The Ocean Health Index Planning Phase

Contents

0.1 Understand the Requirements for Conducting an OHI Assessment

Before you begin actually conducting your assessment (explained in Phase 3), it is crucial to have a full understanding of what is required to complete a successful assessment. Conducting an assessment is a labor intensive process that requires collaboration, communication, funding, dedication and, perhaps most importantly, data. It is imperative to ensure that you have all of these components before starting your assessment.

The lead organizer of the proposed assessment may want to begin by with a stakeholder analysis to gain a better sense of who are the key players involved in ocean and coastal resource management in the study area. We recommend creating a **Working Group** with representatives from public sectors (government agencies, national and regional authorities, etc.), academic and scientific institutions, civil society, and private sector. Engaging these stakeholders will greatly enhance your abilities to collaborate and communicate across several groups. It will also give you access to a larger pool of resources and knowledge. The Working Group is in charge of: * Managing the overall assessment process * Developing a project proposal * Assembling a qualified **Technical Team** to conduct the assessment itself

Under the section **Assembling a Team** you can learn more about the skillsets required for an effective Technical Team.

Procuring funding and creating a budget that is informed by the task timeline will also aid in smart spending and decrease the likelihood that funding will run out before the process is completed.

The availability of local data is perhaps the single most important requirement for conducting an OHI+ assessment.

Index scores are a reflection of data quality, and thus, accessing the best data available is of the highest importance. Data from existing environmental, social, and economic indicators may be used. All data will be rescaled to specific reference points (targets) before being combined therefore setting these reference points at the appropriate scale is a fundamental component of any assessment. This requires the interpretation of the philosophy of each Index goal and sub-goal using the best available data and indicators. For your reference, you may look at a list of the data layers used in the 2014 Global Assessment for Ecuador at http://ohi-science.org/ecu/layers/

0.1.1 Funding

Most assessments up to date have been funded by the public sector. However, in some other cases foundations, research labs and academic institutions, and/or the private sector have provided the funding.

More specifics on funding are included under the Strategic Planning section.

The OHI program does not offer funding for assessments. However, Conservation International may be able to support assessment activities through field programs. The OHI program offers significant in kind contribution to those doing assessments: we facilitate trainings and workshops and provide technical, managerial, and communications support. For more information about the OHI program and the team refer to the **About Us** page.

0.2 Assembling a Technical Team

The success of your OHI+ assessment will depend on the effectiveness of your team. While every assessment will be done differently–it is always done according to local needs, resources, and priorities–we do have some guidance on suggested ways to go about assembling a team. Typically, team sizes have ranged from two to eight people depending on the scope of the study and the qualifications/skills of the Technical Team members. Whether members are full-time team members or contracted out depends on the assessment. On average, most teams have around 6-10 people.

Rather than a specific number of individuals, it is very important to have a team with experts in the following fields:

- Subject-matter experts to inform goal model decisions:
- Ecological analysts (Fisheries models, species and habitats, pollution, climate change, etc.)
- Economic analysts (jobs, wages, revenue of marine dependent industries)
- Socio-cultural analysts (artisanal fishing, sense of place and cultural identity)
- R analysis (statistical computing)
- Geospatial analyst (GIS or open-source software)

The OHI team can offer in-kind support (scientific, managerial, and communications), but for local technical information and support, you will require dedicated specialists. .

Effective assessments are carefully planned and require adequate project leadership and vision. Due to the multidisciplinary nature of the Index, assessments often count with participation of various stakeholder groups. Nevertheless, we recommend a key agency or group assumes the leadership of the assessment to ensure proper planning, development, and engagement throughout the assessment.

> For more information, refer to the **Task Timeline** in the the **Orientation** (link) section

0.2.0.1 Case Study: The Baltic Health Index One approach, for example, that has been very successful is to spread the goal model development across different team members. In the Baltic Health Index assessment, for example, each chosen goal has been assigned to a different "Goalkeeper," who is responsible for their technical team's development of goal models, data, as well as the appropriate stakeholder engagement. There is also a separate "Pressures" point-person and a separate "Resilience" point-person, which has proven to be an effective approach–since pressures and resilience are cross- cutting across goals, and the data for them are so important. The larger effort is then coordinated by another team member, who ensures that the goalkeepers are working toward the desired objective.

0.2.1 Data Requirements

Time-series data are needed for the four components of each goal: Status, trend, pressures, and resilience.

These are the types of data that have been used in previous assessments:

Data required for status and trend: - Fisheries and mariculture harvest - Natural products harvest - Need and ability for small-scale fishing - Coastal habitats extend and condition - Employment, wages, and revenue of coastal industries - Species extinction risks and protection of special places - Tourism and recreation information - Water pollutants

Data required for pressures: - Ecological pressures - Pollution - Habitat destruction - Species threats - Fishing impacts - Climate change - Social pressures - Governance indicators

Data required for resilience - Ecological resilience - Regulatory framework - Ecological integrity - Social resilience - Social integrity - Governance indicators

0.3 Planning and Partnering with Decision Makers

> "The Index offers a tool to engage stakeholders and decision-makers in difficult but necessary discussions, while also helping agencies fulfill their mandates" (Halpern *et al.* 2014)

For your assessment, appropriate conditions and resources will include scientific capacity, government actions (policies, barriers to action, regulatory frameworks and transparency), and civil engagement, all of which create an environment conducive to effectively conducting the assessment.

Although the Index assessments can be produced without the input of non-scientific groups (policy, civil society, etc.), *multi-stakeholder collaborative planning and decision-making are more likely to yield integrated management efforts* focusing on coordinating multi-sector activities, assessing cumulative impacts and trade-offs, and maximizing sustainable productivity. Therefore, the steps we present here propose establishing a strong multi-disciplinary management and leadership framework, and focus on developing a strong strategic plan that can guide the entire process.

Achieving healthy oceans (i.e., reaching the targets established) will require using information produced from the assessment to adopt management actions and enact policies that gradually improve ocean conditions across multiple ocean goals.

Successful assessments require leadership to help set targets and get buy-ins from various interested parties. The assessment should be an element of a larger strategy to improve ocean health and in no case should it be the sole strategy for improving ocean health.

0.3.1 Who Should Be Involved?

The assessment process will require a dedicated and interested group of individuals to lead the initiative. This core team, tasked with detailing the process, may include managers, government officials, community members, nongovernmental representatives, and others.

Stakeholder participation may vary greatly depending on the purpose of the assessment and the unique characteristics of the regions chosen for the study. Prior initiatives demonstrate that enduring success is more likely when stakeholders and communities are actively involved throughout the planning process.

The process of implementing the tool will require scientists and leaders to make politically sensitive decisions across multiple social, political and economic dimensions. We recommend creating a Working Group of individuals who are able to commit important time to the processes, and have the authority necessary to represent their organizations. A Technical Working Group can support the calculation of the goal scores and esablish a scientific nature to ensure validity.

Ensuring continuous transparency and participatory opportunities is essential to guaranteeing that the findings will be widely accepted and validated. Although a participatory process is highly encouraged, there should be a balance between stakeholder participation and keeping the process moving along a pre-established timeline. It is very important to create clear guidelines for participation, and assign specific roles and responsibilities to the team members directly involved in the process.

Participant stakeholders could include, but are not limited to, the following:

Scientific/Academic institutions:

- University research centers
- Independent or government scientific institutions and consulting firms
- Government statistics departments

Government:

- Ministry/Department/Agencies:
- Environment
- Production
- Planning
- Fisheries/aquaculture
- Tourism
- Finance
- Health
- Agencies:
- Ocean commission
- Water
- Environmental protection

Non-Governmental Organizations, Civil Society, Private Sector:

- Coastal community leaders/associations
- Fishing associations
- Tourism associations
- Conservation non-governmental organizations (NGOs)
- Ocean dependent industries (mariculture, ports,)

0.3.2 Conducting a Stakeholder Analysis

A *stakeholder analysis* can help identify who to involve in the process and how. It is important to recognize that stakeholder support and buy-in is typically stronger when there is transparency and inclusivity from the very early phases of development.

"*The Index was explicitly designed to help inform decision making by providing a comprehensive, comparable, and quantitative assessment of the range of components that drive overall ocean health*" (Halpern *et al.* 2014). Because of this, it is imperative that you understand the local decision-making process and include key influencers in your stakeholder analysis.

Below several resource you may wish to use to help you conduct your stakeholder analysis:

- Mind Tools
- Stakeholder Map
- Overseas Development Institute

Once you have conducted your stakeholder analysis, it might be useful to use a stakeholder management tool to help you prioritize your stakeholders as well as keep track of your communications with them.

0.3.3 Introducing the OHI+ Concept to Key Stakeholders

Once you have identified your key stakeholders, it is important to introduce the OHI+ framework through a lens that will promote buy-in. By referring back to your stakeholder analysis, you can create a strategy for approaching each stakeholder by finding which aspects of the benefits of running an assessment line up with each potential stakeholder's current efforts or motivations.

Below are examples of language and messaging that can be used to describe the index to various stakeholders:

- OHI+ assessments use the same framework as the global assessments, but allow for exploration of variables influencing ocean health at the smaller scales where policy and management decisions are made. Goal models and targets are created using higher resolution data, indicators, and priorities which produce scores better reflecting local realities. This enables scientists, managers, policy makers, and the public to better and more holistically understand, track, and communicate the status of local marine ecosystems, and to design strategic management actions to improve overall ocean health.
- OHI+ is open-access and free. Results of OHI+ assessments are entirely maintained by the independent groups. Our team supports OHI+ assessments by providing a suite of tools to understand the OHI, and to plan the assessment and carry it out, communicate its results, and help make the study as useful as possible for decision makers.
- This approach has been tested at several spatial scales (global, regional, national, subnational) and can be tailored to accommodate different contexts, management priorities, and data quality. The process of conducting an assessment wit the Index can be as valuable as the final calculated scores, since it provides local stakeholders with a consistent framework to combine knowledge, management priorities, and cultural preferences from many different perspectives and disciplines.
- OHI+ case studies (previously known as 'regional assessments') were completed in Brazil (Elfes et al. 2014), the U.S. West Coast (Halpern et al. 2014) and Fiji (Selig et al. 2015). These first three assessments tested the scalability of the index framework, and were done in a largely academic manner, without large engagement from local managers, and stakeholder. However, managing oceans and coasts holistically requires strong stakeholder involvement in order to achieve desired outcomes and improve ocean health. Currently, our efforts have evolved from conducting OHI+ assessments in an academic fashion to supporting independent in-country groups (such as government agencies and research institutions) as they adapt the Index framework to their own contexts, with a focus on using the findings to help inform management decision-making and track performance through time.

- Goal scores are calculated individually for each region in the assessment's study area. The ten goals are averaged together (equally by default) to form complete Index scores for each region, and then combined by offshore-area-weighted average to produce a single score for ocean health for the entire study area. Goal models and pressures and resilience components are the same for each region; only the underlying input data differ between regions.
- In global assessments (Halpern et al. 2012, Halpern et al. 2015), scores are calculated for the exclusive economic zone (EEZ) of each coastal nation and territory (two hundred twenty one regions), and then combined by offshore-area-weighted average to produce scores for all EEZs globally (study area). The Index framework has also been adapted for regional assessments at smaller scales, where data and priorities can be at finer resolution and more in line with local management needs and policy priorities.

0.4 Considerations for Joint Planning

Collaborative assessment planning is an effective approach to ensuring that the assessment will be useful for decision-making. Strengthening scientist-decision maker partnerships creates opportunities for applying research findings to improve ocean health.

- Create a work plan that has research and management objectives
- Align research with policy issues to ensure all parties are pursuing the same objectives
- Share timeline of the study – availability of results, critical decision-making dates (budgets, planning, etc.) – releasing findings strategically can increase impact
- Identify sources of high quality information and data
- Plan communications to make the information accessible to stakeholders and various decision-makers
- Funding strategy should include short and long term planning for science, communication, and action
- Fundraise with decision-makers: Align research with policy issues to ensure both parties are pursuing the same objectives
- Articulate the agreed plans in writing (scientists also share a research plan)
- Create a budget that includes a communications component to cover costs of nationally disseminating findings: providing briefings about findings and applications of if the Index to agencies, decision-makers, and managers who will use the Index
- Allocate ~15% of the budget to science outreach and communications; travel, time, meeting costs, planning, production of materials

0.4.1 Establishing the Vision

Producing the Index is not the end goal: It is merely a process toward the true end goal – achieving improved ocean health.

Index findings can be used by decision-makers to establish ocean health outcomes and management actions that have measurable impacts. Establishing a common vision and determining early in the process how the findings will be used and by whom, makes the final goal clear to the greater community (as well as to stakeholders and participants). Social, political, ecological, economic, and governance criteria should be considered when determining the goal for an assessment.

Establishing a vision is the first step, and will help identify outstanding important issues that may need to be addressed later on. Here, it is important to think about why is there interest in completing an Index assessment. For example:

- What are the existing stakeholder problems, needs, and interests that need to be addressed? Are there conflicting uses of ocean and coastal resources?
- Is the objective to use the findings to reform policies and/or improve practices?
- Are there any specific management priorities established through government mandates, private sector initiatives, and/or international treaty obligations that would especially benefit from an Index assessment?
- Are there any special management needs?
- Is there a need for stronger multi sectorial collaboration for effective management?

0.4.2 Establish Your Objectives

First, establish concrete objectives for the assessment process itself: - Engage stakeholders and create **Working group** - Identify local characteristics, priorities, and determine the goals to assess - Define spatial regions for the assessments - Establish **Technical Team** that will conduct the assessment - Discover and gather data, indicators, and other information for status, pressures, resilience, and trend for all goals to assess - Develop goal models - Establish sustainable reference points using SMART criteria (as stated in **Reference Points** in Phase 1). Your reference points should align with management targets established on a predetermined timeline. - Learn and use the *OHI+ Toolbox* - Establish communications and outreach efforts

> For this step, we recommend you use the Task Timeline presented in the **Orientation**.

Second, create short and long-term objectives highlighting intentions for the findings and iterative activities for future assessments. This refere refers to specific measurable results for your assessment's broad goals. The assessment objectives describe how much of what will be accomplished by when. The objectives should describe the future conditions after the problem has been addressed (think of the reference points), following a logical hierarchy, and illustrating their relationships with the final goal. In defining the objectives, you should also describe the intended strategies (the how) to reach the desired objectives. These strategies can range from the broad (stakeholder analysis) to the very specific (institutionalization of the Index).

0.4.3 Determining the Spatial Scale

It is important to remember that the scale of your assessment should match the scale of decision-making. Most assessments focus on political boundaries, since most agencies and organizations gather and report data at this spatial scale, however, assessments can be conducted at any spatial scale including transboundary areas and ecoregions.

Index goal scores are calculated at the scale of the reporting unit, which is called a 'region' and then combined using a weighted average to produce the score for the overall area assessed, called a 'study area'.

When deciding the spatial scale of the assessments, the Working Group should consider the following:

- At what spatial scale are most data collected?
- What are the existing governance or political boundaries that would be relevant? (governance/decision-making boundaries are needed if the Index will be useful for management)
- If managers and/or policy makers are interested, what needs to be measured and why? At what scale do they work?

These questions are important to keep the Index assessment relevant but ultimately data availability will be the most important factor when defining boundaries for the Index.

There is no single criterion for identifying the scale of the study area since the Index can potentially be used at all scales using data, parameters, interests, and goals at the scale of the study.

0.4.4 Establishing Your Strategy

Your strategy should be a results-based planning document that details the results and objectives that will be achieved through the assessment and the specific activities, human resources, and funding needed to achieve them.

Having an assessment strategy ensures that financial and human resources are used systematically and logically to accomplish the intended objectives.

Those involved in developing the assessment should use a planning approach that is familiar and comfortable to them. All strategies should at a minimum answer these key questions regardless of the exact approach or timeline:

- What do we want to achieve by developing an Index assessment?
- Who will use the strategy, and for what purposes?
- Who will be involved?
- When will the assessment be completed?
- What funding and support are available?

The assessment planning approach should be appropriate to the local context. It is important to carefully consider the physical, social, political, economic and environmental characteristics of the study area to develop a realistic and achievable plan. The process we recommend in this guide can be followed step by step, but it is better if it is adapted to local needs.

It is important to create a detailed planning timeline, detailing specific deadlines and milestones to help organize and coordinate production.

Tools to help you develop these planning documents can be found at the following sites:

- Mind Tools
- Kepner Tregoe
- Project Smart

0.4.5 Costs and Financial Planning

Funds are needed for: - Human resources (**Technical Team**) - Workshops, trainings, meetings, stakeholder engagement, and travel - Research (data gathering, spatial and statistical analysis, model programming) - Outreach and communications (including publications)

As the budget is developed, consideration should be given to the source of financing for the assessment. The budget should provide a detailed estimate of all the costs to complete objectives and activities. It might be helpful to separate the budget into the three Phases of the Index process. The budget should allow the satisfactorily completion of all the activities to accomplish the objectives. Given the scientific nature of the Index, engaging qualified human resources may be the highest cost involved in developing an assessment.

It may take up to eighteen months to complete an assessment, therefore, creating a financing plan is recommended to determine how the expenses in the budget will be covered over time.

It is important to understand tasks and commitments made under contract, including the disbursement time frame, financial reporting schedule, and possible renewal options. Also consider future finances for long-term objectives.

When identifying funding sources, make sure the team understands the tasks needed to secure and maintain any contracts and/or grants awarded. As part of identifying roles and responsibilities in the step above, it will be important to choose a person or group who will be responsible for tracking and monitoring the finance plan (the Working Group could be in charge of this step).

Depending on the local context fundraising can be an important challenge to overcome. Foundations, NGOs, research institutions, and/or the private sector could serve as donors. It might be beneficial to design the financing plan in a "modular" way, so that key pieces can be pulled out from the plan to respond to specific funding opportunities.

> Note: it is difficult for us to provide exact figures on the cost of an assessment because the costs vary widely depending on the local context and the scope of the assessment. Assessments have ranged from ~US$250,000 to US$2 million.

0.4.6 Adaptive Management

> "If the Index were adopted as a management tool, recalculating scores regularly could reveal whether management actions had the intended effect on both overall ocean health and particular goals" (Halpern *et al.* 2014).

Findings will help inform decision-makers about management actions and policies. However, understanding the effect of management actions requires iterative studies. Therefore, we strongly recommend you plan on conducting repeated assessments in the future to continuously adapt management strategies. Future assessments may not require as much time or funding as the initial assessment, since the focus is to update data and reference points. For this reason, management plans must include a thorough mechanism to track any changes (i.e. data and indicator collection) related to the assessments activities.

A repeatable process of Index assessments can help determine how well the management interventions are accomplishing the established targets. Through this process, the design, management, and monitoring of the project should be used to continually gather information on the effectiveness of its decision-making process. As information is gathered and assessed, it is possible to recommend policy and management reforms as needed, providing a flexible decision-making process that constantly improves. This will provide key information to decision-makers so they can adapt their management strategies over time, in a way that increasingly moves closer to the target.

Continuous monitoring of the strategy will also help improve resource allocation, so the strategies remain cost-effective.