the project on aggregation of the initial results. The steering committee is made up of stakeholders from a wide range of backgrounds and interests, covering marine conservation, fisheries management, Indigenous values, and academic research in Australia. Multiple academic databases, alongside Australian Federal, State, and Territory legislation and related policies will be reviewed using Boolean keyword search strings for both academic databases and relevant grey literature. Results from eligible documents will be compiled and insights from the review collated to provide information on the status of PPA implementation in Australia.</p>
Study Type	systematic review
Journal	PLOS ONE
Journal SJR Quartile	1
DOI	10.1371/journal.pone.0284711

N.	124
Year	2023
Title	Avoiding “Paper Parks”: A Global Literature Review on Socioeconomic Factors Underpinning the Effectiveness of Marine Protected Areas
Authors	A. Di Cintio, F. Niccolini, S. Scipioni, F. Bulleri
Citations	7
Takeaway	Stakeholder involvement, increased communication, and appropriate enforcement are key factors for enhancing the effectiveness of marine protected areas, preventing "paper parks."
Abstract	<p>Marine protected areas (MPAs) are a common management tool for preserving marine biodiversity and halting resource depletion. Despite the number of MPAs rapidly increasing worldwide, there are concerns over the full achievement of their objectives. Indeed, in some cases—the phenomenon of so-called “paper parks”—protected areas totally fail to achieve their conservation and socioeconomic targets. Therefore, identifying the factors underpinning MPA success or failure is crucial to increase their effectiveness. To achieve this goal, we performed a global literature review on the socioeconomic factors that managers should pursue to enhance MPA effectiveness on a global scale. A search of the Scopus database, using strings of keywords connected by Boolean operators, generated a batch of 715 items, out of which 68 were retained after the application of inclusion/exclusion criteria. Six other articles were added through the scanning of the literature cited in selected papers. We grouped MPA success-factors into 13 main groups and ranked them according to the frequency of citation in the literature. Our findings identify stakeholder involvement, increasing communication and awareness between specific stakeholder groups, as well as ensuring appropriate enforcement and monitoring, control and surveillance, as the leading factors for MPA success. Our results will assist in the process of upcoming global expansion of MPAs, thus contributing to improving conservation of marine biodiversity and associated livelihoods.</p>
Study Type	systematic review
Journal	Sustainability
Journal SJR Quartile	1
DOI	10.3390/su15054464

N.	125
Year	2023
Title	Diversity in marine protected area regulations: Protection approaches for locally appropriate marine management
Authors	Dominic A. Andradi-Brown, Laura Veverka, Nicole L Crane, H. Fox, D. Gill, J. Goetze, Charlotte Gough, Nils C. Krueck, S. Lester, Shauna L. Mahajan, John Rulmal, Marianne Teoh, G. Ahmadia, C. F. Santos, Stuart Kininmonth, A. Aguilar-Perera
Citations	17
Takeaway	Partially protected marine areas can effectively conserve biodiversity and support coastal communities, if tailored to local context.
Abstract	Globally, marine protected area (MPA) objectives have increasingly shifted from a primary focus on maintaining ecosystems through prohibiting extractive activities, to more equitable approaches that address the needs of both people and nature. This has led to MPAs with a diverse array of fisheries restrictions and recent debate on the type of restrictions that contribute to achieving biodiversity goals. Here we use a global dataset of 172 MPAs (representing 31 nations) alongside nine detailed case study MPAs (from Australia, Belize, Cambodia, Federated States of Micronesia, Fiji, Indonesia, Madagascar, Solomon Islands, and United States of America), including partially protected areas that allow regulated fishing, to illustrate the many diverse pathways that some MPAs have adopted to protect biodiversity and safeguard the rights and well-being of resource-dependent coastal communities. We group MPAs based on their restrictions and explore four key insights emerging from these groupings using our nine case studies: (i) MPAs use highly diverse approaches to regulate fisheries; (ii) partially protected areas can address gaps in regional fisheries management; (iii) devolving resource management rights to communities influences the chosen fisheries restrictions; and (iv) state-governed MPAs can use highly tailored fisheries restrictions to increase equity in access. We find that partially protected MPAs can offer effective and equitable pathways for biodiversity conservation if tailored to local context. Rather than focusing primarily on fully protected areas for achieving new global MPA targets, we recommend countries use a blend of locally-appropriate protection levels – from fully protected areas to partially protected MPAs to achieve positive biodiversity outcomes.
Study Type	
Journal	
Journal SJR Quartile	1
DOI	10.3389/fmars.2023.1099579

N.	126
Year	2023
Title	Drivers of Small-Scale Fishers' Acceptability across Mediterranean Marine Protected Areas at Different Stages of Establishment
Authors	D. Marzo, Iacopo Cavallini, L. Scaccia, P. Guidetti, A. Di Franco, A. Calò, F. Niccolini
Citations	3
Takeaway	Small-scale fishers' acceptability of marine protected areas in the Mediterranean is positively related to their age, but formal establishment alone is not sufficient for increasing their acceptability.
Abstract	The success of marine protected areas (MPAs) in achieving conservation and sustainable development goals hinges on, among other things, their social acceptability by local communities. Small-scale fishing communities represent a key stakeholder category within and around MPAs. Although many authors have examined the social acceptability of MPAs, relatively few studies have addressed this issue by considering how MPA acceptability is built and can be preserved. This study assessed the latent structure of MPA social acceptability and identified the individual and institutional variables driving stakeholders' acceptability. Using questionnaire surveys, 124 small-scale fishers' perceptions of MPAs and their social acceptability were explored in six Mediterranean MPAs (three were implemented, and three were designated). The results show that MPA acceptability is positively related to fishers' age. The findings also highlight that the formal establishment of MPAs is not a sufficient condition for increasing MPA acceptability among fishers. Considerations about the possibility that MPA acceptability can be increased by building support and compliance emerged. MPA managers should implement successful long-term stakeholder engagement initiatives to increase commitment around conservation measures and to improve overall MPA effectiveness.
Study Type	
Journal	Sustainability
Journal SJR Quartile	1
DOI	10.3390/su15119138

N.	127
Year	2023
Title	Ecotourism in Marine Protected Areas as a tool to value natural capital and enhance good marine governance: A review
Authors	Daniela Casimiro, M. A. Ventura, A. Z. Botelho, J. Guerreiro
Citations	6
Takeaway	Ecotourism development and community participation are crucial for achieving sustainable development in Marine Protected Areas, while also enhancing good marine governance.
Abstract	<p>Marine Protected Areas (MPAs) are essential to reach the UN Ocean’s Decade challenges and the Sustainable Development Goal 14 (life below water – conserve coastal and marine areas), and their crucial role for the health of the planet was highlighted in the United Nations Ocean Conference. However, often these MPA’s are no more than Paper Parks, with poor financial and human resources, thus lacking effectiveness. Moreover, they frequently trigger conflicts with local communities, by imposing restrictions to their activities with no alternative or compensations, causing serious governance inefficiencies. Thus, within the UN Oceans Decade, MPA’s must face simultaneously three of the challenges: Protect and restore ecosystems and biodiversity (Challenge 2); Develop a sustainable and equitable ocean economy (Challenge 4) and Change humanity’s relationship with the ocean (Challenge 10). To address those challenges, it becomes clear that management models of MPA’s had to find ways to value natural capital and, at the same time, involve local communities and stakeholders in the governance processes. The conservation of biodiversity has both direct and indirect economic benefits for many sectors of the economy, namely tourism, being ecotourism considered one of the segments particularly adequate to value natural capital. Ecotourism, defined as “environmentally responsible travel and visitation to relatively undisturbed natural areas”, to enjoy and appreciate nature, is often used to enhance the natural capital, while protecting and promoting protected areas. Several studies have been carried out about ecotourism in MPA’s all over the world, particularly in the 21st century. In this article, we analyzed several case studies focusing ecotourism in MPAs, to better understand the connection between the development of this industry, the development of sustainable blue economy, and the efforts for ocean conservation. From the analysis conducted, we conclude that ecotourism development and community participation are of paramount importance in achieving sustainable development in MPAs, although there is still room to new advances improving good marine governance.</p>
Study Type	literature review

Journal	
Journal SJR Quartile	1
DOI	10.3389/fmars.2022.1002677

N.	128
Year	2023
Title	If you build it, they will come: Coastal amenities facilitate human engagement in marine protected areas
Authors	Christopher M. Free, Joshua G. Smith, Cori Lopazanski, J. Brun, Tessa B. Francis, J. Eurich, J. Claudet, J. Dugan, David A. Gill, S. L. Hamilton, K. Kaschner, D. Mouillot, Shelby L. Ziegler, J. Caselle, K. Nickols
Citations	3
Takeaway	Developing land-based amenities and locating marine protected areas near coastal amenities can promote human engagement, enhancing conservation performance.
Abstract	<p>Calls for using marine protected areas (MPAs) to achieve goals for nature and people are increasing globally. While the conservation and fisheries impacts of MPAs have been comparatively well-studied, impacts on other dimensions of human use have received less attention. Understanding how humans engage with MPAs and identifying traits of MPAs that promote engagement is critical to designing MPA networks that achieve multiple goals effectively, equitably and with minimal environmental impact.</p> <p>In this paper, we characterize human engagement in California's MPA network, the world's largest MPA network scientifically designed to function as a coherent network (124 MPAs spanning 16% of state waters and 1300 km of coastline) and identify traits associated with higher human engagement. We assemble and compare diverse indicators of human engagement that capture recreational, educational and scientific activities across California's MPAs.</p> <p>We find that human engagement is correlated with nearby population density and that site "charisma" can expand human engagement beyond what would be predicted based on population density alone. Charismatic MPAs tend to be located near tourist destinations, have long sandy beaches and be adjacent to state parks and associated amenities. In contrast, underutilized MPAs were often more remote and lacked both sandy beaches and parking lot access.</p> <p>Synthesis and applications: These results suggest that achieving MPA goals associated with human engagement can be promoted by developing land-based amenities that increase access to coastal MPAs or by locating new MPAs near existing amenities during the design phase. Alternatively, human engagement can be limited by locating MPAs in areas far from population centres, coastal amenities or sandy beaches. Furthermore, managers may want to prioritize monitoring, enforcement, education and outreach programmes in MPAs with traits that predict high human engagement. Understanding the extent to which human engagement impacts the conservation performance</p>

	<p>of MPAs is a critical next step to designing MPAs that minimize tradeoffs among potentially competing objectives.</p> <p>Read the free Plain Language Summary for this article on the Journal blog.</p>
Study Type	
Journal	People and Nature
Journal SJR Quartile	1
DOI	10.1002/pan3.10524

N.	129
Year	2023
Title	Socioeconomic dimensions of the Buccoo Reef Marine Park, an assessment of stakeholder perceptions towards enhanced management through MSP
Authors	S. Peters, R. Guppy, D. Ramsewak, A. Potts
Citations	2
Takeaway	Stakeholders in Buccoo Reef Marine Park recognize the need for marine spatial planning, with jet skis being a primary contributor to conflicts between users, and support its implementation.
Abstract	<p>The effective management of marine protected areas (MPAs) requires an in-depth understanding and assessment of the varying socioeconomic uses and users of the physical space. However, in some localities, little research is conducted on this aspect and in particular user perceptions on current and proposed management strategies for MPAs. Such site-specific evaluations are imperative to developing context-dependent management measures. The aim of this study was to identify the spatial extent of socioeconomic activities, assess stakeholders' awareness of the varying socioeconomic activities that take place in the Buccoo Reef Marine Park, Tobago, and gauge stakeholder support for proposed management mechanisms, namely marine spatial planning (MSP). Targeted surveys were conducted over a six-month period, to obtain perspectives from key Marine Park stakeholder groups, namely marine resource managers, visitors, and tour operators. The results indicated over ten main socioeconomic activities occurring within the Marine Park, with multiple activities taking place in the same location. Results also suggest that stakeholders are aware of the conflicts that occur between various users of the space with jet skis operation identified as the primary contributor. Finally, using a Likert scale, stakeholder groups predominantly rated the need for a marine spatial plan as "necessary." This research, therefore, documents existing socioeconomic activities in the Buccoo Reef Marine Park and highlights the importance of stakeholder engagement in future management strategies.</p>
Study Type	
Journal	ICES Journal of Marine Science
Journal SJR Quartile	1
DOI	10.1093/icesjms/fsad066

N.	130
Year	2024
Title	Collaborative fisheries research reveals reserve size and age determine efficacy across a network of marine protected areas
Authors	Shelby L. Ziegler, Rachel O. Brooks, L. Bellquist, J. Caselle, Steven G. Morgan, Timothy J. Mulligan, B. Ruttenberg, Brice X. Semmens, Richard M. Starr, Joe Tyburczy, Dean E. Wendt, Andre Buchheister, Jose R. Marin Jarrin, Christina Pasparakis, S. Jorgens
Citations	6
Takeaway	Increased size and age of marine protected areas (MPAs) consistently contribute to increased fish catch, biomass, and positive species responses, while accounting for factors like latitude, primary productivity, and distance to the nearest MPA.
Abstract	A variety of criteria may influence the efficacy of networks of marine protected areas (MPA) designed to enhance biodiversity conservation and provide fisheries benefits. Meta-analyses have evaluated the influence of MPA attributes on abundance, biomass, and size structure of harvested species, reporting that MPA size, age, depth, and connectivity influence the strength of MPA responses. However, few empirical MPA evaluation studies have used consistent sampling methodology across multiple MPAs and years. Our collaborative fisheries research program systematically sampled 12 no-take or highly protective limited-take MPAs and paired fished reference areas across a network spanning 1100 km of coastline to evaluate the factors driving MPA efficacy across a large geographic region. We found that increased size and age consistently contributed to increased fish catch, biomass, and positive species responses inside MPAs, while accounting for factors such as latitude, primary productivity, and distance to the nearest MPA. Our study provides a model framework to collaboratively engage diverse stakeholders in fisheries research and provide high-quality data to assess the success of conservation strategies.
Study Type	meta-analysis
Journal	Conservation Letters
Journal SJR Quartile	1
DOI	10.1111/conl.13000

