

Human Dimensions of Large-Scale Marine Protected Areas
Best Management Practices Guidebook

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Abstract

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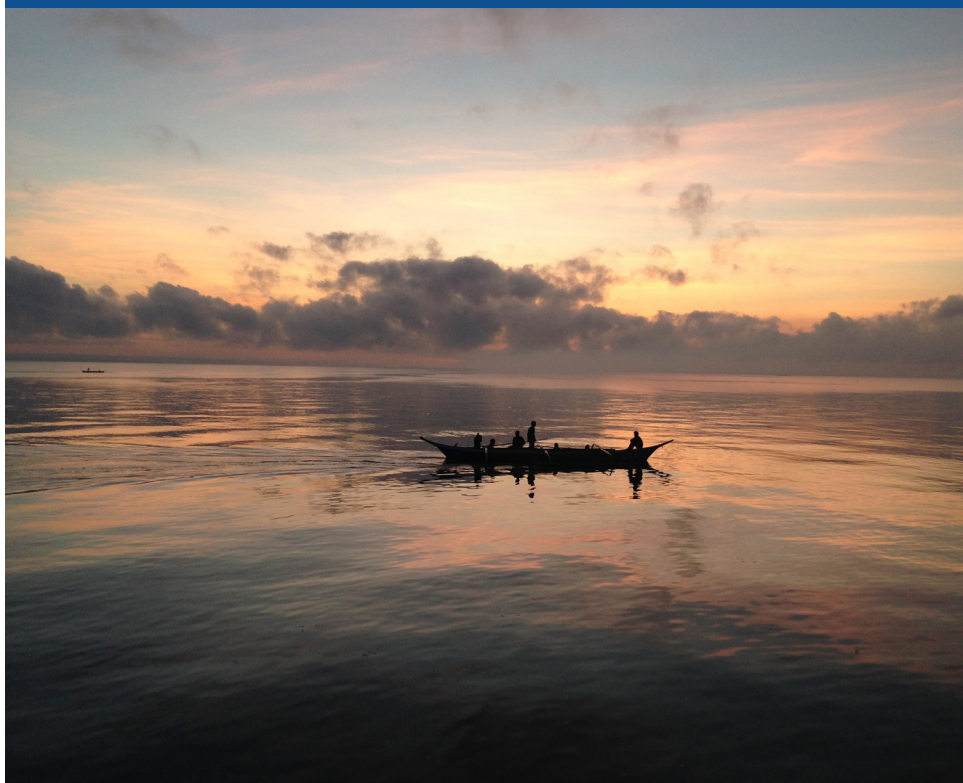
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The world has entered a new age of large-scale marine conservation. Since 2006, more than 17 Large-Scale Marine Protected Areas (LSMPAs) have been declared or expanded - each more than 100,000 km² in size and totaling more than 14 million km². However, due to large-scale marine protected areas sheer size, complex socio-political realities, and distinct cultural and economic situations, successful design, management, and enforcement of LSMPAs remains a work in progress. As a result, the field of human dimensions of LSMPAs has emerged to address these gaps. Human dimensions of LSMPAs (HD LSMPA) embody the social, cultural, political, institutional, and economic considerations in design and management. Practical guidance is needed for informing how to integrate human dimensions into LSMPA design and management. This guidebook advises how to collect human dimensions information to understand the ways people interact with the marine environment and LSMPAs and, most importantly, how to consider their interests and behavior to improve LSMPA design and management. Practitioners of this guidebook will learn how to develop and implement an HD project in their LSMPA through the adaptive management process. This guidebook is intended for use by marine protected area practitioners, including site leaders, community leaders, marine managers, policy makers, and all relevant stakeholders involved in the design and management of LSMPAs.

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The guidebook is intended to act as an investment in the global field of human dimensions of marine and environmental management and a step forward in developing the field of Human Dimensions of Large Scale Marine Protected Areas. May this tool inspire you to do good for the environment and its people together, and lead to practices that will mutually benefit both in the long-term.

Table 1 - Established large-scale marine protected areas (listed by date of establishment, as of July 2017)

Name and Type of LSMPA	Country	Year	Area (km²)
1. Great Barrier Reef Marine Park	Australia	1975	344,400
2. Galapagos Island Marine Reserve	Ecuador	1998	133,000
3. Papahānaumokuākea Marine National Monument	United States	(2006 established) 2016	(362,075) 1,508,870
4. Phoenix Islands Protected area	Kiribati	(2006 established) 2008	(184,700) 408,250
5. Marianas Trench Marine National Monument	United States	2009	250,487
6. Pacific Remote Islands Marine National Monument	United States	(2009 established) 2014	(225,100) 1,269,065
7. Motu Motiro Hive Marine Park	Chile	2010	150,000
8. British Indian Ocean Territory Marine Reserve	United Kingdom	2010	640,000
9. South-west Corner Commonwealth Marine Reserve	Australia	2012	271,898
10. Norfolk Commonwealth Marine Reserve	Australia	2012	188,433
11. Macquarie Island Commonwealth Marine Reserve	Australia	2012	162,000
12. Argo-Rowley Terrace Commonwealth Marine Reserve	Australia	2012	146,099
13. Coral Sea Commonwealth Marine Reserve	Australia	2012	989,842
14. South Georgia & the South Sandwich Islands MPA	United Kingdom	2013	1,007,000
15. Le Parc Naturel de la mer de Corail (National Park)	France	2014	1,300,000
16. Palau National Marine Sanctuary	Palau	2015	500,238
17. Parque Marino Nazca-Desventuradas (Marine Park)	Chile	2015	297,518
18. Pitcairn Islands Marine Reserve	United Kingdom	2016	840,000
19. St. Helena Marine Protected Area	United Kingdom	2016	444,916
20. Ross Sea Marine Protected Area	International waters	2016	1,550,000
21. Marea Moana: Cook Islands Marine Park	Cook Islands	2017	1,900,000
Approximate Total Area			14,302,016 km²

Introduction to the Human Dimensions Think-Tank



Image 1: Human Dimension Think-Tank participants on Day 3 in Honolulu, Hawaii.

On February 8-10 of 2016, 125 experts from 17 countries and 16 academic institutions convened in Honolulu, Hawaii to address the potential HD LSMPA challenges, emerging issues, and opportunities arising from this new age of large-scale marine conservation. The Human Dimensions Think-Tank (HDTT), as the first of its kind, brought together a diverse community of marine managers, cultural/indigenous leaders, policy makers, academics, and donors with a common goal:

- To co-produce knowledge: *to engage in collaborative and proactive discussions to better understand HD considerations*
- To create outputs: *to produce best management practices and a research agenda to be implemented globally and utilized by a wide range of professionals.*



Image 2: Human Dimension Think-Tank Facilitation Team (left) and Design Team (right). Note: Not all design team members are pictured here.

A pre-meeting survey, an effort led by Marine Management Solutions, informed the Think-Tank and its outputs. One hundred and two HDTT invitees responded to the pre-meeting survey (48% response rate), and responses were presented during plenary sessions of the HDTT. Respondents included academics (33%), government coastal and marine management specialists (13%), NGO coastal and marine management specialists (10%), LSMPA site managers (10%), NGO representatives (7%), cultural/indigenous leaders (5%), lawyers and consultants (5%), and others (including fisheries and tourism professionals, industry) (17%). The results of this survey will be referred to throughout this guidebook. The Think-Tank's knowledge cafes, small group sessions, and plenary sessions, journal articles, and guidebooks (see Bibliography) also inform this guidebook.

The Think-Tank resulted in a better understanding of HD considerations and produced:

- a shared HD research agenda for LSMPAs
- a journal article submitted for peer review (Christie *et al.*, in review)
- 20 commitments by organizations and individuals to continue to collaborate on and support (technical, financial, or logistical) the field of HD LSMPAs

Results of the Think-Tank and pre-Think-Tank survey revealed that inclusion of human dimensions in design and management of LSMPAs is a crucial factor in determining success and more attention should be paid to this area. Conclusions of the three-day Human Dimensions Think-Tank will be referred to throughout this guidebook.

For further details on the Think-Tank, it is suggested you refer to the following: Christie *et al.* (in review); Christie and Lewis (2016); LSMPA Community of Practice (2016); “Report on the Think Tank” (2016); “A Practical Framework for Addressing HD LSMPAs” (2016).

Why an HD LSMPA Best Management Practices Guidebook?

Practical guidance is needed for informing how to integrate human dimensions considerations into LSMPA design and management. This HD LSMPA Best Management Practices Guidebook will build upon the efforts of the Think-Tank and its outputs, and serve as a unique contribution to the field of LSMPA management. There are some related guidebooks, for example *How is Your MPA Doing* (Pomeroy, Parks & Watson, 2004), that provide an insight into the subject of human dimensions of marine and environmental management, yet no such guidebook solely focuses on the integration of HD considerations in LSMPA design and management. Additionally, there is no existing step-by-step guide for practitioners to learn from, utilize, and refer to.

Sixty seven percent of respondents to the pre-HDTT survey agreed that a set of best practices was the most important output to be generated, and 25% called for a guidebook or manual. Furthermore, a number of journal articles have indicated a need for an LSMPA social science, or human dimensions, agenda, (Agardy *et al.* 2003; Christie, 2004; Christie *et al.* 2003; Gruby *et al.* 2015; Mascia *et al.* 2003). The chances for conservation successes are reduced without a revised management framework that addresses social issues relating to LSMPAs. This guidebook advises how to collect human dimensions information to understand the ways people interact with the marine environment and LSMPAs and, most importantly, how to consider their interests and behavior to improve LSMPA design and management.

This new human dimensions agenda should be participatory in nature, holistic, and address the specific political, social, and economic factors of the established LSMPA. The development of a best practices for HD LSMPA design and management will contribute to this new agenda, and is both timely with the recent proliferation of LSMPAs and significant to encouraging LSMPA successes for decades to come.

Who should use this guidebook?

This guidebook is intended for use by marine protected area practitioners, including site leaders, community leaders, marine managers, policy makers, and all relevant stakeholders involved in the design, planning, and management of LSMPAs. Its clarity, simplicity, and visual appeal will add to its practicality and usefulness. There will be no long narratives, but instead informs with figures, tables, exercises, and scenarios alongside text. HD scholars may find this guidebook to be a helpful contribution to the study of HD LSMPAs as well as a source of information and inspiration for new studies and research.

How is this book organized?

The intention of this book is to provide a guide to incorporating HD considerations into the design and management of LSMPAs in a format that is easy to follow and adopt. Practitioners of this guidebook will learn how to develop and implement a project in their LSMPA that considers human dimensions. For the purposes of this guidebook, this project will be referred to as an HD LSMPA project.

This guidebook is:

- » Practical
- » Process-based
- » Directly applicable to practitioner use

This guidebook is intended for use during:

- » Design/planning stages
- » Management/implementation stages
- » Evaluative stages

It is important to remember that this step-by-step guidebook is intended to be used as a guideline or a framework for implementation. Though it is recommended the guidebook be followed closely, there is room for individual interpretation and adaptation. This book is by no means all-inclusive, and should act as a supplement to other analyses and guidebooks available. When deciding on how best to use this book, consult with relevant stakeholders, as a collaborative undertaking is highly encouraged.

The guidebook follows the path outlined below and includes the following sections. Note that certain sections are color coded to assist the user and encourage active participation in exercises.

- **Overview of HD considerations**
 - » Includes **Further Reading**
It is recommended the reader refers to the referenced guidebooks and articles to gain a greater understanding of the HD considerations covered in this section.
- **Introduction to the Iterative Loop of HD LSMPA Design and Management**
This section provides an overview of the framework used and referred to for the remainder of this guidebook.
- **Step-by-Step Guide**
 - » Includes **Further Reading**
It is recommended the reader refers to the referenced guidebooks and articles to gain a greater understanding of how to complete the steps.
 - » Includes **Exercises**
The exercises should be completed to assist the reader in designing their own HD project best suited to their specific LSMPA and HD considerations. The intention is to challenge readers to consider their HD LSMPA aspects and inform integration into already established management plans or the design of new management plans.
 - » Includes **Scenarios**
Two scenarios follow this guidebook throughout. They are provided to depict the many challenges and decisions faced when integrating HD considerations into LSMPA design and management. These scenarios are hypothetical and are analyzed throughout this guidebook at various phases of the HD Iterative Loop. It is recommended you refer to the scenarios when directed to and allow them to assist with your exercises.
- **Conclusion**
- **Bibliography**

Introduction

The Seven Human Dimensions Considerations

Seven HD considerations will be explored throughout this guidebook to provide a basis of understanding to the opportunities and challenges that social, cultural, political, institutional, and economic considerations present to LSMPA design and management.

1. Integration of culture and traditions
2. Effective public and stakeholder engagement
3. Maintenance of livelihoods and wellbeing
4. Promotion of economic sustainability
5. Conflict management and resolution
6. Legitimate and appropriate governance
7. Social justice and empowerment

These seven considerations have been carefully selected as the most prominent high priority themes based on the results of the Human Dimension Think-Tank, and informed by journal articles, guidebooks, and case studies (see Bibliography). These considerations are incomplete, but serve as a starting point for integrating HD considerations into LSMPA design and management.

These HD considerations are interconnected, and thus often overlap and interact with one another. Addressing one has the potential to affect another, and therefore, they should be treated as parts to a whole. The social success of the LSMPA is dependent on the ability to address high priority HD considerations.

The following pages will provide an overview of the seven HD considerations and inform the development of your HD LSMPA project later in this guidebook.

Consideration 1: Integration of culture and traditions

88% of HDTT participants agree that issues surrounding their LSMPA's cultural heritage are a top HD concern.

People and tradition has been a consistent and historical driver of marine and environmental protection, proving that nature and culture are inextricably linked and a disruption in one subsequently affects the other. How culture affects the natural environment, and vice versa, varies across communities.

Traditional ecological knowledge or TEK, often passed down for centuries within communities, has much to offer in design and management phases of LSMPAs and marine management in general. TEK often takes into account culture, people, and values in relation to their environment while offering significant historical environmental knowledge that is often overlooked, inaccurate, or incomplete in Western data collection. This knowledge typically differs in form from Western research and data, but is equally important in informing management. Integrating the two, TEK and data collected through the Western-developed scientific method, can create a more complete picture of the socio ecological status and history of the LSMPA. Understanding data and cultural values as a whole and their evolution over time can provide insight into appropriate spatial planning and help to predict social and ecological outcomes of decision making processes.

Paying special attention to areas of cultural importance, traditions, values and opinions of indigenous communities can also elevate community appreciation and value for the LSMPA. Indigenous communities relevance and input in design and management phases provides a foundation for sustainable community involvement and support. On the other hand, disengagement of indigenous communities and local leaders has the potential to separate people from place. Choosing not to consider cultural access to the LSMPA, traditional use, traditional management systems, or spiritual or religious aspects (e.g. taboos) of communities may have serious implications for the success of the LSMPA. Lack of cultural considerations may result in increased conflict and political instability, and decreased appreciation and rule and regulation-following of the LSMPA. Recognizing that indigenous communities have a long deep-rooted history and therefore a substantial stake in the sea is an integral aspect of HD LSMPA consideration.

Further Reading

For more information on integration on culture and traditions, refer to: Aswani (2012); Bennett K et al. (2015); Christie and White (2007); Christie et al. (in review); Drew (2005); Friedlander et al. (2016); Poe, Norman, & Levin (2014); Sale et al. (2014); Schreckenberget al. (2010)

Consideration 2: Effective public and stakeholder engagement

49% of HDTT participants identified the lack of meaningful and effective stakeholder consultation and participation as a highest priority LSMPA issue.

Engaging key community members and stakeholders in the design and management phases is important for ensuring all those affected by the LSMPA are also receptive to the LSMPA and involved in its processes. Public and stakeholder engagement comes in many shapes and forms and may include consultation meetings, public voting processes, public surveys, and other approaches. Engagement may be as simple as providing opportunities to vote on an LSMPA logo or as complex as voting on budget, zoning, or rules and regulations. All engagement should strive to be inclusive, group-appropriate, allow time for feedback, and provide multiple platforms for participation.

Whatever the mechanism, the ultimate goal is to create a positive impact on all stakeholders long-term. This, of course, is hardly ever fully achieved as there will also always be mis-matching of ideas, values, and goals within the community and between stakeholders. It is important to be aware of goals and user expectations of different stakeholders and remain transparent throughout all processes. Be prepared for conflict to coincide with stakeholder engagement and ensure mechanisms are in place to respond to such conflicts (See Consideration 5: Conflict management and resolution). Oftentimes, policy makers wish to engage the public, but do not know how best to proceed. Knowing how the local community best engages and learning from other LSMPA successful engagement programs can help to inform implementing this HD consideration.

It is important the community remains involved throughout the LSMPA design and management processes, and therefore, it is encouraged the LSMPA establishes programs for all ages and people to promote this involvement. Examples of successful programs include educational programs and campaigns in schools, religious centers, and community centers, and citizen science programs. These long-term established community engagement programs create opportunities for community members to feel and be invested in the LSMPA, and subsequently breeds respect and appreciation for the process and outcomes. As a result, the community can become empowered, stronger, and unified for the cause.

Public and stakeholder involvement can contribute to improved LSMPA performance as a result of increased compliance with rules and regulations. In that sense, direct and proactive engagement of the fishing community in decision making is essential to avoiding the 'paper park' trap. Additionally, stakeholders must not be considered only those with financial resources and power. All individuals affected in any way by the LSMPA and subsequent effects of the LSMPA should be considered stakeholders and are entitled to an opportunity to be heard and influence the process.

Further Reading

For more information on effective public and stakeholder engagement, refer to: Agardy et al. (2011); Bennett K (2015); Christie and White (2007); Christie et al. (2009); Christie et al. (in review); Day (2002); Gruby et al. (2015); Laffoley (2008); Pietri et al. (2015); Reed (2008); Varney et al. (2010)

Consideration 3: Maintenance of livelihoods and wellbeing

83% of HDTT participants identified problems related to economy and livelihoods as their site's top HD issue.

LSMPAs have the potential to positively or negatively affect the livelihoods and wellbeing of local communities. With the establishment of a LSMSPA comes new regulations that often affects an individual's or a community's quality of life, food security, subjective well-being, and mental, spiritual, emotional, and/or physical health.

A LSMSPA that considers the maintenance of livelihoods and wellbeing in design and management phases will engage in practices that instill pride for the LSMSPA in the community. People should feel emotionally invested in the LSMSPA, whether actively invested through programs that encourage participation in MPA-related activities or decision making, or simply supportive of the MPA. Individuals can feel supportive as a result of indirect benefits they have received from the LSMSPA that elevate livelihoods and wellbeing. For example, support can be rallied by an increase in economic stability, job availability, food security, environmental aesthetics, sense of place, or an increase in community pride for the LSMSPA.

When this HD consideration is correctly integrated, the LSMSPA may result in communities with an elevated wellbeing. When not considered, negative results to the community may include something similar to the impacts to local communities during periods of colonialism; displacement, decrease in job and food security, increased conflict, use of fear as a management tool, loss of pride, and dissolution of culture.

Further Reading

For more information on maintenance of livelihoods and wellbeing, refer to: Allison and Ellis (2001); Bennett (2010); Bennett and Dearden (2014); Bennett K et al. (2015); Bennett et al. (2015); Cattermoul, Townsley, & Campbell (2008); Charles et al. (2016); Christie et al. (in review); De Lange et al. (2015); Dudley and Stolton, (2008); Dudley et al. (2008) Franks, P. (2008); Schreckenberget al. (2010)

Consideration 4: Promotion of economic sustainability

61% of HDTT participants believe budget and funding limitations to research are the most significant challenges to filling design and management gaps.

Economic sustainability very closely overlaps with all other HD considerations, as it is difficult to ensure social, cultural, political, and institutional success without financial stability underpinning a LSMPA. Thus, effective long-term resourcing of the LSMPA is an integral component to consider in design and management as money is needed for enforcement, monitoring and evaluation, and implementation of HD-related programs. Effective long-term resourcing is possible with diverse funding streams coming from sources with different interests. This also allows for more autonomy and flexibility in management. Pooling from fundraising, foundation donations and grants, local and state government funds, and tourism fees may help to ensure sustainable financing long-term.

The interests of those providing donations and grants should also be examined: Do the donors efforts align with your LSMPA interests, and how are donors affecting rules and regulations? In considering prioritization of funds, evaluate what is most needed (e.g., improvement of programs, installation of new programs, enforcement, hiring and training). Additionally, diverse partnerships with differing interests, such as private-public partnerships, may help to reduce costs. Sustainable resourcing should also draw from cost benefit analyses and consider both short-term and long-term losses and gains. Costs and benefits can be both monetary and non-monetary (intrinsic value of environment, community wellbeing), and the distribution of costs and benefits (inter- and intra-generational, short-term and long-term) is also an important consideration for long-term economic sustainability.

This HD consideration should also address the number and diversity of people the LSMPA can employ, directly and indirectly. Job shifts as a result of LSMPA rules and regulations should be considered and accounted for. Often, these LSMPA regulations put fishermen at an economic disadvantage, so it is important to ask: Is there compensation available to offset lost fishing incomes and/or mechanisms to fund this compensation (e.g., tourist tax)? Are other job markets such as eco tourism available? Are training programs to facilitate career shifts available (e.g. tour guide courses provided to ex-fishermen)? Educating on the purpose behind specific rules and regulations that affect economic security is also important to inform those who are affected of options, opportunities, and potential long-term gains the LSMPA could provide.

Further Reading

For more information on promotion of economic sustainability, refer to: Christie (2004); Christie et al. (in review); Bennett K et al. (2015); Ecobudget (2009); Gill et al. (2017); Gruby et al. (2015); Laffoley (2008); MPA News (2016); Ocean Action Agenda (2017); Pomeroy et al. (2003); Toonen et al. (2013); West et al. (2003)

Consideration 5: Conflict management and resolution

18% of HDTT participants agree that increased social conflicts is of highest importance to address at their LSMPA.

With the many stakeholders with diverse ideas, opinions, values, and backgrounds surrounding LSMPA design and implementation, conflict is highly likely. LSMPA implementation requires trade-offs in which there are likely to be winners and losers when changes are made to the status quo. Conflict can take the form of violence, active debates, long-lasting rivalries, subtle disputes, or under-the-radar discontent. Conflict may be between individuals, groups or organizations for any number of reasons, for example, mismatching of ideas and institutions, unequal distribution of costs and benefits to stakeholder groups, changes in power and authority, and multi-user conflict. Being that conflict is nearly unavoidable, it is important to focus on mechanisms for conflict management and resolution.

Integration of this HD consideration requires new organizational arrangements at institutional and individual levels. At each level, there should be a body or mechanism in place for regulating conflicts and a framework for resolving them. There will inevitably be conflicts between policy makers, scientists, fishers, and indigenous and community leaders. To ensure these conflicts do not impede on progress and waste limited time and energy, it is recommended a specialist in conflict mitigation and resolution is employed by the LSMPA.

It is important to keep in mind that conflict is not always a bad thing, as conflict often provides a stage for differing opinions to be heard and worked through. Conflict may be necessary for disenfranchised social groups to influence a planning process. In that way, conflict can act as the launchpad for negotiation and compromise or agreement, and a place for ideas to be heard and considered. The conflict specialist may wish to hold open debates to discuss high-level and widely-known disagreements. This can help to reduce conflict in the long-term and act a mechanism to increase trust and understanding. In short, it is absolutely crucial to know there will be conflict and prepare for it. Stable governance and successful integration of HD considerations is often a cause of reduced conflict.

Further Reading

For more information on conflict management and resolution, refer to: Christie (2004); Christie et al. (2009); Christie et al. (in review); Dukes et al. (2016); Kittinger et al. (2011)

Consideration 6: Legitimate and appropriate governance

98% of HDTT participants agree that issues surrounding their LSMPA's governance is a top HD issue.

Governance can be defined as “the interactions among structures, processes and traditions that determine how power and responsibilities are exercised, how decisions are taken, and how citizens or other stakeholders have their say” (Graham et al., 2003: 2). Understanding political dynamics and how governments and policy makers make tradeoffs is integral to implementing legitimate and appropriate governance.

Legitimate and appropriate governance combines top-down and bottom-up governance, practices effective and respective leadership at all levels, and implements effective coordination between inter and intra-governmental and inter and intra-sectorial bodies. Co-management, or collaborative management of the LSMPA between two or more bodies, may enhance governance legitimacy, but these management decisions should be based on site-specific context. Co-management design should vary depending on laws, norms, and cultural context.

Community support and long-term local backing can be indicators of legitimate and appropriate governance. To ensure this, it is important that governance bodies are transparent throughout design and management phases. All stakeholders and local community members should be made aware of the reasoning behind the creation of the LSMPA, subsequent rules and regulations, and desired outcomes. Stakeholders should receive updates on pending regulations and monitoring and evaluation results. The ability to generate trust is an essential element of effective implementation, and involving all stakeholders in governance processes will build that trust. Indigenous leaders and those political stakeholders holding long-term positions should be involved in decision making, as political positions are often short-term with rapid turnover. This change in leadership can lead to wasted time and energy, making legitimate and appropriate governance a more difficult undertaking. Political realities and timeframes are therefore an important consideration.

Effective enforcement is often a challenge, though necessary for LSMPA ecological and HD improvement. Clear and transparent governance, political will, economic sustainability, and compliance with national and international laws and social licenses makes for easier enforcement. Regulations must be binding and enforceable, and enforcement protocols should be clearly defined. When adequate enforcement resources are not available, trust and respect for LSMPA regulations is necessary. Therefore, successful integration of HD considerations can lead to increased compliance without the need for increased enforcement resources.

Further Reading

For more information on legitimate and appropriate governance, refer to: Aswani (2012); Ban et al. (2015); Bennett K et al. (2015); Bennett et al. (2014); Bennett et al. (2015); Bennett et al (2016); Bennett et al (2017); Christie (2011); Christie et al. (2014); Christie et al. (in review); Friedlander et al. (2016); Graham et al. (2003); Gruby et al. (2015); Kittinger et al. (2010); Lockwood (2010); Lockwood et al. (2010); Pomeroy et al. (1997); Pomeroy et al. (2004); Sale et al. (2014); Varney et al. (2010)

Consideration 7: Social justice and empowerment

77% of HDTT participants agree that issues surrounding their LSMPA's social systems are a top HD issue.

The LSMPA has the ability to elevate the local community and country, turning small island states into large ocean countries while providing international recognition and praise. In this way, social justice and empowerment can be elevated. This HD consideration is highly interconnected with the others and relies on the LSMPA's ability to empower its community. Social justice and empowerment can be encouraged in a number of different ways, including local involvement in decision making, the establishment of education and citizen science programs, and the promotion of LSMPA through spirited and inclusive campaigns.

Where social justice and empowerment is not properly considered, a LSMPA may take the form of 'ocean grabbing', a term used to "describe actions, policies or initiatives that deprive small-scale fishers of resources, dispossess vulnerable populations of coastal lands, and/or undermine historical access to areas of the sea," (Bennett, Goven, & Satterfield, 2015: 61). Ocean grabbing is typically the result of transnational or national companies, governments, NGOs, or organizations taking control of local resources and decision making without comprehensive consideration of local human dimensions. As a result, social justice and empowerment is compromised due to local HD losses (e.g. social, cultural, political, institutional, and economic) and subsequent loss of community pride and respect for the LSMPA. To avoid these effects, consider tradeoffs in design and management of the LSMPA. A successful LSMPA is one that people are proud of and invested in, and one that elevates those affected.

Further Reading

For more information on social justice and empowerment, refer to: Aswani (2012); Bennett K et al. (2015); Bennett and Dearden (2014); Bennett Goven, and Satterfield (2015); Christie et al. (in review); Dudley and Stolton (2008); Dudley et al. (2008); Friedlander et al. (2016); Gruby et al. (2015); Pietri et al. (2015) Schreckenberg et al. (2010);

THE ITERATIVE LOOP OF HD LSMPA DESIGN AND MANAGEMENT

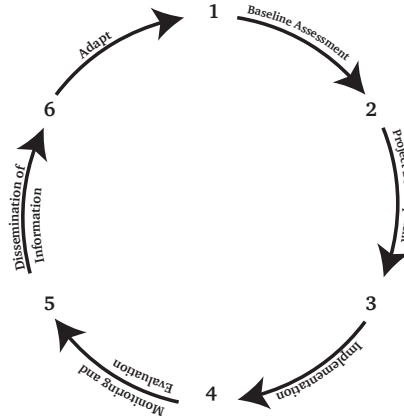


Figure 2: The Iterative Loop

What is it?

Incorporating human dimensions into LSMPA design and management demands an adaptive management process (Figure 2). One definition of adaptive management is the following:

Whereby managing institutions formulate policy as an uncontrolled, non replicated experiment, monitor the results of the strategy, and iteratively revise their approach in order to adapt to changing social and ecological conditions (Kittinger et al, 2010: p 11).

The adaptive management process is best realized in the form of an iterative loop, or step-by-step circular process which provides a framework for management of HD LSMPAs (Figure 2).

The Iterative Loop of HD Design and Management consists of six repeating phases to developing a HD LSMPA project, or a project that addresses one or more HD considerations for improvement. Following this phase-based process will ensure HD best practices are exercised throughout design and management, resulting in a LSMPA that addresses both social and ecological concerns in a sustainable manner, (Kaplan-Hallam and Bennett, in press).

The Process: Your HD LSMPA Project

Each phase in the iterative loop is associated with specific steps (Table 2). This Best Management Practices Guidebook provides a detailed account of how to incorporate HD considerations into each of these phases and their associated steps. If HD considerations are ignored at any of these phases, the outcomes of management processes will likely reflect that void. The following sections will take you through this phase-based process while paying close attention to the seven HD considerations.

Adaptive management is designed to be sustainable, and is aimed at improved effectiveness by progressing toward particular goals and objectives (Pomeroy, Parks & Watson, 2004: 2). Results of the adaptive management process are intended for use in adapting your project for improvement, and monitoring and evaluation is essential to determining how your project should adapt. There will always be new information to consider and aspects to refine, and therefore the adaptive management process is in theory never complete and can always be improved upon. It is up to the discretion of the practitioner to decide when intended results of incorporating HD into their LSMPA is sufficient.

Table 2: The Adaptive Management Process (adapted from Margoluis & Salafsky, 1998).

Phases	Steps
1. Baseline Assessment & Identification of HD Issues	<ol style="list-style-type: none"> 1. Identify what you already know 2. Choose methods for gathering and analyzing data 3. Gather data 4. Prioritize issues 5. Choose HD consideration(s) and define mission statement
2. Develop HD LSMPA Project	<ol style="list-style-type: none"> 1. Establish management team 2. Define goals, objectives, and actions
3. Implement HD LSMPA Project	<ol style="list-style-type: none"> 1. Initial Implementation 2. Expansion 3. Ongoing Implementation
4. Monitor and Evaluate	<ol style="list-style-type: none"> 1. Develop monitoring strategy, monitoring indicators, and monitoring methods 2. Monitor for indicators 3. Analyze and evaluate data
5. Disseminate Information	<ol style="list-style-type: none"> 1. Choose method of communication 2. Collect feedback 3. Contribute to the global database
6. Adapt	<ol style="list-style-type: none"> 1. Assess results of Phases 4 and 5 2. Adapt and Iterate

Step-By-Step Guide

The remainder of this guidebook will take you through the six phases to developing and implementing your HD LSMPA project (Table 2). The associated exercises and scenarios will encourage you to identify, analyze, and address the root causes of the most significant HD issues affecting the design and management of your LSMPA.

Phase 1: Baseline Assessment and Identification Of HD Issues

In this section, you will:

- Choose which HD consideration(s) to address in your HD LSMPA Project
- Develop your mission statement

63% of HDTT participants felt current HD research efforts are inadequate to support effective management of LSMPA

Phase 1 sets the stage for the management process to incorporate HD best practices into your LSMPA.

Baseline assessments are a necessary first step to ensuring a sustainable adaptive management process for your HD LSMPA project. A baseline assessment will reveal where HD efforts are needed most and why it is important to address them, while providing you with a mission for your efforts. It is important not to assume a project mission before assessing your HD issues and areas for improvement.

The baseline assessment also acts as a reference point for how to measure and evaluate your progress. Ensuring the assessment is conducted with care and considers essential HD considerations will increase your chances of project effectiveness.

Step 1: Identify what you already know

- Lay out all information you already know in relation to your LSMPA with the 7 HD considerations in mind
- Consider knowledge gaps in your information
- Begin to formulate conclusions and links to HD LSMPA issues

*To facilitate Step 1, ask yourself challenging and empirically-based questions for each of the 7 HD considerations. Complete **EXERCISE 1: Asking Fundamental Questions**.*

When responding, think about the extent to which the issue in question affects your LSMPA. Ask follow up questions: Are some issues more widespread than others? Do certain issues result in a greater negative effect than others? Results you draw from this exercise will reveal the extent of an HD issue and inform the following phases. If your responses to the questions reveal a gap you wish to fill, you may consider developing a HD LSMPA project to fill that gap.

Step 2: Choose methods for gathering and analyzing data

- » Consider what you have identified in **EXERCISE 1: Asking Fundamental Questions**. You may have some idea of current HD issues and how they affect each other and the LSMPA.
- » If you are very knowledgeable of the issue(s), their causes, and/or how these issues have an effect on your LSMPA, this activity may not be necessary and you may skip to Phase 1, Step 4: Prioritize Issues.
- » If you feel it is important to learn more about the extent of an HD issue(s) or uncover unknown or hidden HD issues, this activity is highly recommended.

In choosing the best method to collect HD data for your baseline assessment, consider what you already know, the questions you are trying to answer, the gaps you are trying to fill, and the challenges you may encounter (Refer to **SCENARIO: Baseline Assessment** and Draw from **EXERCISE 1: Asking Fundamental Questions**). This will inform the design of your baseline assessment.

You may wish to conduct quantitative surveys, qualitative interviews, or convene focus groups to gather baseline information of which HD consideration(s) need the most attention. It is important to remember that the goal of the baseline assessment is to inform *which HD consideration(s) to address in your HD LSMPA project*. Therefore, in designing methods to gather and analyze data, considering efficiency and effectiveness toward this goal is a priority.

Further Reading

For information on prioritizing which HD considerations (if any) to gather information on, refer to Pomeroy, Parks & Watson (2004: 15-18).

For information on selecting methods, refer to Margoluis & Salafsky (1998: 126) and Pomeroy, Parks & Watson (2004: 21-26).

Step 3: Gather data

Using your method(s) of choice, you will gather information on HD issue(s) in your LSMPA. Your ability to gather information may be hindered by budget, staff, time allotted, and stakeholders' willingness to participate.

In gathering your information, ensure that methods are robust and standardized. Following an ethical code of conduct is recommended in addition to being transparent with subjects on why this study is being conducted and what the intended outcomes are.

In choosing your method, gathering information, and analyzing your collected data, recall that this is a baseline evaluation, and should be treated as such. In Phase 4, you will monitor and evaluate your HD LSMPA project. This Phase will require more time and energy, as *this initial evaluation is simply intended to guide you in choosing the HD consideration(s) to address in your HD LSMPA project* and assist you in later defining your project's goals, objectives, and actions.

Further Reading

For information on applying methods, refer to Margoluis & Salafsky (1998: 156) and Pomeroy, Parks & Watson (2004: 27-31).

For information on analyzing data, refer to Margoluis & Salafsky (1998: 179) and Pomeroy, Parks & Watson (2004: 32-34).

Step 4: Prioritize issues

If you have identified multiple HD issues, you may or may not have the institutional capability to address all issues in your HD LSMPA project. Tackling all seven HD considerations is not advised against, but remember to consider your feasibility and issues specific to your site. Therefore, it is important to prioritize HD issues.

Draft a list of all issues from highest to lowest priority with explanations of the ranking and opportunities for improvement of the HD consideration. For this activity, draw from what you have learned in the **EXERCISE 1: Asking Fundamental Questions & SCENERIO: Baseline Assessment** to Complete **EXERCISE 2: Prioritizing Your HD Consideration(s)**.

If you initially decide to address multiple issues and later realize you cannot address all simultaneously, this list will come in handy. At that point, you can then adapt your management plan to address highest priority issues first, and others issues will come secondary. Similarly, you may choose to address only one issue now, and revisit this list when you are ready to address more.

It is recommended you treat this list as a living document. Priorities can change with time, and as you implement your project, you will adapt this list accordingly.

Further Reading

For information on ranking, refer to Margoluis & Salafsky (1998: 54) and Pomeroy, Parks & Watson (2004: 27-30).

Step 5: Choose HD Consideration(s) and define your project mission statement

Now that you have identified and prioritized HD issues and assessed capacity, you can now:

- Choose which HD consideration(s) to address
- Identify intended outcomes in incorporating the issue(s) into an HD LSMPA project
- Define your project mission statement

Recall that HD considerations overlap and even in addressing one, others will be affected. Keep this in mind when choosing your HD consideration(s) and realize that your project may address few HD considerations simultaneously.

Analyze your *explanation for your chosen HD consideration(s) and opportunities for improvement* to arrive at *intended outcomes* of your action plan. These *intended outcomes* are meant to address the issues you have identified and prioritized. Your mission statement embodies all conclusions you have arrived at thus far.

Refer to SCENERIO: Mission Statement and Complete EXERCISE 3: Developing Your Mission Statement. This exercise will draw from **Exercise 2**.

Your defined mission statement will lead you directly to **Phase 2: Develop HD LSMPA Project**

EXERCISE 1: Asking Fundamental Questions

The following baseline questions are intended to guide you through Phase 1 and provide insight into which HD issues you choose to explore. These questions should also be referred back to throughout the entirety of the adaptive management process to inform decision making and evaluation periods. The following is not an all-inclusive list and serve as examples.

The questions should be proposed internally and shared amongst your team. It is suggested you focus on the questions that are of the greatest concern for your LSMPA and seek those answers that will assist in prioritizing HD issues. It is suggested you take notes as you verbally address these questions with your team.

- Integration of Culture and Traditions**
 - Are traditional leaders consulted with before and during all management processes?
 - Was cultural access considered in LSMPA design?
 - Are indigenous people satisfied with their access rights to the LSMPA?
 - Do site managers have cultural knowledge and perspectives?
 - Does culture act as a driver of marine protection?
 - Are cultural taboos, religion, and traditions considered throughout LSMPA processes?
 - Is traditional ecological knowledge (TEK) and traditional management history taken into account in design and management?
 - Is there an established code of ethics to be followed in LSMPA research, design, and management? If not, is there a need for one?
 - How has established culture and tradition affected the support for the LSMPA and ocean protection in general?

- Effective Public and Stakeholder Engagement**
 - What is the nature of public and stakeholder engagement?
 - In what ways do public and stakeholder engagement affect the management process?
 - What mechanisms are in place to enhance or promote engagement?
 - What mechanisms are in place for community concerns to be heard?
 - Do local stakeholders promote the LSMPA?
 - Were all stakeholders involved from the get-go?
 - How are mis-matching of institutions and ideas amongst stakeholders addressed?
 - How has the inclusivity of all stakeholders shifted or changed since inception?
 - How has public understanding of the importance of the LSMPA developed and changed?
 - How do local stakeholders engage with the community? How do non-local stakeholders engage with the community?
 - Has the LSMPA been dubbed a paper park? Why, and by whom?
 - How does the desire to engage the public and stakeholders compare with the reality of engagement?
 - Are there youth engagement programs associated with the LSMPA?
 - Are there citizen science programs associated with the LSMPA?
 - How often are community meetings held? What are the results of these meetings and subsequent actions taken?
 - Are there established stakeholder partnerships and/or networks, including those involved in tourism, education, fisheries, religion & culture, sports, etc.? How successful are these partnerships and how are they organized?
 - What are LSMPA goals within stakeholder groups? How do LSMPA goals overlap or diverge for different stakeholder groups?

- Are there prominent figures within the community associated with the LSMPA, and how are these individuals perceived?
- What type of media outreach does the LSMPA have?
- Maintenance of Livelihoods and Wellbeing**
 - How has food security changed since LSMPA implementation, and how has LSMPA management responded?
 - Are livelihoods threatened by changing ecosystem conditions?
 - How has overall mental, spiritual, physical, and emotional health changed as a result of the LSMPA?
 - How have those impacted by the LSMPA benefited or suffered mentally, spiritually, emotionally, and/or physically?
 - How has overall wellbeing of communities shifted as a result of the LSMPA?
 - How complete is community participation in LSMPA design, management and related activities?
 - How complete is the volunteer-level participation?
 - What is the level of LSMPA pride within the youth community, and within the adult community? How can differences in pride be explained?
 - How do local benefits resulting from the LSMPA compare with non-local benefits?
 - Is fear used as a major mechanism to enforce?
 - How might management actions be taken to improve the social benefits of the LSMPA?
- Promotion of Economic Sustainability**
 - How has the community's ability to grow economically shifted?
 - Is there substantial displacement of small-scale and subsistence fishers?
 - Is the LSMPA sustainably financed? How are funds prioritized and allocated?
 - How much of an emphasis is put on short-term economic gains?
 - How are costs of implementation and management balanced with short-term and long-term benefits (social, economic, environmental)?
 - How are costs and benefits distributed, and how have they changed over time?
 - How diverse and reliable are funding sources?
 - How are funders impacting the design and management of the LSMPA?
 - What mechanisms, and how many, are in place to promote sustainable financing for the site?
 - Is there a developed understanding of the long-term economic impacts of current management practices?
 - Is lost revenue being replaced in a just and fair way?
 - Is ability to enforce (technology, human capital) compromised or limited? If so, how and why?
 - Are there alternative and available sources of income to substitute displaced fisherman?
 - How has unemployment rate and average household income changed as a result of the LSMPA?
 - What partnerships are in place to reduce and share costs?
 - Economically speaking, who is most positively affected by the LSMPA, and who is most negatively affected? How are the negatively affected groups compensated?
- Conflict Management and Resolution**
 - What conflicts have arisen throughout design and management processes?
 - Have new organizational arrangements at institutional and individual levels led to new conflict? How has this affected the LSMPA?
 - Are most disputes or areas of conflict predictable?

- How have conflicts been addressed and/or settled?
- How prepared is LSMPA management to deal with disputes?
- Is there local resistance to perceived LSMPA management agendas?
- Is there continued and interruptive conflict over management practices?
- Is a body and process for regulating and resolving conflicts necessary for the success of the LSMPA?
- How have power hierarchy issues been addressed?
- How have conflicts among stakeholders affected the LSMPA?
- How much wasted time, energy, and money is spent on resolving disputes?
- How much trust exists between stakeholders?
- How does government (in)stability affect the ability to agree and implement?

- Legitimate and Appropriate Governance**
 - Are governing systems effectively monitoring and enforcing the LSMPA?
 - What governance processes are available and what do they allow for?
 - How often and which decisions are made through participatory agreements between multiple parties?
 - How often and which decisions are made through top-down processes with little stakeholder engagement?
 - How have top-down and bottom-up governance interacted to affect LSMPA governance?
 - Has co-management been attempted, and if so, how has it impeded or supported LSMPA governance?
 - How has mis-matching of ideas and institutions affected the ability to govern and enforce the LSMPA?
 - How much community support is there for the political leadership?
 - How has political instability or change of governance affected LSMPA governance?
 - How transparent are governance authorities?
 - How has political will, legal mechanisms, and social compatibility affected the ability to effectively enforce LSMPA policy?
 - How does social trust interact with rule enforcement?

- Social Justice and Empowerment**
 - How even is the distribution of benefits and costs to stakeholders?
 - How is power distributed in design and management processes, and who is the power distributed between?
 - What is the distribution of benefits and costs amongst locals versus non-locals?
 - Does the LSMPA instill a sense of pride in the local community?
 - How (or how not) has the LSMPA brought global visibility to the local communities, and how (or how not) has this affected the community?
 - How has the local community grown closer as a result of the LSMPA?
 - What tradeoffs have been made in design and management processes? How have these tradeoffs been justified?
 - Does the LSMPA employ a variety of education efforts that empower youth and adults of diverse backgrounds?
 - How has sense of place been affected by the LSMPA?
 - How is environmental health valued within the community?

The following figure depicts two hypothetical LSMPAs, which this guidebook will follow throughout to depict certain Phases and Steps.

Scenario A: Hai Islands	Scenario B: Isabelle Islands
<p>Management has closed the entire Hai Islands LSMPA to commercial fishing. Fishermen and their families are expressing their anger with demonstrations and campaigns. Average household income has gone down since inception.</p> <p>Stakeholders are unhappy as they are suffering economically from the closure of commercial fisheries. Informed from the current situation, as well as the answers to the questions asked in Exercise 1, the managers conclude that HD Consideration: Economic Sustainability is highest priority to address with their HD LSMPA project. Therefore, no baseline assessment is needed. Managers can skip to Phase 1, Step 4.</p> <p>Note that other HD issues, including Conflict Management & Resolution, and Livelihood & Wellbeing are also represented. HD issues naturally overlap.</p>	<p>The long chain of the Isabelle Islands LSMPA was established three years ago. With establishment came an increase in tourism to the main islands, but a decrease in access to the outer islands containing historical and cultural significance. Management has restricted access to these unpopulated outer islands to increase biodiversity and decrease human-related pressures.</p> <p><i>What should managers do?</i></p> <p>There are no outstanding indicators that the change in access has negatively affected stakeholders or the community. As it is important not to assume HD issues, HD considerations should be explored further. Therefore, managers complete Exercise 1 and conduct a baseline assessment to identify HD considerations to be addressed in their HD LSMPA project.</p> <p>Managers of the Isabelle Islands LSMPA may wish to conduct an island-wide survey or hold a community meeting to reveal if and how stakeholders could benefit by re-opening access to outer islands.</p> <p>The important question here is how the LSMPA can provide added benefits to stakeholders while remaining true to environmental goals. This is a common question in HD LSMPA management. In order to arrive at an answer, managers must first uncover if, why, and how stakeholders are negatively impacted as a result of LSMPA design and management.</p>

Figure 3: SCENERIO: Baseline Assessment

EXERCISE 2: Prioritizing Your HD Considerations

Fill in the following as part of Step 4 of your baseline assessment: Prioritizing HD Considerations. This exercise is a product of your conclusions resulting from **Exercise 1: Ask Yourself Fundamental Questions**, and the remainder of your baseline assessment.

This guidebook recommends you attempt to rank all 7 HD Considerations by order of importance to address in your HD LSMPA project. The impact of HD Considerations on your LSMPA is always changing, especially when implementing an HD LSMPA project. Therefore, this exercise is intended to be treated as a living document, referred back to, and revised regularly as you develop and implement your HD LSMPA project.

RANK 1:

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

RANK 2:

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

RANK 3:

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

RANK 4:

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

RANK 5:

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

RANK 6:

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

RANK 7:

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

Scenario A: Hai Islands

HD CONSIDERATION(S): Promotion of Economic Sustainability & Maintenance of Livelihood and Wellbeing

WHY: Average household income has gone down and fishermen are angry.

EXPLANATION: Economic sustainability, livelihoods, and wellbeing are at stake. Anger about zoning will lead to increased IUU. Enforcement will need to be leveraged.

OPPORTUNITIES FOR IMPROVEMENT:

- 1) Reconsider zoning for commercial no-take
- 2) Offer compensation or assistance into other existing job markets
- 3) Create new job markets that are easily adoptable for the masses

INTENDED OUTCOMES OF PROJECT:

Fishermen are satisfied with LSMPA rules and regulations, economic sustainability is achieved, and unemployment decreases.

MISSION STATEMENT:

The project seeks to consider fishermen's livelihoods in LSMPA design and management with the goal to promote economic sustainability within the fishing community without sacrificing ecological objectives.

Scenario B: Isabelle Islands

HD CONSIDERATION(S): Integration of Culture and Traditions & Social Justice and Empowerment

WHY: Island-wide survey revealed that indigenous communities feel it is unjust to deny them access to the outer islands, an area of historical and cultural significance.

EXPLANATION: Lack of consideration may lead to a dissolution of culture, including traditions and customs, discourage cultural pride, and decrease community support in the LSMPA.

OPPORTUNITIES FOR IMPROVEMENT:

- 1) Reconsider zoning regulations
- 2) Adopt new cultural programs
- 3) Create mechanisms to empower indigenous communities

INTENDED OUTCOMES OF PROJECT:

Culture and tradition is integrated into management, and indigenous communities feel empowered by the LSMPA.

MISSION STATEMENT:

The project seeks to consider culture and tradition in design and management to ensure indigenous communities' values are represented and these communities are empowered by the LSMPA.

Figure 4: SCENERIO: Mission Statements

EXERCISE 3: Developing Your Mission Statement

Fill in the following and refer back as you develop your HD LSMPA project. Refer to **SCENARIO: Mission Statement** to help guide you through the necessary steps to developing your mission statement.

Recall that your mission statement should embody all conclusions you have arrived at thus far, and should describe what your project seeks to accomplish in a general sense. The mission statement is intended to act as the framework that your project is built upon. The exercise below should be referred back to regularly as you develop and implement your HD LSMPA project. This will help to ensure your HD LSMPA project remains in line with your fact-based mission statement.

HD CONSIDERATION(S):

EXPLANATION:

OPPORTUNITIES FOR IMPROVEMENT:

INTENDED OUTCOMES OF PROJECT:

MISSION STATEMENT:

Phase 2: Develop HD LSMPA Project

In this section, you will: Define the goals, objectives, and actions of your HD LSMPA project

Now that you have completed Phase 1 and have arrived at a mission statement, it is time to develop your HD LSMPA project.

A well-developed project is based on local conditions, sound data and information, considers major direct and indirect threats, presents only relevant factors, and is a team effort (Margoluis & Salafsky, 1998).

Your HD LSMPA project should be guided by the above conditions, based on the results of your baseline evaluation, and informed by the exercises you have completed in the previous section.

Step 1: Establish your HD management team

Your management team dedicated to your HD considerations will carry out the HD LSMPA project for many years to come. Therefore, your management team should consist of individuals who have already shown success in working together. The team should hold similar values and be representative of the LSMPA community as a whole.

Once established, the management team may wish to adopt partners for collaboration. Encourage potential collaborators to share their interests, views, and priorities with one another. Discussing similarities and differences in partners' visions will help to inform the feasibility and effectiveness of a possible collaboration. Collaboration between two or more stakeholder groups is possible, and possibly recommendable, when overlap of visions exists (see Figure 5).

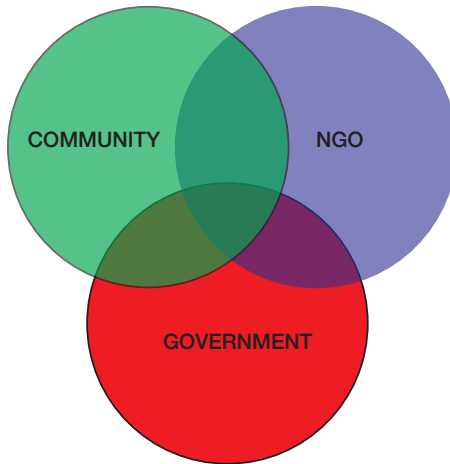


Figure 5: Collaboration Diagram (Margoluis & Salafsky, 1998: 21)

Step 2: Define goals, objectives, and actions

- » Consider the HD issues you have chosen to focus on and recall your mission statement. For now, disregard those HD issues you have chosen not to address due to feasibility or practicality.
- » Review your mission statement. Once again, ensure your mission statement represents your chosen HD consideration(s), addresses opportunities for improvement, and embodies intended outcomes of your HD LSMPA project. Your mission statement should be heavily relied upon when defining goals, objectives, and actions.
- » Define goals, objectives, and actions.

Your HD LSMPA project will be guided by three components: goals, objectives, and actions. These components will make up your action plan summary, which will create the foundation for your adaptive management process. Your action plan summary will act as a reference point to measure your HD LSMPA project progress.

A goal is

A general summary of the desired state that a project is working to achieve.

Goals should be *visionary, relatively general, brief, and measurable* (Margoluis & Salafsky, 1998).

Objectives are

Specific statements detailing the desired accomplishments or outcomes of a project.

If the project is well conceptualized and designed, realization of a project's objectives should lead to fulfillment of the project's goal. Objectives should be *impact-oriented, measurable, time-limited, specific, and practical* (Margoluis & Salafsky, 1998).

Actions are

Specific actions or tasks undertaken by project staff designed to reach each of the project's objectives. Actions are process-oriented, unlike objectives.

Actions should be *feasible, appropriate, focused, and linked* to its objectives (Margoluis & Salafsky, 1998).

Complete **EXERCISE 4: Testing Your Knowledge (goals, objectives, and actions)** to gain a greater understanding of how goals, objectives, and actions take shape.

You are now ready to define your HD LSMPA project's goals, objectives, and actions.

Refer to **SCENARIO: Goals, Objectives, and Actions** & Complete **EXERCISE 5: Defining Your Goals, Objectives and Actions**

When completing **EXERCISE 5**, remember to draft goals, objectives, and actions that link directly to your chosen HD consideration(s) and mission statement and draw directly from previous exercises. A goal, objective, or action can embody more than one HD consideration, though you may choose to separate objectives or actions by HD consideration. Your decision should be dependent on how your considerations interact with one another and how you envision the implementation of your HD LSMPA project.

Consult with your management team and any collaborating partners when designing the goals, objectives, and actions of your HD LSMPA project. During this exercise, it is also important to write down details to help explain the reason behind the chosen goals, objectives, and actions. These details should draw from and elaborate on **EXERCISE 3: Developing Your Mission Statement**. Your detailed notes will assist your team in understanding why your project takes a specific form. Details may include challenges or threats to the project, financing information, assumptions and expectations, and outstanding questions you hope to answer.

Don't assume your baseline information and subsequent exercises are sufficient for informing this activity. It is therefore recommended that you share this document (**EXERCISE 5**) with partners, stakeholders, and the public for feedback. Edit your goals, objectives, and actions based on feedback. This exercise will also come in handy when adapting your plan. You will want to reference these detailed notes to remind yourself and your team of why you made the choices you did and then adapt accordingly.

At the completion of **Phase 2: Define your HD LSMPA Project**, you should have determined one goal, linked to one or more objectives. For each objective, you should have designated two or more actions.

The products of this phase should not be forgotten about. Treat **EXERCISE 5** as a living document with your mission statement acting as its anchor. Your goals, objectives, and actions along with their written details are informed from activities undertaken in **Phase 1: Baseline Assessment & Identification of HD Issues**. These three components should be constantly referred back to as you implement your project, and as your actions become regularly occurring practices at your site.

Further Reading

For information on goals, objectives, and actions, refer to (Margoluis & Salafsky, 1998: 60-82) and (Pomeroy, Parks & Watson, 2004: 6).

EXERCISE 4: Testing Your Knowledge (goals, objectives, and actions)

Below are examples of well-designed and poorly-designed goals, objectives, and actions. Choose the ones you believe best fit the criteria for well-designed goals, objectives, and actions. This exercise will help to prepare you to define your HD LSMPA project's goals, objectives, and actions, derived from your baseline assessment and subsequent mission statement.

Recall:

Goals should be *visionary, relatively general, brief, and measurable*.

Objectives should be *impact-oriented, measurable, time-limited, specific, and practical*.

Actions should be *feasible, appropriate, focused, and linked to its objectives*

(Margoluis & Salafsky, 1998).

Review answers on page 33.

Goals:

- A. Integration of Culture and Traditions - To ensure the inclusion of cultural identity and practices.
- B. Effective Public and Stakeholder Engagement - To engage all stakeholders in meaningful roles and encourage public participation.
- C. Maintenance of Livelihoods and Wellbeing - To increase food security among 75% of the population.
- D. Promotion of Economic Sustainability - To ensure economically viable options are available and easily transferable for displaced fishermen.
- E. Conflict Management and Resolution - To reduce overall conflict.
- F. Legitimate and Appropriate Governance - To encourage legitimate and appropriate governance by improving connections between formal and non-formal governance systems and international and national laws.
- G. Social Justice and Empowerment - To reduce social disenfranchisement, disempowerment, and injustice by increasing social safeguards and ensuring basic human rights.

Objectives:

- A. Integration of Culture and Traditions - By the end of the second year, have an established program for indigenous community members to learn about, contribute to, and visit marine areas of cultural significance.
- B. Effective Public and Stakeholder Engagement - Engage all stakeholders in an online forum.
- C. Maintenance of Livelihoods and Wellbeing - In three years, provide fishermen with three alternatives that benefit their livelihoods and wellbeing.
- D. Promotion of Economic Sustainability - Decrease unemployment by 5% in the next three years.
- E. Conflict Management and Resolution - Within 6 months, measurably reduce conflict between stakeholders.
- F. Legitimate and Appropriate Governance - Increase funding to enforcement by 15% in two years and improve enforcement related technology in three years.
- G. Social Justice and Empowerment - In one year, empower all local youth.

Actions:

- A. Integration of Culture and Traditions – Work with local schools to establish a scholarship program to send indigenous youth to areas of cultural significance for a week long education program.
- B. Effective Public and Stakeholder Engagement - Hold stakeholder consultation meetings.
- C. Maintenance of Livelihoods and Wellbeing - Provide out-of-work fishermen with career training and placement programs to encourage and facilitate appropriate career transfer.
- D. Promotion of Economic Sustainability - Provide unemployment salary for all unemployed as a result of the LSMPA.
- E. Conflict Management and Resolution - Provide a platform for conflict resolution during stakeholder consultation meetings and hire a conflict resolution specialist to assist the process.
- F. Legitimate and Appropriate Governance - Create a volunteer citizen-science program for anonymously reporting IUU to supplement paid enforcers.
- G. Social Justice and Empowerment - Provide locals with opportunities to express support for the LSMPA.

Answers:

Goals:

- A. Integration of Culture and Traditions: To ensure the inclusion of cultural identity and practices. **CORRECT**
- B. Effective Public and Stakeholder Engagement - To engage all stakeholders in meaningful roles and encourage public participation. **CORRECT**
- C. Maintenance of Livelihoods and Wellbeing - To increase food security among 75% of the population.
INCORRECT. This goal is too specific.
Revision: To increase food security among the general population.
- D. Promotion of Economic Sustainability - To ensure economically viable options are available and easily transferable for displaced fishermen. **CORRECT**
- E. Conflict Management and Resolution - To reduce overall conflict.
INCORRECT. This goal is not very visionary and would be difficult to measure.
Revision: To reduce conflict and increase transparency by building trust and understanding among diverse stakeholders.
- F. Legitimate and Appropriate Governance - To encourage legitimate and appropriate governance by improving connections between formal and non-formal governance systems and international and national laws.
INCORRECT. This goal is does not meet the standards of being visionary, general and brief.
Revision: Implement governance mechanisms that build trust, buy-in, respect, and support for management.
- G. Social Justice and Empowerment - To reduce social disenfranchisement, disempowerment, and injustice by increasing social safeguards and ensuring basic human rights. **CORRECT**

Objectives:

- A. Integration of Culture and Traditions - By the end of the second year, have an established program for indigenous community members to learn about, contribute to, and visit marine areas of cultural significance. **CORRECT**
- B. Effective Public and Stakeholder Engagement - Engage all stakeholders in an online forum.
INCORRECT. This objective does not meet the standards of measurable, time-limited, and specific.
Revision: In one year, create an online forum and discussion board to engage stakeholders, resulting at least 50% local stakeholder participation.
- C. Maintenance of Livelihoods and Wellbeing - In three years, provide fishermen with three alternatives that benefit their livelihoods and wellbeing. **CORRECT**
- D. Promotion of Economic Sustainability - Decrease unemployment by 5% in the next three years. **CORRECT**

E. Conflict Management and Resolution - Within 6 months, measurably reduce conflict between stakeholders.

INCORRECT. This objective is not measurable or specific.

Revision: In six months, reduce number of documented conflicts by 10%.

F. Legitimate and Appropriate Governance - Increase funding for enforcement by 15% in two years and improve enforcement related technology in three years. **CORRECT**

G. Social Justice and Empowerment - In one year, empower all local youth.

INCORRECT. This objective is not measurable or specific.

Revision: In one year, implement an education program to empower youth ages 10-18 years in 25% of schools.

Actions:

A. Integration of Culture and Traditions - Work with local schools to establish a scholarship program to send indigenous youth to areas of cultural significance for a week long education program. **CORRECT**

B. Effective Public and Stakeholder Engagement - Hold stakeholder consultation meetings. **INCORRECT.** This action is not focused.

Revision: Hold stakeholder consultation meetings bi-monthly to discuss latest LSMSPA updates and provide volunteer opportunities.

C. Maintenance of Livelihoods and Wellbeing - Provide out-of-work fishermen with career training and placement programs to encourage and facilitate appropriate career transfer. **CORRECT**

D. Promotion of Economic Sustainability - Provide unemployment salary for all unemployed as a result of the LSMSPA.

INCORRECT. This action is not feasible.

Revision: Provide out-of-work fishermen who join career-transfer programs with a 3 month stipend derived from LSMSPA-related income.

E. Conflict Management and Resolution: Provide a platform for conflict resolution during stakeholder consultation meetings and hire a conflict resolution specialist to assist in the process. **CORRECT**

F. Legitimate and Appropriate Governance - Create a volunteer citizen-science program for anonymously reporting IUU to supplement paid enforcers. **CORRECT**

G. Social Justice and Empowerment - Provide locals with opportunities to express support for the LSMSPA.

INCORRECT. This action is not specific or focused.

Revision: Create a 'LSMPA Day' holiday for locals to celebrate the LSMSPA, integrate traditions and local talent, and provide opportunities for fundraising, engagement and community volunteering in relation to the LSMSPA.

Scenario A: Hai Islands

MISSION STATEMENT:

The project seeks to consider fishermen's livelihoods in LSMPA design and management with the goal to promote economic sustainability within the fishing community without sacrificing ecological objectives.

GOAL: To increase economic sustainability within the fishing community.

OBJECTIVE: In three years, provide fishermen with three established programs that benefit their livelihoods and wellbeing and increase their economic sustainability.

ACTION 1: Hold bi-monthly community meetings to encourage engagement, integrate input, and create a platform for compromise.

ACTION 2: Provide out-of-work fishermen with career training and placement programs to encourage and facilitate appropriate career transfer.

ACTION 3: Provide out-of-work fishermen who join career-transfer programs with a 3-month stipend derived from LSMPA-related income.

Scenario B: Isabelle Islands

MISSION STATEMENT:

The project seeks to consider culture and tradition in design and management to ensure indigenous communities' values are represented and these communities are empowered by the LSMPA.

GOAL: To empower indigenous communities and integrate culture into the LSMPA.

OBJECTIVE: By the end of the second year, have an established program for indigenous community members to learn about, contribute to, and visit marine areas of cultural significance.

ACTION 1: Redesign zoning to allow those of indigenous descent visit marine areas of cultural significance.

ACTION 2: Work with local schools to establish a scholarship program to send indigenous youth to areas of cultural significance for a week long education program.

ACTION 3: Create a curriculum to educate youth ages 10-18 on the cultural significance and interlinkages of culture and environment and implement the program in all public schools.

Figure 6: SCENERIO: Goals, Objectives, and Actions

EXERCISE 5: Defining Your Goals, Objectives and Actions

Complete this detailed action plan summary. Allow what you've learned from **EXERCISE 4: Testing Your Knowledge** and **SCENARIO: Goals, Objectives, and Actions** to guide you.

Even if you are not ready, this is a good brainstorming exercise to take on. This exercise can be edited and refined any number of times you wish before you arrive at a final action plan summary. Recall that you may wish to create more than one objective for HD consideration(s). If this is the case, adapt this worksheet accordingly.

This final document will serve as the direct result of your baseline assessment and follow your mission statement. This exercise is necessary to guiding the implementation of your HD project and should be referred to throughout implementation to ensure your actions are in line with your plan.

Recall:

Goals should be *visionary, relatively general, brief, and measurable*.

Objectives should be *impact-oriented, measurable, time-limited, specific, and practical*.

Actions should be *feasible, appropriate, focused, and linked to its objectives*.

(Margoluis & Salafsky, 1998)

MISSION STATEMENT:

GOAL:

DETAILS:

OBJECTIVES:

DETAILS:

ACTION 1:

DETAILS:

ACTION 2:

DETAILS:

ACTION 3:

DETAILS:

Phase 3: Implement HD LSMPA Project

In this section, you will:

- Develop your implementation plan
- Initiate, expand, and continue implementation

Once you have completed the above phases and have developed your action plan summary, it is time to enter the implementation phase of your HD LSMPA project. Recall that the success of your HD LSMPA project is defined by your ability to meet your goal and objective(s) through implementation of your actions as defined in the previous phase.

Implementation is an ongoing, modifiable process that occurs simultaneously with **Phase 4: Monitor and Evaluate**, **Phase 5: Disseminate Information**, and **Phase 6: Adapt**. Therefore, you will remain in implementation phase for the remainder of your project. The following four steps provide insight into the long-term implementation of your HD LSMPA project.

Step 1: Develop Implementation Plan

An implementation plan strategically lays out the timeline and activities for implementing a project's actions. In order to develop your implementation plan, you must first decide on your timeline associated with your actions. This timeline will differ based on your budget, staff, project progress, and how you define progress.

The timeline will also differ for each action of your implementation plan. You may wish to implement all actions at once or stagger their implementation. This will also be defined by your budget, capacity, and project priorities. Dependent of timeline, actions should align in order to achieve your goal and objective(s).

The following steps will be integrated into your implementation plan. This plan will outline this phase in entirety, from initial implementation to ongoing implementation. It is advised you become familiar with these steps as a whole before completing the exercise at the end of this chapter.

After reviewing Phase 3 in entirety, refer to **SCENARIO: Implementation Plan** and complete **EXERCISE 5: Developing Your Implementation Plan**.

Recall that the scenario represents hypothetical projects and timelines intended to guide you through **EXERCISE 5**. For brevity, this scenario depicts the timeline for only one action and includes a subset of the detail you may wish to include in your implementation plan. To facilitate learning, it is assumed how the projects will adapt.

Step 2: Initial Implementation

Initial implementation includes both the exploratory phase and the launch of your HD LSMPA project.

Exploratory Phase:

Exploratory phase includes any additional tasks you may need to complete followed by initial testing of your project. Tasks may include collecting additional information to inform your project or identifying individuals to implement specific activities.

After completing additional tasks, it is recommended you test your project before launching. This is often referred to as a 'soft launch' or 'trial-run'. Depending on your project, you may wish to conduct focus groups, test a randomized sample of the population you wish to affect, or present the project to a selected audience.

Testing will allow for a period of feedback to be considered prior to the launch of your project. This feedback should be considered, evaluated, and integrated into your HD LSMPA project. A 'soft launch' can also act as a way to communicate the upcoming project launch and instill excitement within the community. Note that the ability and necessity to conduct a 'soft launch' is dependent upon the project.

HD LSMPA project launch:

The full-scale launch of your HD LSMPA project also marks the official launch of **Phase 4: Monitor and Evaluate**, **Phase 5: Disseminate Information**, and **Phase 6: Adapt**.

Early in your implementation, you will draft your monitoring strategy (see **Phase 4**) and communicate your HD LSMPA project launch with the public (see **Phase 5**). You will most likely also come across obstacles or uncover new ways to progress your project. As this occurs, you will refine and adapt certain aspects of your implementation plan accordingly (see **Phase 6**).

Step 3: Expansion

Remember that your plan or project will not be perfect in the beginning, and it will take time to refine and adapt action specifics in order to accomplish your goal(s) and objective(s). Do not forget your reasons behind your action plan and refer to your completed exercises often.

The expansion of your plan may represent a development in your project or an increase in size, area, or population affected. In order to expand your project, you must first monitor and evaluate the current project to identify if and how the project should be expanded. Monitoring and Evaluation will provide insight into the success of your LSMPA project and works to close the loop, connecting implementation with adaptation. This concept will be further explored later in this guidebook.

Step 4: Ongoing Implementation

It is possible that implementation will continue for years after your goal, objective(s), and actions are achieved. In Ongoing Implementation, there is continued opportunity to adjust, improve and expand your project in sync with **Phase 4: Monitor and Evaluate**, **Phase 5: Disseminate Information**, and **Phase 6: Adapt**.

Scenario A: Hai Islands

GOAL: To increase economic sustainability within the fishing community.

OBJECTIVE: In three years, provide fishermen with three established programs that benefit their livelihoods and wellbeing and increase their economic sustainability.

ACTION 2: Provide out-of-work fishermen with career training and placement programs to encourage and facilitate appropriate career transfer.

IMPLEMENTATION PLAN:

Initial Implementation (Month 1 – Year 1):

Exploratory Phase:

Conduct community-wide census to determine the number of unemployed fishermen and the job markets most appropriate to shift into.

Conduct community-wide survey to determine who and how many people will take part in these programs.

Hire a contractor to develop the career training and placement programs.

Hire and train a program lead and program manager.

Test 3-week pilot programs among a sample group.

Convene a focus group to collect feedback.

Adjust program based on feedback.

Launch:

Programs are operational within the community.

Communicate launch with public.

Expansion (Year 1 – Year 3):

Ongoing monitoring and evaluation.

Ongoing communication with the public.

Adapt program accordingly.

Expand program to reach bordering coastal communities.

Expand program to reach young adults and train them to enter lucrative jobs markets consistent with the LSMPA regulations (e.g. tourism, environmental management, policy, science, education, business).

Ongoing adaptation.

Ongoing Implementation (Year 3 – Ongoing):

Ongoing monitoring and evaluation.

Ongoing communication with the public.

Ongoing adaptation (adjustment, expansion, or improvement)

Scenario B: Isabelle Islands

GOAL: To empower indigenous communities and integrate culture into the LSMPA.

OBJECTIVE: By the end of the second year, have an established program for indigenous community members to learn about, contribute to, and visit marine areas of cultural significance.

ACTION 1: Redesign zoning to allow those of indigenous descent visit marine areas of cultural significance.

IMPLEMENTATION PLAN:

Initial Implementation (Month 1 – Year 1):

Exploratory Phase:

Consult with traditional and culture leaders.

Conduct community survey to determine which areas locals wish to have access to, and for what purposes (spiritual or religious, educational, enjoyment).

Collect and analyze results and feedback.

Develop a plan for when, how, and who access will be open to.

Redraft and pass regulation to re-open this area for 3 months of the year.

Launch:

Access to specified areas of cultural access is open under pre-determined conditions.

Communicate launch with public.

Expansion (Year 1 – Year 2):

Ongoing monitoring and evaluation.

Ongoing communication with the public.

Adapt program accordingly.

Redraft regulation to re-open this area for 5 months of the year.

Ongoing adaptation.

Ongoing Implementation (Year 2 – Ongoing):

Ongoing monitoring and evaluation.

Ongoing communication with the public.

Ongoing adaptation (adjustment, expansion, or improvement)

Figure 6: SCENARIO: Implementation Plan

EXERCISE 6: Developing Your Implementation Plan

Your implementation plan will act as the roadmap to achieving your goal, objective(s), and actions. When completing this exercise, consult with your team and any collaborators, and remember that there will be regular opportunity to adapt and refine this plan.

GOAL:

OBJECTIVE:

ACTION 1:

INITIAL IMPLEMENTATION: (month, year - month, year)
DETAILS:

EXPANSION: (month, year - month, year)
DETAILS:

ONGOING IMPLEMENTATION: (month, year - month, year)
DETAILS:

ACTION 2:

INITIAL IMPLEMENTATION:(month, year - month, year)
DETAILS:

EXPANSION:(month, year - month, year)
DETAILS:

ONGOING IMPLEMENTATION:(month, year - month, year)
DETAILS:

ACTION 3:

INITIAL IMPLEMENTATION:(month, year - month, year)
DETAILS:

EXPANSION:(month, year - month, year)
DETAILS:

ONGOING IMPLEMENTATION:(month, year - month, year)
DETAILS:

Phase 4: Monitoring And Evaluation

In this section, you will:

- Develop your monitoring strategy
- Monitor and evaluate

In Phase 4 you will measure and assess how your HD LSMPA project is progressing according to your goal, objective(s), and actions.

This phase often tends to be overlooked, yet it is of utmost importance in practicing adaptive management. Historically, marine and environmental projects have looked to biophysical monitoring and evaluation more so than social science monitoring and evaluation. As previously stated, human dimensions and the environment are inherently connected and both must be evaluated to determine LSMPA success. Therefore, human dimensions progress within your LSMPA cannot be assumed and will require the same attention to monitoring and evaluation that any biophysical project may require.

Monitoring and Evaluation allows us to understand benefits, costs, and changes over time to provide insight on project progress and inform management. This phase provides perspective, lessons learned, informs communication, and is to be utilized when adapting your project in **Phase 5: Adapt**.

As with implementation, monitoring and evaluation is an ongoing, adaptive process. This phase consists of three steps to be *performed alongside implementation*, and should occur at different levels (local, national, and global if possible).

Step 1: Develop monitoring strategy, monitoring indicators, and monitoring methods

In order to begin monitoring for HD LSMPA progress, you must first develop your **monitoring strategy**, which will inform your chosen **indicators and monitoring methods**. For each objective, you should develop at least one monitoring strategy, linked at least one indicators, and at least one methods.

Monitoring Strategies define how you will assess project progress or change, determines indicators, and is implemented through your monitoring method(s).

Monitoring Indicators are what you intend to monitor in order to collect information.

Indicators should be:

Measurable: able to be recorded and analyzed

Precise: both accurate and reliable

Consistent: measurable over time

Sensitive: changes proportionately in response to condition changes

(Margoluis and Salafsky, 1998).

Your monitoring indicators should be based on your project actions. In developing monitoring indicators, consider how you will assess those indicators to draw conclusions. These conclusions will influence how you adapt your project. Your chosen indicators will also determine the monitoring methods you choose to use.

Monitoring Methods are the means used to measure your indicators.

Methods should be:

Precise: accurate, reliable, and repeatable

Cost-effective: considering the trade-off between precise data collection and resources available for that collection

Feasible: considering the trade-off between simple and complex data collection

Appropriate: both culturally and socially in the local setting

You should develop at least one monitoring method per indicator, though multiple monitoring methods may help to further inform analysis. It is encouraged you utilize both qualitative and quantitative methods, though consider your capacity. Also consider capacity when deciding how many indicators you wish to monitor for. If you do not have the capacity to monitor for all indicators at first, it is recommended you prioritize based on your ability to adapt and influence positive change. It is also recommended you have an adequate sample size and randomized samples when appropriate (for example when using quantitative surveys), though this may be dependent on the objective you are monitoring for.

Examples of monitoring methods:

Formal quantitative survey

Formal qualitative survey

Key informant interviews

Direct observation

Participant observation

Focus groups

Mapping

Policy analysis

Secondary source analyses (news articles, social media patterns)

Reviewing the previous exercises you have completed in this guidebook will help in defining your monitoring strategies and identifying indicators and methods. Your monitoring strategies should link directly to your HD LSMPA project objective(s) and actions, address your project's intended outcomes and opportunities for improvement, and align with your implementation plan.

Refer to SCENARIO: Monitoring & Complete **EXERCISE 7: Developing your monitoring strategies, indicators and methods**

Recall this is a hypothetical scenario and as with the implementation plan, the monitoring strategy depicted represents only a subset of the detail that you may wish to have in your monitoring strategies.

Further Reading

For information on monitoring strategy, indicators, and methods, refer to Margoluis & Salafsky (1998: 83-178) and Pomeroy, Parks & Watson (2004: 15-26).

Step 2: Monitor for indicators

Once you have developed your monitoring strategies, selected indicators, and chosen methods, you may begin monitoring for project progress or change. You should have a designated team responsible for managing the monitoring process and collecting the data.

Social science project monitoring strategies will typically involve human subjects and require interactive data collection. Therefore, your designated team should develop a code of conduct, or a set of rules for ethical behavior. Codes of conduct encourage respect for cultural, spiritual, and religious sensitivities and taboos when interacting with human subjects and sharing information about subjects.

Further Reading

For information on monitoring, refer to Pomeroy, Parks & Watson (2004: 27-29).

For information on codes of conduct, refer to Bennett et al. (2017).

Step 3: Analyze and evaluate data

You should have a designated team responsible for managing the analysis and evaluation process. This team may or may not be the same team that oversees monitoring. Recall that monitoring and evaluation is an ongoing process, and it is recommended Step 2 and Step 3 occur simultaneously in ongoing implementation.

Allow considerable time to analyze and evaluate the data you have collected. When evaluating your data, be sure to ask yourself what the results say about the progress of your LSMPA project. Question the nature of your results in an attempt to uncover how correlated your results are to your HD LSMPA project. Analyze how the results of multiple monitoring strategies relate to one another, and ask yourself if indicators directly or indirectly affect each other, or if the two operate independently.

It is important that conclusions and the nature of your conclusions are understood by all involved on your project team. Being able to describe and explain your results, and their relation to HD LSMPA project intervention, is important in moving forward to **Phase 5: Disseminate Information** and **Phase 6: Adapt**.

Further Reading

For information on analysis, refer to Margoluis & Salafsky (1998: 179-206) and Pomeroy, Parks & Watson (2004: 31-35).

Scenario A: Hai Islands	Scenario B: Isabelle Islands
<p>MONITORING STRATEGIES, INDICATORS, AND METHODS:</p> <p>OBJECTIVE: In three years, provide fishermen with 3 established programs that benefit their livelihoods and wellbeing and increase their economic sustainability.</p> <p>STRATEGY: Measure the success of the three established programs, as facilitated by the HD LSMPA project.</p> <p>INDICATOR 1: Number of programs being implemented</p> <p>METHOD 1: Program review</p> <p>INDICATOR 2: Satisfaction of program participants (fishermen and stakeholders) with outcomes</p> <p>METHOD 2: Qualitative key informant interviews</p> <p>INDICATOR 3: Percentage of fishermen who have successfully transferred careers</p> <p>METHOD 3: Formal quantitative survey</p> <p>INDICATOR 4: Change in average household income in ex-fishermen that have transferred careers.</p> <p>METHOD 4: Formal quantitative survey</p>	<p>MONITORING STRATEGIES, INDICATORS, AND METHODS:</p> <p>OBJECTIVE: By the end of the second year, have an established program for indigenous community members to learn about, contribute to, and visit marine areas of cultural significance.</p> <p>STRATEGY: Measure the success of the established program, as facilitated by the HD LSMPA project.</p> <p>INDICATOR 1: Percentage of areas of cultural significance re-opened</p> <p>METHOD 1: LSMPA regulation review</p> <p>INDICATOR 2: Percentage of indigenous youth visiting areas of cultural significance</p> <p>METHOD 2: Formal quantitative survey</p> <p>INDICATOR 3: Increase in cultural knowledge in schools</p> <p>METHOD 3: Consistent standardized testing</p> <p>INDICATOR 4: Community satisfaction with re-opening areas of cultural significance</p> <p>METHOD 4: Qualitative key informant interviews</p>

Figure 7: SCENERIO: Monitoring

EXERCISE 7: Developing Your Monitoring Strategies, Indicators, and Methods

Completing this exercise is crucial when implementing your HD project, as monitoring is necessary to understanding how your HD project is affecting your LSMPA. Choosing monitoring strategies, indicators, and methods directly linked to your goal, objective(s) and actions will yield the most telling results.

Use this exercise as a framework for developing your monitoring strategies, and recall that each objective requires a separate monitoring strategy. Refer to **Scenario: Monitoring** to guide this exercise.

This exercise should be treating as a living document, and only trial and error will help predict whether your monitoring strategy is best fit to provide accurate information on the progress of your HD project. Though you can always alter your monitoring strategy, it is encouraged you choose one initially and continuously implement that strategy to yield results before deciding to switch to another one.

OBJECTIVE 1:

MONITORING STRATEGY 1:

INDICATOR 1:

METHOD 1:

INDICATOR 2:

METHOD 2:

INDICATOR 3:

METHOD 3:

INDICATOR 4:

METHOD 4:

Phase 5: Disseminate Information

In this section, you will:

- Communicate your HD LSMPA project with the public
- Disseminate information & collect and integrate feedback
- Contribute to the global database

Often, the implementation of a project, the results of monitoring and evaluation, and plans for adaptation are not fully communicated across the general public. Communicating to both internal and external audiences is necessary to remain transparent, inclusive, and consistent with HD considerations.

Step 1: Choose method of communication

It is recommended you communicate your results across stakeholder groups and the general public, and just as groups differ, so should your methods of disseminating information. For example, youth, fishermen, the scientific community, and the general public all may process information differently. This must be taken into account when developing your communication strategy. Choosing the appropriate communication method for each group and implementing multiple communication methods may require extra time and energy. Consider your capacity when making these decisions, though it is recommended you communicate your results in at least two different ways to maximize the receptiveness of your target audience.

Your communication methods may also differ based on what you are communicating. It is recommended you inform the public during the project development, implementation, monitoring and evaluation, and adaptation phases. Methods can be ongoing, as with a social media campaign, or a one-time occurrence, as with a town hall meeting. Regardless of methods, dissemination of information should occur on a consistent basis to inform project progress and changes. If resources are available, coupling local with global outreach is highly encouraged (see Step 3).

Assign roles to your team to develop your communication strategy, implement the dissemination of information, and collect and evaluate feedback.

Examples of communication methods:

Oral Presentation

Website

Webinar

Social Media Campaign

Report or Journal Article

Newspaper Article

Press and Media Releases

Informational Posters or Videos

Informational Brochures or Infographics

Newsletter (Email or Paper)

Step 2: Disseminate information & collect and integrate feedback

After methods have been chosen and roles have been assigned, you are ready to begin disseminating information on a regular basis to inform project development, launch and implementation, monitoring and evaluation, and adaptation. Initial communication should reach the local communities and HD LSMPA stakeholders.

When disseminating information, providing a platform for feedback (online or in-person) is highly encouraged. You may wish to set up an email account to collect feedback, hold Q&A sessions at town hall, or set up a call-in line or message board. Allow an appropriate amount of time for the audience to process the information, develop their thoughts, and provide their feedback. This feedback, along with monitoring and evaluation results, should be taken into consideration when adapting your HD LSMPA project (Phase 6).

Step 3: Contribute to the global database

As stated earlier, current data on HD LSMPA is sparse. Communicating your HD LSMPA project and the results of monitoring and evaluation to the international community can assist in developing a global understanding of the field of HD LSMPA, fill knowledge gaps, and answer larger questions about how socio-ecological systems function. This information can be extremely helpful in informing the field of marine and environmental management as a whole. Collaborating with international organizations, scientific communities, or global networks may help to spread information in an effective, efficient, and influential manner. Note that this step is recommended yet not required.

Further Reading

For information on communicating results, refer to Margoluis & Salafsky (1998: 206-219) and Pomeroy, Parks & Watson (2004: 37-39)

Phase 6: Adapt

In this section, you will:

- Assess results of previous phases
- Adapt and iterate

It is now time to utilize the knowledge gained from previous phases to perform the task that forms the very foundation of the iterative loop: Adaptation. Your project's adaptation will be guided by your mission statement with the intention to reach your goal and accomplish your objective(s).

Step 1: Assess results of Phases 4 and 5

Adaptation is a complex, dynamic, sensitive, project-specific, and continuous process. The strategy to successfully adapting your HD LSMPA project is to assess the results of monitoring and evaluation (Phase 4) and the feedback from disseminating information (Phase 5), and allow these conclusions to inform your project's adaptation. Throughout this assessment, it is recommended you review the prior exercises you have performed to re-familiarize yourself with the details and intentions of your project.

Find below a series of questions that may help to guide you through this step. Answer these questions based on the results of monitoring and evaluation, feedback from dissemination of information, and previous exercises completed. These questions are intended to encourage reflection, inform your definition of project success, and lead you to Step 2: Adapt and iterate.

Adaptation questions:

- How can your project improve to remain true to your mission, reach your goal, and accomplish your objective(s)?
- What are some themes or trends that arose from monitoring and evaluation?
- What monitoring and evaluation results surprise you most?
- What are some themes or trends that arose from public and stakeholder feedback?
- What public and stakeholder feedback surprised you most?
- How can your project better address your HD Consideration(s)?
- What gaps have yet to be filled?
- How can you more positively influence the stakeholders involved in your chosen HD consideration(s)?
- What about your project are people unhappy with?
- What are you unhappy with as it relates to your project?
- Where can funds be better allocated to result in a more successful project?
- What is a realistic accomplishment for this iteration of adaptation?
- What small changes can you make to produce large results?
- How has capacity (financial, logistical, human) affected your project, and in what ways can this be addressed?

Step 2: Adapt and Iterate

After assessing results of the previous phases and deciding on an adaptation approach, you will refine your project accordingly.

Adaptation can range from simple modifications, such as hiring two more employees to monitoring your project, to complex changes such as a complete reorganization of your actions. The first example here depicts adapting the means of implementation, while the second represents adapting the design of a project. Both forms of adaptation should be considered. When goals and objective(s) have been reached, a project can adapt to expand in size and reach. The type and extent of your adaptations will rely on your assessment in Step 1 and resources available (time, budget, staff). All adaptation decisions should be made as a team.

Recall that adaptation is the essential phase in adaptive management and defines the iterative loop. Moving forward, you will rely heavily on the evolving results of monitoring and evaluation and feedback from dissemination of information as you continue to engage in these ongoing phases. In this way, your HD LSMPA project will undergo regular internal and external review, providing you with the ongoing opportunity to adapt.

This phase will not be accompanied by an exercise or scenario as to not presume that adaptation can be predicted. If the previous phases have been thoroughly completed, adaptation can be a rather simple process. Trust in your team's prior work, your results, and local feedback to guide you through this phase.

You have now completed your first Iterative loop of HD Design and Management and have entered into the second iteration. Continue to implement your HD LSMPA project, monitor and evaluate, disseminate information, and adapt with the goal that each iteration will bring your project closer to success.

Further Reading

For information on adapting your project, refer to Pomeroy, Parks & Watson (2004: 40-42).

Conclusion

The Human Dimensions of Large-Scale Marine Protected Areas is a growing field and needs more attention now than ever before. This best practices guidebook is intended to assist all involved in LSMPA design and management and encourage the field's growth in knowledge and application. In addition to this guidebook, we recommend you engage in knowledge sharing activities and collaborative conversations to further assist you and the development of the field of HD LSMPA.

Lessons learned from this guidebook, and from the application of this guidebook, can significantly contribute to the field of marine and environmental management in general. Therefore, engagement across all sectors, fields, and levels is highly recommended. We encourage you to share this guidebook with those outside of the HD LSMPA community, as human dimensions are relevant in all fields where nature and people meet. We hope this guidebook will help you and others to design and implement a project that benefits both your marine environment and local communities for generations to come.

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