A Practical Framework for Addressing the Human Dimensions of Large-Scale Marine Protected Areas

DRAFT Version for Review

March 2016

Developed by the LSMPA HD Community of Practice

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Contributors	Timeframe	Revisions
HD Think Tank Co-organizers	March 2016	Initial drafting completed based on HD Think Tank outputs
HD Think Tank Attendees	April 2016	Review and comment/editing of initial draft
HD LSMPA Community of Practice, Framework Committee	May 2016	Review edits/comments incorporated; 2nd draft completed, shared with Community of Practice

About this Document
This document provides a practical framework for addressing the human dimensions relating to large-scale marine protected areas (LSMPAs), including the aims and intended activities of a community of practice, an evolving and testable set of best management practices, and a shared human dimensions research agenda. This document is intended to serve as set of evolving collaboration guidelines that empower interested and willing collaborating partner agencies and organizations to work together to address and improve the human dimensions research and site-based design and management practice at LSMPAs around the world.

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LIST OF ACRONYMS

HD	Human dimensions
LMMA	Locally-managed marine area
LSMPA	Large-scale marine protected area
MPA	Marine protected area
NGO	Non-government organization

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INTRODUCTION

The use of large-scale marine protection is a new and rapidly expanding tool being used for global marine conservation. During the past decade, large-scale marine protected areas[1] (LSMPAs) went from only a few sites to more than two-dozen. As of early 2016, there are 16 formally established LSMPAs, with at least another 10 LSMPAs being proposed by governments or non-governmental organizations (NGOs). As of 2016, LSMPAs now account for nearly 9 million km[2] of total area, representing approximately 2.5% of Earth's oceans and the majority of ocean waters currently managed by humanity.

Due to their sheer size, complex socio-political realities, and distinct local cultural perspectives and economic needs, the successful design, implementation, and on-going management of LSMPAs can be quite challenging, and not without controversy. Scientific researchers, outspoken critics, and the international press frequently cite such socio-political, cultural, economic, and institutional issues and challenges as a primary reason to objecting to the continued use and expansion of LSMPAs around the world. This has led the managers of such large marine areas to ask themselves: how can we address these 'human dimensions'[2] and improve our effectiveness at LSMPAs?

Human Dimensions Think Tank

Given the rapid and recent growth in the designation of LSMPAs, along with the issues and challenges associated with their creation and ongoing management, in February 2016 an international workshop was held in Honolulu, Hawaiʻi to bring the international marine management community together to discuss the human dimensions (HD) of LSMPA design and management. Entitled the "Think Tank on the Human Dimensions of Large Scale Marine Protected Areas" (HDTT), the objectives of the workshop were to:

(1) Evaluate existing human dimensions knowledge related to LSMPAs;

(2) Identify best management practices regarding human dimensions considerations in LSMPAs;

(3) Draft practical research recommendations to fill existing knowledge gaps and generate a shared human dimensions research agenda for LSMPAs; and

(4) Develop and launch an ongoing collaborative relationship among marine managers, human dimensions researchers, and supporting partners, referred to hereafter as community of practice.

The Think Tank was a true meeting of the minds around the topic of social impacts (positive and negative), and research relating to the world's largest marine protected areas (MPAs), bringing together a total of 125 participants from 17 countries (see Appendix 1). Workshop participants included dozens of site managers, marine specialists, and support staff from 10 of the world's largest MPAs, as well as dozens of research professionals from 16 academic institutions from both hemispheres. Attendees also included: supporting governmental agency and NGO staff;

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[1] For the purposes of this document, 'large-scale marine protected areas' (LSMPAs) are marine protected areas that are roughly 100,000 km2 in size, or larger.
[2] The 'human dimensions' include social, economic, institutional, political, and cultural aspects (after Gruby *et. al* 2015).

indigenous/traditional community leaders; marine policy and management professionals; and ocean industry/user group stakeholders. Attendees included not only established scholars and veteran site managers, but also the next generation of marine management and research professionals, including graduate students, post-graduate research assistants, and post-doctorate researchers. Additional information regarding the process and outputs of the Think Tank can be found online at the Big Ocean website[3].

The outputs of the Think Tank, as generated by the more than 100 participants, served as both the rationale for the creation of this framework, as well as the basis for its original content. The initial drafts of this framework were created based on responses to an online survey (see Appendix 2), the plenary and small group decisions, discussion points, and outputs generated during the Think Tank. Since then, the organizers of the HDTT have reviewed, edited, and iteratively strengthened the ideas and content reflected within this document. Eventually, the LSMPA HD community of practice will further review and augment the framework.

Purpose of this Document

The purpose of this document is to present a practical framework for addressing the human dimensions relating to large-scale marine protected areas, including the aims and intended activities of a community of practice, an evolving and testable set of best management practices, and a shared human dimensions research agenda. The overarching goal of this framework is to outline a practical and proactive approach to addressing and overcoming human dimensions related challenges and to maximize opportunities regarding large-scale marine protection.

This framework is intended to serve as a 'living' document; in other words, the framework, or portions thereof, will be regularly updated and renewed as more precise guidance and an improved understanding of how to effectively address HD needs builds through time within the LSMPA community of practice.

In addition, this document will reflect the relevant collaborative HD research projects being implemented at or across specific LSMPAs, and will 'link' to and reference relevant collaborative research project description documents, activity workplans, and project timelines, as well as supporting logistical and strategic implementation details relating to the community of practice. Serving as a 'home' or repository for this iterative, evolving content relating to the HD of LSMPAs is likely to become a principal impetus for the continued maintenance and updating of the Framework.

Ultimately, the usefulness of this document will be determined by whether or not the evolving best practice guidelines and shared research agenda empower and maintain the interest of the willing sites, interested researchers, and collaborating partner agencies and organizations that make up the LSMPA HD community of practice. Ideally, this framework will allow the LSMPA HD community of practice to effectively work together in addressing and improving the HD aspects of site-based design and management at LSMPAs around the world.

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[3] http://bigoceanmanagers.org/human-dimensions-think-tank/

COMMUNITY OF PRACTICE

A 'community of practice' can be defined as a group of people who share a craft and/or profession, and who come together periodically to share and learn from one another out of a desire or concern to perform their craft/profession more effectively.

The LSMPA HD community of practice is founded to encourage the effective, equitable, and transparent engagement of cultures, people, and communities in ocean conservation and governance. Outlined below is the charter, or organizing document, for the LSMPA HD community of practice. Within this charter there are a number of sections, as follows: (1) the code of conduct and statement of intent; (2) core principles; (3) aims and goals to achieve; (4) roles to be filled; (5) activities to be completed; and (6) coordination.

Core Principles

The LSMPA HD community of practice commits to uphold the following core principles:

- **Collaboration** – recognizing that by working together, we achieve greater impact while also supporting one another and hold each other accountable;
- **Objectivity** – dedicated to an evidence-based approach to inquiry and open mindedness; encouraged through a commitment to the shared research agenda and engagement of research institution partners
- **Engaging** – including a commitment to convening opportunities for meaningful, face-to-face interaction, thoughtful dialog and analysis, and professional relationship building. External engagement includes disaffected/impacted communities and

stakeholders as a result of LSMPA designation and operation (including indigenous groups, local communities, fishers, and other user groups) and LSMPA advocates.
- **Non-exclusivity** – remaining open to all those who are interested in participating and contributing to the community; this diversity includes, amongst other groups, indigenous representatives, traditional leaders, knowledgeable and respected elders, elected officials, LSMPA advocates, industry, and HD researchers.
- **Transparency** – clear, open, and fully accessible decisions, process, and generation of new knowledge and other products; a commitment to honesty and truth in all that we do
- **Equity** – recognize and actively work to equitably address and overcome power dynamics and socio-political inequities, including north/south, indigenous/non-indigenous, developed/developing, and western/non-western dynamics.

Aims/Goals to Achieve

The LSMPA HD community of practice aims to achieve the following goals:

- Coordinate and facilitate collaborative social science research relating to HD of LSMPAs
- Promote awareness and share knowledge regarding the HD of LSMPAs; outreach across multiple disciplines and key target audiences
- Learn from and integrate relevant indigenous cultural perspectives and values within the design and management of LSMPAs
- Research, develop, and document "Guiding Principles" and best management practices of HD in LSMPAs; build a "code of conduct" for

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LSMPAs that is upheld by the international conservation community
- Engage donors meaningfully and recruit their support on incorporating HD at LSMPAs
- Building on Big Ocean, serve as peer-to-peer learning network to facilitate knowledge transfer and building capacity
- Recruit commercial/industry participation and representation
- Elevate LSMPAs and promote successful LSMPA design and management; give member sites a voice

Roles to Be Filled

The LSMPA HD community of practice strives to contribute to the following roles within the international marine conservation community:

- **Researcher** – commit to the production of new knowledge, to fill existing knowledge gaps relating to HD; remain open to what the community does not know and how to address this. Bridge (social) science to action (application) at LSMPA sites around the world.
- **Mentor** – Inspire and guide future or recently established LSMPAs. Recruit and train the next generation of marine managers who will inherit and lead LSMPAs.
- **Advisor** – provide advice and guidance to governments and non-government partners who are thinking of designing and designating LSMPAs on how to appropriately incorporate HD. Available to help advise on the creation of legal/official agreements.
- **Trainer** – build the technical capacity to incorporate HD at LSMPAs; build long-term social science capacity at sites
- **Advocate** – Uphold and promote best management practices of HD in LSMPAs; hold governments, NGOs, and donors accountable to best management practices

- **Mediator** – serve as a neutral party and facilitate conflict resolution regarding HD concerns/issues raised and LSMPA managers/site supporters
- **Analyst** – HD analysis
- **Communicator** – use modern tools to communicate and share relevant information; including the use of digital technology and social media. Communicate and inform across sectors; maintain clear, open communication among members
- **Educator** – reach out to youth and the emerging/next generation of marine managers, recognizing that they have an important stake and voice, and relevant contributions to be offered into the community of practice
- **Clearinghouse** – maintain a membership database of LSMPA sites, site managers, and HD experts and practitioners available to assist LSMPAs
- **Coordinator** – organize and schedule meetings and collaborations for the community of practice.

Potential Activities

The HDTT served as an opportunity to brainstorm and plan for potential HD-related activities that the community of practice could carry out. A prioritized workplan and fundraising effort will need to be completed to pursue some or all of these ideas. HD-related activities that the community of practice may conduct include the following.

Implement a Shared HD Research Agenda:

- Identify priority knowledge gaps and corresponding key questions that need to be asked/answered; all should have agreed management value/priority;
- Identify an agreed-upon set of relevant HD research priorities that gather new data to close knowledge gaps; periodically review progress and maintain/update the shared social science research agenda;

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- Pool human and financial resources to conduct cross-site HD research relating to priority research topics;
- Determine site-based interest in conducting HD research across LSMPAs;
- Conduct collaborative research based on identified and agreed research priorities;
- Conduct collaborative analysis of research data and generate findings;
- Conduct collaborative dissemination of research results with relevant target audiences, particularly within the LSMPA HD community of practice.

Document and Share Best Practices:

- Provide 'Best Management Practices' guidance for HD in LSMPAs;
- Become the 'go-to' source for strategic guidance on HD in LSMPAs;
- Site implementation planning: set methods and standards of practice;
- Establish framework of feasibility and effectiveness prior to declaration of LSMPAs;
- Legal analysis of enabling policies and legal systems that support HD;
- Space for indigenous processes, knowledge systems, science, and values;
- Website for Community of Practice: repository of best practices for HD in LSMPAs;
- Begin collecting lessons for application within high seas management and areas beyond national jurisdiction;

Share Lessons Learned and Case Studies:

- Document and communicate real-world HD 'lessons learned'; share experiences, including successes and failures; use digital tools such as short videos and social media for sharing.
- Review and learn/take inspiration from existing models of other communities of practice.

- Create LSMPA case study database (web-based) that is key word searchable
- Effectively communicate benefits and services to people and stakeholders from LSMPAs.
- Document and share case studies for comparison of methods for applying HD in the establishment and management of LSMPAs; outcomes, process lessons. Publish peer reviewed articles and contribute to professional newsletters (e.g., MPANews) on relevant topics.
- Safe space to learn from. mistakes/failures in a constructive and supportive way.

Peer-to-Peer Interactions and Support:

- Facilitate cross-LSMPA site visits ('study tours' between sites; share lessons on-site);
- Talent management; recruit and train the next generation of LSMPA managers; facilitate and mentor new or emerging LSMPAs on HD.
- A 'safe space'; trust and comfort between members of community to discuss and explore ideas and concepts openly and without fear of judgment or retribution.
- Improve communication lines among/between LSMPA managers and stakeholders.
- Serve as 'home' or secretariat for well-respected leaders, champions of LSMPAs.
- Community of Practice as a commitment to learn from one another.
- Available network of cultural advisors and monitors.
- Conduct training and capacity building function with focus on local communities.
- Contacts of LSMPA managers, researchers, partners; kept up to date.
- Database of available 'experts' and practitioners with HD experience in LSMPA.

External Outreach and Education:

- Engagement with private sector/industry stakeholders (including commercial fisheries); serve as 'conduit' for them to enter into marine conservation community. Eventually these stakeholders may join within this community of practice.
- Agreed upon multinational set of terms and definitions regarding HD in LSMPAs
- Reach out to and consult with public and key stakeholders; including indigenous peoples and leaders.
- "Make the case" clearly as to why HD is important to apply within LSMPA design and management; marketing and public buy-in.
- Educational curricula on role of people in LSMPAs.

Foster Collaboration:

- Fundraising for continued scientific research (shared agenda), HD training workshops, meetings.
- Design and coordinate the hosting of face-to-face exchanges and deep discussions (Think Tanks) for the community of practice; facilitate regular sharing and documentation of "lessons learned" across sites; case study compilation.
- Collate, host online, and maintain a clearinghouse of relevant HD LSMPA literature and resources, including guides, how-to videos, and other written documents online to guide HD application.
- Provide team-building activities to maintain membership interest and grow the community of practice.

Coordination

The following team of collaborating organizations and individuals will oversee the coordination of this community of practice. Provisionally, Big Ocean ('Aulani Wilhelm and Nai'a Lewis as co-leads) and

the University of Washington School of Marine and Environmental Affairs (Patrick Christie as lead) will lead this community of practice. Respectively, they represent a network of LSMPAs managers and an academic institution, and therefore bring complementary perspectives and institutional strengths.

Founded in 2010, Big Ocean is a peer-to-peer network of LSMPA site managers sharing lessons and experience to support effective LSMPA design and management. As an existing peer network with a strong track record of coordination and collaboration, Big Ocean can support the LSMPA HD community of practice. In this regard, the LSMPA HD community of practice benefits from the opportunity to build on the Big Ocean network. University of Washington School of Marine Affairs has a long-standing interest in human dimensions of ocean policy that include graduate programs, dedicated faculty members and boundary organizations. UW faculty members and Big Ocean leaders formulated the initial ideas leading to the HDTT and HD community of practice.

Individuals from the following institutions will provide significant leadership and effort into developing this community of practice.

- Nathan Bennett, University of British Columbia and University of Washington
- Rebecca Gruby, Colorado State University
- Noella Gray, University of Guelph
- Natalie Ban, University of Victoria
- 'Aulani Wilhelm and Sue Taei, Conservation International
- Jon Day, James Cook University
- Alan Friedlander, University of Hawaii
- Jacqueline Evans, Cook Island Marine Park (Marae Moana)
- Nai'a Lewis, NOAA Office of National Marine Sanctuaries

The institutional and individuals roles will evolve in 2016 based on the agreements

reach in planning meetings and in discussions with institutional leaders and Big Ocean members.

Code of Conduct

One of the key roles of the HD of LSMPAs community of practice is to develop a "Code of Conduct" document for the marine conservation community. The rationales identified by the nascent community of practice for developing such a Code of Conduct were threefold: 1) there was a perceived need for a clear social contract developed by and supported by members of the marine conservation community about how conservation occurs and the social impacts of conservation, 2) there was a perceived need for a document that identifies key responsibilities and accountabilities, 3) there was a perceived need for a document that parties can commit to and that can be used to hold members of the marine conservation community to account for their actions. The proposed Code of Conduct would be relevant to all parties engaged in marine conservation – including researchers, governments, NGOs, private sector and local organizations. The guiding responsibilities and accountabilities identified in the document would apply to different processes associated with marine conservation (e.g., research, policy development, decision-making, management, outreach/engagement) and at different stages in each process (e.g., prior to entry, during entry, in planning phase, during implementation, in ongoing management, in monitoring and adaptation). The Code of Conduct document will identify and align with other global commitments, such as ILO 169 Indigenous and Tribal Populations Convention and Recommendation and the Universal Declaration of Human Rights, and soft-laws such as the FAO Voluntary Guidelines for

Securing Sustainable Small-Scale Fisheries.

BEST MANAGEMENT PRACTICES

As a key service provided by the LSMPA HD community of practice, a set of best management practices relating to HD application within LSMPA design and management will be developed and tested through time. During the HDTT in February 2016, participants began the process of identifying best HD practices that are presented below. Such best practices will continue to be identified, generated, tested, and refined by participating LSMPA sites and other supporting organizations within the LSMPA HD community of practice. Best practices of applying HD at LSMPAs may have relevance to other types or scales of marine management as well, such as in areas beyond national jurisdiction.

Effective Application

The LSMPA HD community of practice recognizes that with proven and sufficient HD-related guidance regarding best management practices, the following positive consequences could occur as a result of correctly integrating and applying HD in the design and management of existing and future LSMPAs:

- Prior to MPA creation: in-depth community consultation leading to LSMPA support.
- Prior to MPA creation: offset of lost fishing income.
- Secure political will/buy-in; including of local elected officials and leaders.
- Increased/long-term local food security; thriving resources to feed future generations.
- Continuation/persistence over time of LSMPA (valued inter-generationally).
- Recognized/rejuvenated cultural value for the site.

- Community engagement and local participation in site design & decision-making leading to improved design.
- Integration of traditional knowledge systems and customary management practices leading to improved design.
- Improved stakeholder integration leading to successful adaptive management through time, increased compliance with marine resource rules and regulations, and pride in place.

Initial draft best practices

At the HDTT, a Knowledge Café was held to generate ideas of potential best practices under themes determined by the organizing team. The themes were: integration of culture and traditions, effective public and stakeholder engagement, maintenance of livelihoods and wellbeing, promotion of economic sustainability, conflict management and resolution, institutional transparency and (mis)matching ideas and institutions, legitimate and appropriate governance, and social justice and empowerment. These themes were intended to cover the main areas of human dimensions, but were not meant to be exhaustive. Overlap among themes was unavoidable, and ideas should be considered preliminary, yet to be fully developed. Each participant had the opportunity to engage in one or two Knowledge Cafes (i.e., participate in one or two of the themes), each of which had about one hour of discussion time. Some themes had more participants than others. The Knowledge Cafes consisted of discussions, and participants had the opportunity to write their ideas of best practices on sticky notes that were displayed on a flip chart. Not all best practices will apply in all situations, or be applicable to all audiences (e.g., managers, NGOs, researchers, funders).

The best practices are intended as a living document that will be expanded upon by interested parties involved in their creation, the HD LSMPA community of practices, and others as appropriate. The intended next steps are to expand upon the bullet points listed below, and to share the expanded draft best practices at the World Conservation Congress in September 2016.

Presented below is a summary of the main ideas from the Knowledge Cafes for each theme. The summary bullet points were extracted from the notes taken by volunteer note-takers in each theme. Because LSMPAs involve multiple interested parties,

the best practices can be applied to different audiences. As such, some best practices will be more applicable to some audiences than others. Similarly, each LSMPA is different, and some best practices will be more relevant than others. Thus the best practices are intended as menus of considerations, rather than a comprehensive list that must be applied.

Best Practices: Integration of Culture and Traditions

A cornerstone best management practice for incorporating HD within LSMPA design and management is the appropriate integration and support (including promotion) of indigenous cultural norms, values, knowledge, and traditions within LSMPA design and implementation. Such efforts should appropriately and respectfully incorporate and validate traditional knowledge systems and customary management practices.

The following best practices were suggested at the Knowledge Café:

- Follow local protocols.
- Ensure that community and traditional leaders are consulted before the process starts.
- Respect and incorporate traditional management and traditional ecological knowledge at all stages (e.g., in initial consultation, when developing management plans, in ongoing management).
- Be genuine when integrating culture and tradition - follow through.
- Listen to ideas and concerns of communities.
- Involve cultural practitioners early and give them a seat the table.
- Utilize existing social and cultural structures and recognized cultural leaders to engage people.
- Be clear about intellectual property rights.

- Recognize different knowledge systems, and consider traditional ecological knowledge as equal to western science.
- Allow traditional leaders to initiate public consultation.
- Gather and share information from different age groups, stakeholders and user groups.
- Identify potential or realized positive and negative impacts of LSMPA.
- Liaise with traditional or cultural leaders or communities to learn about – and integrate into management plans – traditional methods sustainable management / stewardship.
- Write management plan in local native language.
- Have at least one person on staff that can speak native language & can effectively communicate w/ members.
- Recognize that there may be a mismatch of timeframes between agencies and traditional owners. Allow lots of time for feedback.
- Train managers from local communities – and the policy makers.
- Formal agreements between (or within) traditional owner groups should be developed and brought to government to be formally accredited.

Best Practices: Effective Public and Stakeholder Engagement

Another cornerstone best management practice is effectively engaging the general public and key stakeholder groups within the design and management of LSMPAs. Ideally, such engagement should be conducted with the intention of providing meaningful, regular, and focused opportunities for representatives of the public and key stakeholder groups to

actively and directly participate in LSMPA management decision-making.

The following best practices were suggested at the Knowledge Café:

- Be clear about the role of the stakeholder engagement process – e.g., how it contributes to the overall process, what kinds of input can be considered.
- Set and meet deadlines.
- Develop locally appropriate forms of stakeholder engagement. For example, in some place large public meetings do not work very well because they only allow a few voices to be heard. More, smaller meetings may be more appropriate. Polling can be used to get a sense of the general public's support.
- Understand values of different stakeholder groups. It can help to hire people from those sectors to engage with their own stakeholder groups (i.e., hire fishermen to consult with fishermen).
- Spend time to get to know stakeholders, to build trust.
- Developing a multi-user stakeholder management board / steering committee to guide the stakeholder engagement process can be very helpful. Ensure that the representative understand their role and expectations.
- It helps to have champions from stakeholder groups who are interested in the process and engage with their own group.

Best Practices: Maintenance of Livelihoods and Well Being

Ideally, LSMPAs should be designed and implemented in such a way that they inherently link to maintaining and even strengthening the livelihoods and human

well being for residents living in and around the LSMPA. In the case of remote LSMPA sites, such livelihood and well-being connections may appear to be distant or unrelated; however, such remote LSMPAs should work to 'connect' the importance and existence value of the LSMPA to the daily lives and social well being of stakeholders and the public.

The following best practices were suggested at the Knowledge Café:

- Understand place-based livelihoods and well-being. Ask people from multiple generations what they would see as desired livelihoods. (Younger generations may have a different idea of desirable livelihoods from older generations.)
- Be clear about who is defining livelihoods and well-being. Ideally involve people affected by LSMPA to be involved in developing definitions.
- Monitor change in livelihoods and well-being over time, and how these are linked to ecological outcomes (including accounting for climate change).
- Do not make assumptions about livelihoods, especially in remote places. Lack of permanent human settlements does not necessarily mean lack of use.
- Involve local communities in making decisions about livelihoods, for example access to resources.
- Recognize and account for trade-offs that occur between different kinds of uses (e.g., subsistence livelihoods and ecotourism).
- Ensure access to tangible resources (e.g., fish), and to less tangible values associated with LMPA spaces (e.g., 'spiritual areas'), while recognizing the need for conservation measures within LSMPAs that go beyond mere fisheries management.

- Consider economic well-being of communities. If appropriate and desired by communities, explore alternative economies (e.g., blue economies) to offset reduction in extractive activities.
- Establish cultural education programs for visitors so that LSMPA visitor uses do not conflict with traditional uses.

Best Practices: Promotion of Economic Sustainability

LSMPAs can have positive and negative economic consequences, which should be understood and compensation (monetary or otherwise) provided to those negatively affected. Economic valuation can be used to highlight the multi-faceted values of LSMPAs, and user fees can be used to re-invest in conservation projects and local communities.

The following best practices were suggested at the Knowledge Café:

- Carry out economic valuation to identify the contribution of the LSMPA to the regional or national economy. Such economic valuations are tricky because they do not effectively incorporate non-monetary values. Along with the economic valuation, communicate non-monetary values (e.g., spiritual connections). The framing of ecosystem services may help.
- Explore options of payment for maintenance of ecosystem services.
- Analyze who is benefiting from protection and from resource degradation, and who is negatively affected. Assist people who are negatively affected.
- Fees or taxes for environmental impact and use of an area can help to offset lost revenue from resource extraction. Fees for tourists work in places that have a lot of visitors, but

may not be practical in remote places with few visitors.

- Invest in education when creating LSMPAs to gain a broader understanding of multi-faceted values of LSMPAs. Education can also bring a benefit to communities that have made a sacrifice in the creation of LSMPAs.
- Visitor and other fees can be reinvested in restoration projects and education.

Best Practices: Conflict Management and Resolution

Conflict may arise in LSMPAs because of the multiple perspectives/values and trade-offs inherent with resource management. Resolving conflicts involves being proactive, creating a transparent process, and building trust. Ways of resolving conflicts may be context-specific.

The following best practices were suggested at the Knowledge Café:

- Focus on process, not content. Be up front and transparent with the process. Create ground rules for all parties, including consequences for breaking the rules. This can help to establish authority in order to avoid conflict.
- Create transparency from the beginning to build trust. This can be done by sharing information, scientific processes, involving the public and stakeholders in choosing topics, leaders, objectives, and the science is then communicated back to the community.
- Meet early and often.
- Define everyone's roles and responsibilities,
- Sometimes intermediaries and neutral facilitators are needed.
- Choose fights wisely and do not sweat the small stuff. Recognize

other people's point of view, and where they come from. Be willing to compromise, respect sensitivities of opposing parties.

- Recognize your own power and limitations, and find allies.
- Create personal relationships with antagonists, to build trust and better understand their point of view. Do not stay within your comfort zone.
- Mapping can be a useful tool for LSMPAs to resolve conflict and make compromises through zoning designations of multiple use LSMPAs.
- Use appropriate media for communications. Email, for example, can create a lot of miscommunications.
- Take a holistic approach rather than focusing on a single issue. Focusing on a single issue creates winners and losers, whereas a more holistic approach is more likely to lead to concessions in another area, making everyone feel like they are getting a fair deal.

Best Practices: Institutional Transparency and (Mis)matching Ideas and Institutions

To avoid mismatching agendas and institutions between key implementing actors and stakeholders of LSMPAs, a transparent (i.e., clear, open, and easily-accessible) management decision-making process should be shared actively and regularly with affected stakeholder groups and the public. The decision-making process should be justified and consistent with the actual institutional mandates (legislative, regulatory) of the relevant/designated management authorities (designated agencies and management bodies) for the LSMPA.

The following best practices were

suggested at the Knowledge Café:
- Follow principles of good governance.
- Develop a common vision with a shared agenda at the beginning to guide planning and implementation of management.
- Transparency of agendas is important. Encourage everyone to share their agendas.
- Partnerships can be used to bridge across mismatches. For example, an agency can seek a community partner to find common ground with that community.
- NGOs can have different objectives than government agencies. They can assist with developing LSMPAs. There is a need to ensure that the capacity for government/agencies exists after an NGO transitions out of an area.
- Find support for site managers to steer through mismatching agendas and institutions. For example, managers can receive training, have designated mentors, there could be an advisory council or consultative group.
- Engage stakeholders early and often to ensure transparency and accountability.
- If communication breaks down due to mismatching interests, identify champions within the community to restore dialogue.
- Seek compromise before it is too late.

Best Practices: Legitimate and Appropriate Governance

LSMPAs should be managed under a legitimate and appropriate governance framework, given the laws and norms of the home nation. The effective application and integration of HD considerations within the design and establishment of LSMPAs should be completed in order to deliberately support the legitimate and appropriate governance mechanisms relevant to the LSMPA, thereby building trust, buy-in, respect, and support for site management and perpetuation.

The following best practices were suggested at the Knowledge Café:
- Develop an appropriate and legitimate process, including engaging stakeholder groups. Who designs the process will be context-specific; ideally all interest groups are involved in the design process. A governing body or committee with representation could do this.
- Ensure that the formal legal structure and non-legal governance are complementary.
- Be aware of and improve connections between international and national laws.
- Traditional governance structures and management processes should be considered.
- Governance tools need to match the context and capacities, and be effectively implemented.
- If there is a code of conduct, for example for researchers, that needs to be clearly communicated and abided by.

Best Practices: Social Justice and Empowerment

A documented concern with LSMPAs is that their designation and management is associated with social injustice and disempowerment or disenfranchisement of key stakeholder groups by the management authority and/or supporting site partners/advocates. Related concerns include the role of LSMPAs as an

instrument for eminent domain or 'ocean grabbing' by central management authorities, thereby displacing, diminishing, or eliminating indigenous community rights with a traditional and/or legal claims to the waters under declaration. Instead, LSMPAs should be conceived of as a tool that can promote and validate indigenous rights and legal claims to traditional management or customary marine tenure. In order to ensure that such social justice issues are clearly and fully understood, site managers and management authorities must be committed to recognizing, understanding, and integrating the local/site context in terms of political, historical, and cultural contexts.

The following best practices were suggested at the Knowledge Café:

- Respect basic human and indigenous rights, and ideally foster/enhance these rights. Use existing guidelines where applicable. A human rights code of conduct for promotion and establishing LSMPAs would be useful.
- Need to ensure that national and regional policies and processes, and international agreements and laws, are respected or adhered to.
- Utilize the principles of social safeguards. For example, respect local rights and access, traditional use, transparency, full and effective participation, and understand local context.
- Help marginalized groups effectively participate on their own terms. For example, provide financial support for participation, or for background research on important issues to marginalized groups.
- Establish clear rules for what is and is not on the table. For example, there might be areas too culturally important to be included in a LSMPA.

- Ensure equitable distribution of costs and benefits (i.e., environmental justice)
- Establish clear compensation mechanisms.
- Ensure implicated groups have access to legal resources, if they need recourse.
- Consult all stakeholders early and often. Really listen.
- Hire local people in local places. Have local offices.
- Be aware of power dynamics, including colonial legacies.
- Do not make LSMPAs another form of colonialism. Be aware of resource appropriation.
- Encourage community engagement in drafting management plans; make use of a more bottom-up approach as a way of integrating local and traditional knowledge.
- Study the history of the (proposed) LSMPA to be aware of any past or current resource alienation and historical claims.

Risk of Neglecting Best Practices

The LSMPA HD community of practice recognizes that in the absence of HD-related guidance regarding best management practices, the following negative consequences could occur as a result of insufficiently considering or ineffectively applying HD when designing or managing existing and future LSMPAs:

- Lack of community input/consensus; top-down declaration; lack of indigenous engagement and subsequent alienation.
- Loss of time and/or trust due to change in government and/or political leadership.
- Lack of enforcement; concerns of poor effectiveness and low compliance.
- Lack of political will; even despite strong community support.

- Lack of multi-party/national consensus; disagreement between agencies.
- Conflict (political leaders; community); ongoing discontent.
- Human rights issues (injustice/ tokenism); generational trauma; questioned validity.
- Continued loss of biodiversity and ecosystem health declines despite presence of LSMPA.
- Lack of effectiveness ('paper parks').

SHARED RESEARCH AGENDA

A key rationale for the existence of a LSMPA HD community of practice is the implementation and periodic updating of a shared (i.e., mutually agreed-upon and supported) research agenda focused on filling priority knowledge gaps relating to the HD of LSMPAs. Through the shared research agenda, thoughtful and targeted collaborative, international social science research will be conducted among professional researchers, LSMPA site managers and staff, supporting NGOs, policy-makers, donors, scientific institutions, and coastal users and inhabitants.

Key Objectives

The primary objective of developing, implementing, and maintaining a shared research agenda is to address key knowledge gaps relating to the HD of LSMPAs, and support the improved effectiveness of socially-responsible LSMPAs throughout the world. In addition, as a result of the completion of priority research projects under the shared research agenda, through time the community of practice will not only help to improve the effectiveness of existing LSMPAs, but also constructively influence the future design and management of proposed and/or newly emerging LSMPAs.

Important Considerations

In developing a shared research agenda, there are a number of important considerations regarding the HD of LSMPAs that our community of practice must acknowledge and incorporate or reflect within the shared research agenda. Some of these influence how research is conducted while others influence the framing of research efforts. These important considerations include:

- The needs for community/stakeholder engagement and participation in research project design and implementation.
- The need for cultural values and traditional rights (including customary marine tenure) to be reflected through the shared research agenda.
- The need for integration of traditional knowledge systems and traditional management practices within LSMPAs, where relevant.
- The need for LSMPAs to recognize, incorporate, and uphold traditional marine resource ownership claims and rights.
- The critical nature of socioeconomics relating to LSMPAs, including the financial costs, benefits, and non-economic values associated with LSMPA designation and operations.
- The critical nature of sustainable livelihoods being promoted for residents living in or adjacent to the LSMPA.
- The need for LSMPAs to be designed so as to inherently consider and ideally address food security needs of residents living in or adjacent to the LSMPA.
- The need for the governance systems and decision-making processes and structures to be designed and carried out for LSMPAs in a transparent, equitable, and just manner.
- The need for adequate political capital and political will to exist for effective management of LSMPAs.
- The need for LSMPAs to inherently consider and be designed in mind with quality of life and human well being needs.
- The need for LSMPAs to be seen as a vehicle to improve society's spiritual connection, values, and practices with the ocean realm.

In addition to these important HD considerations, there are a number of other HD-related aspects and elements relating to LSMPA design and management to keep in mind when considering research design and implementation, including:

- Adaptation/adaptive capacity;
- Balance between human and biodiversity needs;
- Clarity of beneficiaries and scale of benefits of protection; multi-generational benefits;
- Conflict resolution;
- Public education, outreach, and communications;
- Enforcement and compliance;
- Historical context, including colonialism's impacts;
- Vertical and horizontal integration across authorities and sectors;
- Level and scale/degree of protection;
- Level of economic dependence on marine resources;
- Management and regulatory frameworks;
- Prioritization of financial resources and budgetary decision-making;
- Resource use and extractive activities;
- Shared and diverse of language;
- Spatial scales; spatial planning and management
- Social legitimacy
- Sustainability, including of food sources;
- Transparency of designation and design process; and
- Worldviews and legitimacy of indigenous worldviews.
- Social diversity

Guiding Principles

The following are guiding principles that the community of practice should consider and abide by in regard to the identification of priority research projects and the definition and maintenance of a focused and relevant shared HD research agenda:

- We should conduct HD research that is rigorous and has applied, management value.
- We should be ambitious, but realistic, about the scope and application of the research.
- We should focus on HD research that is feasibly addressed within the short-term (i.e., 6 to 18 months) when possible.
- The LSMPA HD community of practice is inclusive and transparent; we welcome other HD researchers to join and contribute.
- We should recognize that there are many good ideas for HD research, but we should commit to and fully see through a core set of research priorities (the 'agenda') that are shared and agreed-upon by the community of practice; do not loose/abandon those research ideas that are not prioritized.
- We should recognize that research design is complex balancing what is ideal, what feasible, and what context/culturally appropriate.
- We should recognize that not all research projects would be shared priorities across all/multiple sites. Individual LSMPAs may also have site-specific research priorities that they wish to communicate with the community of practice.
- We need to secure research funding quickly once research priorities have been identified; ideally, will have prospective donors to approach with a set of prioritized research projects that can be shared and donor funding requested.
- Our community of practice website should allow donors to contribute online to financing of the shared research agenda.
- We should remain open and flexible to a donation-for-services approach (i.e., paid research projects requested by donors that are relevant to the community of practice); even if the research project being requested for

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completion/financing is not one of the identified priorities.

- The findings of research should be disseminated through appropriate channels such as peer reviewed scientific and policy outlets, educational materials, training programs, online portals, etcetera.

Knowledge Gaps

The following are the most important knowledge gaps that need to be filled, as identified and prioritized by the emergent LSMPA HD community of practice during the 2016 HD Think Tank.

Highest priority HD-related knowledge gaps:

- How best to 'translate' or 'incorporate' cultural practices/values and traditional knowledge within LSMPA design and management?
- Level of community/public engagement and empowerment at new/established LSMPAs.
- How best to incorporate a wide range of human uses and interests (economic, non-economic, cultural) within LSMPA design and management planning.
- Influence of differing LSMPA governance frameworks and decision-making structures on public/stakeholder engagement and perception of LSMPAs; relative governance effectiveness at LSMPAs.

Secondary priority HD-related knowledge gaps:

- Perceived level of impacts (+/-) of LSMPAs on stakeholders; including on stakeholder connection to site.
- Typology/classification of LSMPAs in relating to different HD aspects/elements and issues.
- Level of equity in values, particularly cultural and intrinsic values; level of understanding of stakeholder values.

- Relative motives and agendas of NGO partners and stakeholders in supporting LSMPA designation and management.
- Clear terms and definitions relating to HD.
- Ecosystem services to beneficiaries and the cost-bearers; who services actually flowing to?
- Relative costs/benefits of LSMPAs compared to other marine management tools.
- Socioeconomic value of living and cultural resources within LSMPAs.

Guiding Questions

A list of initial, guiding questions relating to the HD of LSMPAs are provided in Table 1. These initial questions, based on Christie et al. 2015, serve as a starting point for the community of practice to rationalize and scope a shared research agenda. It is recognized that through time, these guiding questions are likely to change as some are addressed and others arise. The HDTT refined and prioritized these questions.

Research Categories

For the purposes of this shared research agenda, we will adopt the thematic categories of HD research as proposed by Gruby *et al.* (2015) for a social science research agenda relating to large marine protected areas. Each of these proposed research topics is outlined in Table 2.

Priority Research Topics

Building from the guiding questions and research categories and designed to address the priority knowledge gaps identified, the community of practice identified at the HDTT the following set of priority HD research projects to focus on addressing.

Project 1: Complete a comparative case study analysis on the **integration of cultural traditions and practices** within LSMPA design and management at existing

and proposed sites. This would include analysis of values and connections to site/place, particularly within indigenous communities.

Project 2: Assess the relative level of **community and stakeholder participation** in the design and management of LSMPAs across willing sites; assess the relative social effectiveness of participatory processes through stakeholder analysis and network analysis. Key dimensions to investigate include how 'scalable' public participation approaches are, and how to avoid technocracy through the public/stakeholder engagement process.

Project 3: Complete the mapping and comparison of current human uses across multiple LSMPAs; as part of this, conduct spatially driven **cost-benefit analyses of various human uses** inside and outside the LSMPAs. Include economic, intrinsic, and spiritual valuations of the costs and benefits.

Project 4: Conduct perception and attitudinal studies (via multiple interview techniques) to document the **perceived degree of equity, transparency, and legitimacy of LSMPA-related decisions** made, and how these correlate with the perceived level of LSMPA site 'success' and impacts (good and bad).

Project 5: Conduct socioeconomic and stakeholder analysis across LSMPAs to **document actual and potential social impacts** (both positive and negative impacts) of LSMPAs on stakeholders.

Project 6: Complete a **social characterization of existing LSMPAs** in relation to various HD-related aspects and elements (e.g., demographics, economic conditions, resource use behaviors, etc.). Comparative results out of the characterization could include site categorization. Could be initially completed

as a remote desk study with participating LSMPAs.

Project 7: Conduct a **values assessment** over the cultural uses and values of residents and indigenous peoples in and around existing LSMPAs. Use joint problem identification to compare and contrast cultural values.

Project 8: Complete a **political-economic assessment** inclusive of stakeholder analysis at specified LSMPAs to identify socio-political and socio-economic lessons and needs associated with LSMPA design and management.

Project 9: Conduct a rapid desk study using secondary data review and online self-administered questionnaire with LSMPA managers and partners to **clarify HD terminology** across LSMPA sites. Use results from rapid study to develop a shared lexicon that can be circulated within the LSMPA HD community of practice for review and comment.

Project 10: Conduct **cost/benefit analyses of ecosystem services** from LSMPA sites that are to be provided to the assumed and/or identified 'beneficiaries' of each LSMPA.

Project 11: Complete a **comparative analysis** of the policies, processes, outputs, and impacts of LSMPAs versus other coastal and marine resource management tools.

Project 12: Complete a **comparative socioeconomic analysis** relating to the living and non-living (with a focus on cultural) resources found across LSMPA sites.

Research Approach

To accomplish this ambitious research agenda in a manner that is rigorous and

inclusive, multiple HD research methods will be employed. These may include, amongst other methods, participatory-action research, rapid participatory and non-participatory assessments, social surveys, interviews, social network analysis, ethnography, institutional analysis, economic assessments such as cost-benefit analysis. Research will necessarily be tailored to question, context, human and financial capacity, and available time.

Intellectual Property Statement

A formal statement of intellectual property has not yet been developed by the community of practice. This will be accomplished in 2016. It will align with social science human subject protocols and norms in member contexts.

Table 1. A listing of guiding initial questions relating to the HD of LSMPAs, as organized by category (Christie et al. 2015).

Enabling conditions:
1. What combination of factors has led to the need for LSMPAs?
2. What perceived opportunities are driving the shift toward LSMPAs as a marine conservation strategy?
3. Which individuals and organizations are central in supporting (and resisting) LSMPAs? What are the implications of having this particular configuration of institutions supporting or resisting LSMPAs?
4. What are key social, political, economic, ecological, and demographic conditions that facilitate or hinder LSMPA declaration and effective implementation?

Governance:
1. What are key governance challenges associated with LSMPAs?
2. How are top-down and bottom-up governance mechanisms influencing declaration and implementation of LSMPAs?
3. What has been the response within the policy, scientific, fishing, and tourism sectors and epistemic communities to LSMPAs? How might their response affect the long-term success of LSMPAs? How do the particulars of context affect these responses?
4. What power and influence do the actors and organizations who are involved in promoting LSMPAs and facilitating their implementation and through which channels to they exercise it (e.g. public campaigning and advocacy, political lobbying, legal action, market mechanisms)?

Ecology:
1. What are ecological justifications for LSMPAs?
2. What stressors (drivers and pressures) have led to the need for LSMPAs? How effectively do LSMPAs respond to stressors?
3. How are ecological factors employed in the siting and design of LSMPAs?
4. What are the demonstrated ecological benefits and costs of LSMPAs?
5. How do ecological outcomes differ in different regions of the world?
6. How do human dimensions process affect LSMPA ecological outcomes?

Socio-economics
1. What are the socio-economic trade-offs associated with creating and establishing LSMPAs?
2. What are the socio-economic trade-offs associated with the continued operation and projected expansion of LSMPAs?
3. What social or occupational groups are benefiting from LSMPAs?
4. What social or occupational groups are bearing the burden of LSMPAs?

Socio-cultural
1. What are the social, cultural and political concerns of local people associated with creating and establishing LSMPAs?
2. How might different cultural and social considerations (e.g., values, management practices, culturally valuable areas) be better incorporated into the creation, governance and management frameworks of LSMPAs?
3. Is the acquisition and management of data gained from utilizing traditional knowledge being undertaken appropriately and with prior informed consent of the community? How does this apply to remote site?

Management effectiveness
1. What management models (e.g. command-and-control, multi-stakeholder and consultative) are used in existing LSMPAs?
2. How do or might different constituencies of LSMPAs, including rights holders (indigenous people and local communities) and key and social groups impacted by LSMPAs define LSMPA management effectiveness?
3. What is the current status of management effectiveness of implemented LSMPAs as defined by different groups?
4. What mechanisms are currently in place to support and improve management capacity?
5. What monitoring and evaluation protocols are being used (or could be used) to inform and improve management effectiveness? Are their barriers to monitoring and evaluation of LSMPAs?
6. Can effective surveillance and enforcement strategies developed at smaller scale or at networks of smaller sites (e.g. LMMAs) and that involve community be applied in LSMPAs?
7. How are surveillance, enforcement and sanctioning currently taking place in LSMPAs?
8. What are the financial, governance and capacity requirements to enable effective management of LSMPAs?
9. How is the theory and empirical evidence from other MPAs and marine conservation initiatives being used to inform LSMPA declaration and ongoing management?

Supportive research
1. What are key socio-economic, ecological, and governance questions related to LSMPAs that deserve further research?
2. What is the most effective combination of governance model (government, co-management, community and private) and management model?
3. As large-scale sites can often overlay multiple jurisdictional and customary boundaries and/or could have smaller scale sites nested within (e.g. LMMAs, CCAs and other non- designated areas of significance), how can LSMPAs further the integration of national, regional or international conservation measures across systems of protected areas?
4. What monitoring and evaluation systems need to be in place to improve the likelihood of effective management, legitimate governance and robust socio-economic outcomes?
5. How can multidisciplinary, applied research efforts that involve social, economic, ecological and governance be created?

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Table 2. The five thematic research categories of HD research for LSMPAs under the shared research agenda (after Gruby *et al.* 2015).

Topic 1: Scoping Human Dimensions
▪ What human—social, cultural, political, economic, and institutional—dimensions are relevant to LSMPA systems in diverse contexts?
▪ What conceptualizations of human/nature relationships underlie LSMPAs as conservation tools, and with what implications?
▪ What alternative conceptualizations are possible (e.g., LSMPAs as social–ecological systems or social spaces)? What opportunities might these create for achieving broader consensus about LSMPAs?

Topic 2: Governance
▪ Who are LSMPA stakeholders?
▪ How have stakeholders been identified, included, or excluded in LSMPA decision-making processes?
▪ What are the short- and long-term trade-offs of different approaches to stakeholder engagement?
▪ What opportunities and limitations do new technologies of visualization and surveillance offer for the design and enforcement of LSMPAs?
▪ How does LSMPA governance interact with governance arrangements at other levels, and with what implications?

Topic 3: Politics
▪ What are the political motivations for designating and opposing LSMPAs? To what extent are these shared among diverse stakeholder groups?
▪ How do LMPAs shift power relations among diverse actors at global, national, and sub-national levels, and with what implications?

Topic 4: Social and Economic Outcomes
▪ What is the full range, magnitude, and distribution of actual and perceived social, cultural, political, and economic benefits associated with LSMPAs?
▪ What is the full range, magnitude, and distribution of actual and perceived social, cultural, political, and economic costs associated with LSMPAs?
▪ What is the range of future potential uses and benefits that an LSMPA enables and precludes?

Topic 5: Culture and Tradition
• What are culturally appropriate local protocols for conducting HD research and sharing information?
• What are appropriate means to work with local leaders and holders of traditional and cultural knowledge?
• What are opportunities to include traditional management and traditional ecological knowledge at all stages of LSMPA planning?

FRAMEWORK IMPLEMENTATION

This framework represents an important and sustained commitment to exploring and engaging in the human dimensions of large-scale marine protected areas. The implementation and oversight of the LSMPA HD community of practice, the best HD management practices for LSMPAs, and the shared research agenda will require leadership, dedication, and a broad base of commitments and support from a wide range of organizations and sites. The following section outlines key components that will support the implementation of this framework. Annual implementation workplans with activity schedules, timelines, and project details will eventually be addendums to this framework.

The is a need to follow up the HDTT and the momentum created within the nascent community of practice with further planning that will clarify institutional and individuals roles. The original proponents of the HDTT (as listed in Christie 2015) and other prominent leaders in the MPA and LSMPA efforts formed a 'design team' for the HDTT. This group continues to meet through conference calls and has contributed to this Framework document. Beginning in April 2016, the team will initiate a planning process focused on framework implementation and institutional/individual responsibility. In some cases, institutions are willing to make formal, written institutional commitments to the community of practice and this Framework. Individuals from these institutions have and will continue to commit their time and energy. In other cases where formal institutional commitments are not made, individuals from these institutions will nonetheless commit their time and energy.

Implementation Team

The following team of collaborating organizations and individuals will oversee the coordination and implementation of this framework. Provisionally, Big Ocean ('Aulani Wilhelm and Nai'a Lewis as co-leads) and the University of Washington School of Marine and Environmental Affairs (Patrick Christie as lead) will oversee the revision and implementation of this Framework. Respectively, they represent a network of LSMPAs managers and an academic institution, and therefore bring complementary perspectives and institutional strengths.

Individuals from the following institutions will provide significant leadership and effort into realizing the development and implementation of the Framework.

- Nathan Bennett, University of British Columbia and University of Washington
- Rebecca Gruby, Colorado State University
- Noella Gray, University of Guelph
- Natalie Ban, University of Victoria
- 'Aulani Wilhelm and Sue Taei, Conservation International
- Jon Day, James Cook University
- Alan Friedlander, University of Hawaii
- Jacqueline Evans, Cook Island Marine Park (Marae Moana)

The institutional and individuals roles will evolve in 2016 based on the agreements reach in planning meetings and in discussions with institutional leaders and Big Ocean members.

Implementation Commitments

Table 3 lists commitments that have been generously offered in support of the implementation of this framework.

Table 3. A list of institutions that offered support to the implementation of the LSMPA HD Framework at the HDTT.

The University of Washington (see letter below.)
IUCN
Government of Chile
Conservation International
NOAA Office of National Marine Sanctuaries
UNEP WCMC
Universidad Catolica del Norte
NOAA Hawaiian Islands Humpback Whale National Marine Sanctuary
Papahanaumokuakea Marine National Monument
Marianas Trench Marine National Monument
Great Barrier Reef Marine Park Authority
Big Ocean Network
Society for Conservation Biology, Social Science Working Group

SCHOOL OF
Marine & Environmental Affairs
College of the Environment • University of Washington

08 February 2016

Big Ocean and other fellow organizers and participants of the Human Dimensions of   Large-scale MPAs Think Tank, Honolulu, Hawai'i

Dear Colleagues:

The School of Marine and Environmental Affairs in the College of the Environment at the University of Washington recognizes your efforts to create a community of practice to address the ***Human Dimensions of Large Scale Marine Protected Areas.*** SMEA is supportive of the creation of a neutral forum around this topic.

To this end, SMEA looks forward, with Professor Patrick Christie as the lead, to playing a leadership role, as appropriate, in subsequent meetings and research/educational/policy development activities. As with the February 2016 Human Dimensions Think Tank meeting, we are supportive of the deep engagement of our faculty members, postdoc research associates, and graduate students in exploring the human dimensions of large-scale marine conservation and resource management efforts. We are interested in joint research, educational, and necessary fund-raising efforts with academic, governmental and non-governmental institutions. SMEA has a long-standing tradition in this and related realms, and takes pride in providing rigorous practical and objective support to policy processes. The development and implementation of the research agenda for human dimensions of large-scale marine protected areas, a key product of the February HDTT meeting, is particularly interesting to us and in line with our mission.

We frequently host self-funded visiting scholars, who have academic and/or extensive policy experience. We would be interested to work with you through educational activities such as guided student research and development of experiential, team-based student learning that addresses human dimension problems of interest. And as with the February HDTT meeting, we stand behind the efforts of our faculty members with they assist in the organization and co-hosting of important multi-stakeholder meetings. Such meetings and support for learning networks such as Big Ocean are essential efforts toward ocean sustainability.

In short, the School of Marine and Environmental Affairs in the College of Environment at UW would like to play a leadership role in this innovative collaboration. We wish you success in your important HDTT meeting this week.

Sincerely,

Terrie Klinger
Barer Professor of Sustainability Science
Director, School of Marine and Environmental Affairs

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ACKNOWLEDGEMENTS

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Appendix 1. Final HDTT Participant List (collated on February 5, 2016)

List provided to all workshop attendees at opening of HDTT (February 8, 2016). Crossed-out names were officially registered participants who at the last minute were unable to attend.

Alan Friedlander, National Geographic & University of Hawaii

Alan White, The Nature Conservancy

Angelo Villagomez, The Pew Charitable Trusts

~~Anita Smith, La Trobe University~~

Anne Singeo, Ebiil Society Inc

Annick Cros, University of Hawaii

Ashley Erickson, Center for Ocean Solutions, Stanford University

Athline Clark, Papahānaumokuākea MNM

Aulani Wilhelm, NOAA Office of National Marine Sanctuaries

Betarim Rimon, The Phoenix Islands Protected Area (PIPA)

~~Bonnie Kahapea-Tanner, Kanehunamoku Voyaging Academy~~

Brad Stubbs, The Nature Conservancy

Carlos Gaymer, ESMOI, Universidad Católica del Norte

Cassandra Brooks, Stanford University

Catherine Courtney, Tetra Tech, Inc.

Christine Greene, Republic of Kiribati

Robbie Greene, Colorado State University

Claudia Naraina, Chagos Conservation Trust

Colleen Corrigan, UNEP and the University of Queensland

Daniel Wagner, Papahanaumokuakea Marine National Monument

Daniela Kittinger, Big Ocean

David Graham, Papahānaumokuākea Marine National Monument

Edward Allison, University of Washington

Emily Fielding, The Nature Conservancy

Eric Mévélec, Government of New Caledonia

Eric Tong, University of Hawai'i at Mānoa

Eva Abal, Great Barrier Reef Foundation

Eva Schemmel, Conservation International Hawaii

Evan Artis, University of Guelph

Frazer McGilvray, Malama Maunalua

Genevieve Brighouse, NOAA National Marine Sanctuary of American Samoa

Georges Toti, Teikiehuupoko Moto Haka (NGO)

Grace Ferrara, University of Washington

Greg Stone, Conservation International

Gustavo San Martin, Undersecretary for Fisheries

Heidi Hirsh, NOAA NMFS Monuments Program

Hoku Johnson, NOAA/NMFS/Pacific Islands Fisheries Science Center

Hoku Ka'aekuahiwi, NOAA Marine National Monuments Program

Hugh Govan, LMMA Network

Isaac Harp, Hawaiian Fisherman

J. Kanekoa Kukea-Shultz, The Nature Conservancy/Kakoo Oiwi

Jack Kittinger, Conservation International

Jaime Aburto, Ecology & Sustainable Management of Oceanic Island

Jason Philibotte, NOAA Coral Program

Jean Tanimoto, NOAA Office for Coastal Management

Jean-Christophe Lefeuvre, Conservation International

John Parks, Marine Management Solutions

John Weller, Independent

Jon Day, ARC Centre of Coral Ref Studies, James Cook University

Julianna Rapu, Pono Pacific, Kupu

Justin Hospital, NOAA - NMFS - PIFSC

Kalani Quiocho, The Nature Conservancy

Kealoha Pisciotta, Papahānaumokuākea Cultural Working Group

Kekuewa Kikiloi, UH Center for Hawaiian Studies

Kem Lowry, East West Center

Keobel Sakuma, Palau National Marine Sanctuary

Keola Lindsey, Office of Hawaiian Affairs/Papahānaumokuākea

Kevin Chang, Kua'aina Ulu Auamo

Kevin Iro, Cook Island Marine Park (Marae Moana)

Kristina Kekuewa, NOAA Office for Coastal Management

Larry Crowder, Center for Ocean Solutions, Stanford University

Laura Beauregard, U.S. Fish and Wildlife Service

Leah Meth, Packard Foundation and Stanford University

Leslie Acton, Duke University

Lida Teneva, Conservation International

Lihla Noori, Hawai'i Conservation Alliance

Lilia Merrin, University of Hawai'i at Mānoa

Lillian Mitchell, University of Guelph

Lindsay Gordon, University of Washington

Lisa Campbell, Duke University

Maery Kaplan-Hallam, University of British Columbia

Margaret Gooch, Great Barrier Reef Marine Park Authority

Maria Carnevale, State of Hawaii, Papahānumokuākea MNM

Matt Rand, Global Ocean Legacy, Pew Charitable Trusts

Matt Stout, NOAA-National Marine Sanctuary System

Matthew Brown, U.S. Fish and Wildlife Service

Melissa Rodgers, Great Barrier Reef Foundation

Michael Gilbeaux, RARE

Moani Pai, Papahānaumokuākea Marine National Monument

Na'alehu Anthony, Polynesian Voyaging Society

Nai'a Lewis, NOAA/ONMS & Big Ocean Coordinator

Naomi McIntosh, NOAA/ONMS Ocean Initiatives

Natalie Andreyka, University of Hawai'i at Mānoa

Natalie Ban, University of Victoria

Nathan Bennett, University of Washington/Univ. of British Columbia

Nicole Crane, Cabrillo College/Oceanic Society

Niquole Esters, Conservation International

Noella Gray, University of Guelph

Pam Weiant, Malama Maunalua

Pascal Erhel-Hakuutu, NGO Motu Haka

Patrick Christie, University of Washington

Paul Holthus, World Ocean Council

Pelika Andrade, Nā Maka o Papahānaumokuākea

Poema du Prel, The Pew Charitable Trusts

Poki Tane Haoa, CODEIPA/Tapu Indigenous Community

Rachel Hyde, Ministry for the Environment, New Zealand

Rashid Sumaila, University of British Columbia

Read Porter, Environmental Law Institute

Rebecca Gruby, Colorado State University

Richard Quincey, Great Barrier Reef Marine Park Authority

Richard Seman, Mariana Trench MNM/Commonwealth

Risa Oram, National Oceanic and Atmospheric Administration

Robbie Greene, Colorado State University

Samantha Brooke, NOAA Fisheries

Sara Maxwell, Old Dominion University

Schannel van Dijken, Conservation International

Scott Atkinson, Conservation International

Sebastian Yancovic Pakarati, Te Mau o Te Vaikava o Rapa Nui

Seth Horstmeyer, The Pew Charitable Trusts

Sheila Sarhangi, Pew Charitable Trusts

Sophie-Dorothee Duron, NGO Motu Haka

Sue Taei, Conservation International

Supin Wongbusarakum, NOAA PIFSC/JIMAR UH

Susan White, Pacific Marine National Monuments, U.S. Fish & Wildlife Service

Taholo Kami, IUCN Oceania

Tamatoa Bambridge, CNRS CRIOBE

Tammy Davies, University of Victoria

Tammy Harp, Papahānaumokuākea Cultural Working Group

Teina Mackenzie, Cook Islands Voyaging Society/Te Ipukarea Society

Trevor Durbin, Kansas State University

Tundi Agardy, Sound Seas

Warren Lee Long, Secretariat of the Pacific Regional Environment Programme

William 'Ailā, State of Hawai'i, Papahānumokuākea MNM
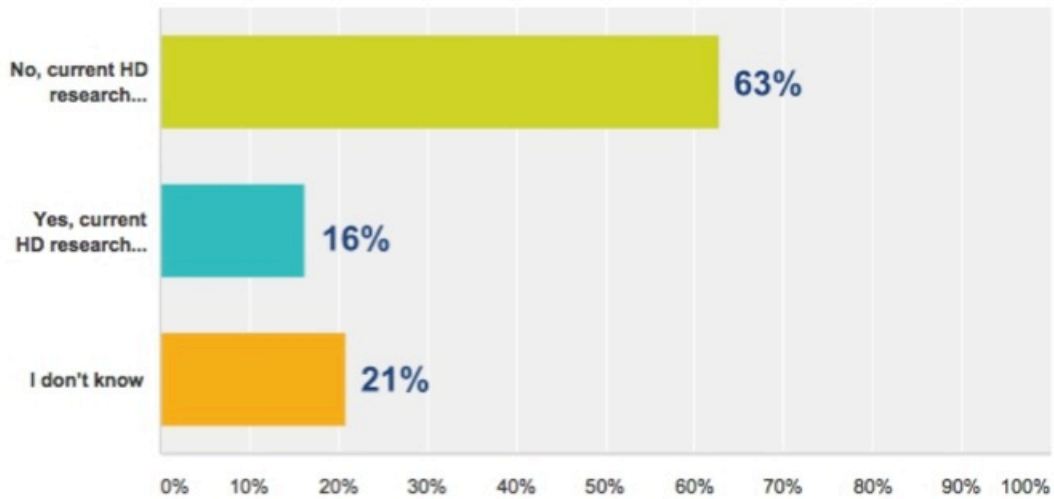
Appendix 2. Key pre-meeting survey results.

The HDTT was designed to consider outputs from an online survey of HDTT participants and other HD experts. Results are based on responses from 85 respondents and was presented on open session of HDTT. Respondents included government, NGO, academic, industry, and cultural leaders and MPA experts. The survey was submitted to UW Human Subjects Division. Respondents granted informed consent and raw data/ respondent identity will be managed as per UW regulations.

*Q10: "What are the **top three most important knowledge gaps** that relate to designing and managing LSMPAs?"*

Perceived highest priority HD issues/problems (>25% response rate) across all respondents:

Priority knowledge gap	% of total respondents selecting knowledge gap
Governance/legal/policy knowledge gaps	37%
Biological/ecological knowledge gaps	34%
Design gaps relating to how an LSMPA is best designed to meet specific management objectives or outcomes	34%
Traditional knowledge & traditional management system knowledge gaps	31%
Stakeholder engagement and participation knowledge gaps	30%
Cultural identity and cultural practice knowledge gaps	26%

University of Washington ■ Big Ocean ■ NOAA Office of National Marine Sanctuaries
University of British Columbia ■ Colorado Sate University ■ University of Guelph ■ University of Victoria

Q15: *"Do you believe that **current HD research efforts are adequate** to support effective management at LSMPAs?"*

University of Washington ■ Big Ocean ■ NOAA Office of National Marine Sanctuaries
University of British Columbia ■ Colorado Sate University ■ University of Guelph ■ University of Victoria

Q16: **"How concerned are you** about whether HD are being adequately addressed through existing management efforts and governance processes at LSMPAs?
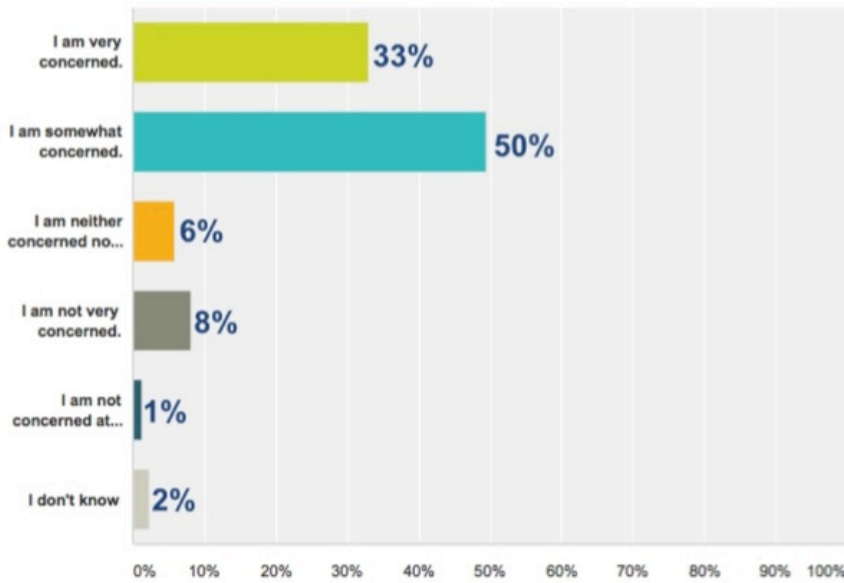
Q23: *"Which of the following outputs do you believe are the **most important products or results to be generated** out of this Think Tank?"*

Perceived highest importance (>25% response rate) Think Tank products or results across all respondents:

Think Tank product or result	% of total respondents selecting product/result
Set of 'best practices' and recommendations on integrating HD considerations into the design and management of LSMPAs	67%
Creation of a 'community of practice' regarding the HD of LSMPAs	48%
Shared research agenda that identifies priority HD research questions or projects for LSMPAs	47%
Series of on-site training workshops for LSMPAs relating to HD	29%
Summary report of the HD Think Tank session content and outputs	25%
Guidebook or manual regarding how to apply and integrate HD into LSMPA design and management	25%
One or more high-impact, open-access papers on the HD challenges, opportunities, and new directions relating to LSMPAs	24%