U.S. CORAL REEF TASK FORCE

WATERSHED PARTNERSHIP INITIATIVE STRATEGY

SOCIAL AND COMMUNITY ENGAGEMENT FOR IMPROVED CORAL REEF WATERSHED

Guided Worksheets for Building Social and Community Engagement Associated with Implementing Priority Watershed Projects

The U.S. Coral Reef Task Force's Watershed Partnership Initiative (WPI) was codified by Resolution 28.1[1] in 2012 and the Watershed Partnership Initiative Strategy[2] was completed in 2016, then revised in 2019 to guide implementation activities across the priority watershed sites of the WPI. The Strategy specifically includes the following targeted objectives focused on social and community engagement:

- Empower and increase the capacity of the local governments and communities to engage in watershed management practices that are protective of coral reefs for the long term;
- Increase the likelihood of long term watershed management success via assistance in institutionalizing local government and community leadership involvement;

This set of guided worksheets was developed to assist watershed coordinators with measuring progress on these objectives during implementation of priority projects identified from their watershed management plans. Since each watershed has a different context and no two communities are alike, these worksheets were developed as a tool for the watershed coordinators to identify and engage with the right stakeholders in their watershed to improve the likelihood of long-term success of the WPI's collaborative work to implement their watershed management plans. This set of worksheets should be used to specifically identify the stakeholder groups associated with each priority project to ensure that the local entity(ies) who will eventually inherit the results of the WPI activities are engaged from the beginning of implementation and are empowered to take on the long-term activities associated with maintaining or perpetuating the actions taken to improve the watershed. The worksheets are designed to be used for a single priority project, and the use of these worksheets should be repeated as implementation of new priority projects for the watersheds are conducted. Below is an overview of the 3 worksheets:

Worksheet 1: Defining your Stakeholders

- Understand the types of stakeholder groups and sub-groups in a watershed partnership site
- Identify the appropriate levels of engagement with each stakeholder group so that priority projects can be effectively and meaningfully implemented in the watershed partnership sites.

Worksheet 2: Developing your Theory of Change

- Understand what a theory of change is and how it can be used as a reference and logical framework for meeting social outcomes;
- Understand how to use a theory of change to link your strategies, actions, and outcomes with your objectives and goals.

Worksheet 3: Stakeholder Engagement Objectives and Indicators

- Identify stakeholder engagement objectives related to implementing the priority projects for your watershed.

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[1] Resolution 28.1: Watershed Partnership Initiative (2012)
[2] Watershed Partnership Initiative Strategy (2019)

- Identify actions to ensure local government and community leadership involvement for watershed restoration projects to increase the likelihood of long-term success and sustainability.
- Identify indicators for the stakeholder engagement objectives of priority projects and contribute to the common WPI indicator: _# of empowered local stakeholder groups who willingly assume long-term ownership of a portion of the watershed restoration efforts._

The first step for using these worksheets is to review your Watershed Management Plan's (WMP) goals and/or recommendations and identify priority projects for implementation that include or would benefit from engagement efforts with stakeholders. List the priority projects below, then for each project complete worksheets 1-3.

Master List of Priority Projects for your WMP

1.
2.
3.

Master List of Stakeholders:

Please list the stakeholders that are associated with the priority projects listed above. Consider updating this master list after completing Worksheet 1 for each priority project. (Examples include: local governments, local non-profits, community groups, homeowners associations, academic or research institutions). Write specific names of each of the stakeholder groups.

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Priority Project: Date:

Purposes of Worksheet 1:
- Understand the types of stakeholder groups and sub-groups in a watershed partnership site.
- Identify the appropriate levels of engagement with each stakeholder group so that priority projects can be effectively and meaningfully implemented in the watershed partnership sites.

A community can be defined in many ways, for example:

Geographically (e.g., the people who live in your watershed boundaries, island residents)

Activities / Livelihoods (e.g., fishers, tour operators, divers and snorkelers)

Members of a group (e.g., members of an organization, indigenous peoples, local government)

Interests and involvement (e.g., those who participate in trash pick-ups, attend community meetings)

The communities you engage with for your watershed partnership, and sub-groups within a community, can also be considered "stakeholders." For the rest of these worksheets, the term stakeholder will be used to refer to the various communities or individuals who use the watershed directly and indirectly, and those who are affected by management or changes of the watershed (see Bryson, 2004 for a detailed discussion about stakeholders). It also includes those who are involved in or have influence on management in some way, including decision-making, planning, and implementing management activities.

1. Identify stakeholders for your priority watershed project (list all relevant stakeholders below; refer to the master list of stakeholders from the overview page)

Remember to include:
- *People who directly depend on the watershed for their well-being and are directly impacted by changes in the watershed (e.g., fishers, farmers, local residents)*
- *People who make indirect use of the watershed (e.g., tourists) or whose actions may affect the resources (e.g., travel agents, coastal developers)*
- *Organizations with direct responsibility for managing activities affecting the watershed, or with an interest in the direct and indirect users (e.g., government agencies, public officials, NGOs, businesses, hotel operators)*
- *Local government and community leaders who will be ultimately responsible for long-term ownership of the project*

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2a. From the list above of the stakeholders you would like to engage in priority watershed management activities, identify if there are any important sub-groups to engage individually, or if the stakeholder group can be engaged as a community. (*use Table 1 at the end of the worksheet*)

Example:
Stakeholders = <u>Local watershed residents</u>

Sub-groups who may need to be engaged independently:
      Ex 1: Fishermen, farmers, village council, church groups, piggery owners, village youth, women's group…
      Ex 2: Homeowner's association, boater's association, community volunteer groups…

One way to help think about how best to engage different groups is by mapping out their relative interests in watershed management and influence over any management decisions and activities. Plotting relative levels of stakeholder interest and influence can help visualize clusters of community groups and individuals you may want to engage in different ways (Figure 1). This type of exercise was developed in the late '90s (Bryson, 2004) and has been modified by others for use in stakeholder assessment (see Reed et al., 2009).

2b. Next, place each stakeholder identified in Step 1 and Step 2a on the grid below in terms of their relative interest in and influence over watershed management.
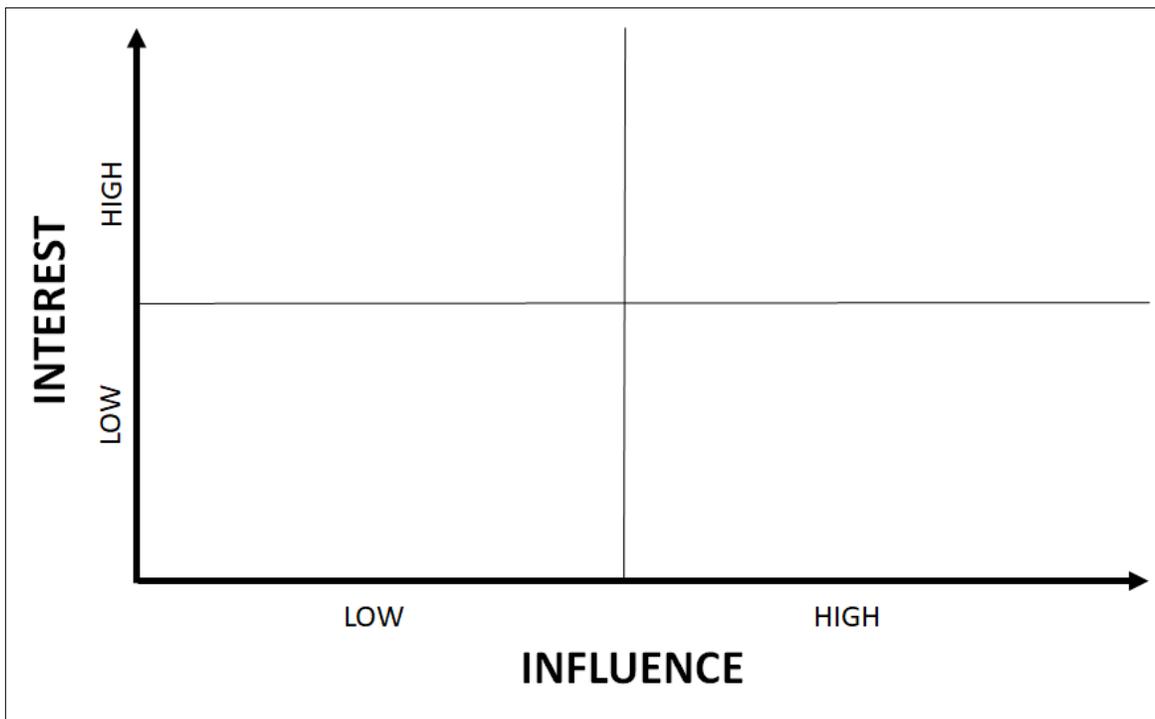

Figure 1. Stakeholder analysis based on interest and influence.

3. Identify the appropriate level for engaging each stakeholder or sub-group.

The International Association for Public Participation developed a "spectrum of participation" which identifies different levels of stakeholder engagement, depending on the goals, time frames, resources, and levels of concern in the decision to be made (https://www.iap2.org/?page=pillars).

The interest by influence grid can be used to help identify which engagement level is appropriate for each stakeholder group (Figure 2), an approach that has been used by the Department of Interior Collaboration Clinic trainings, and FAO Regional Office for Asia and the Essential Ecosystem Approach to Fisheries Management training course.
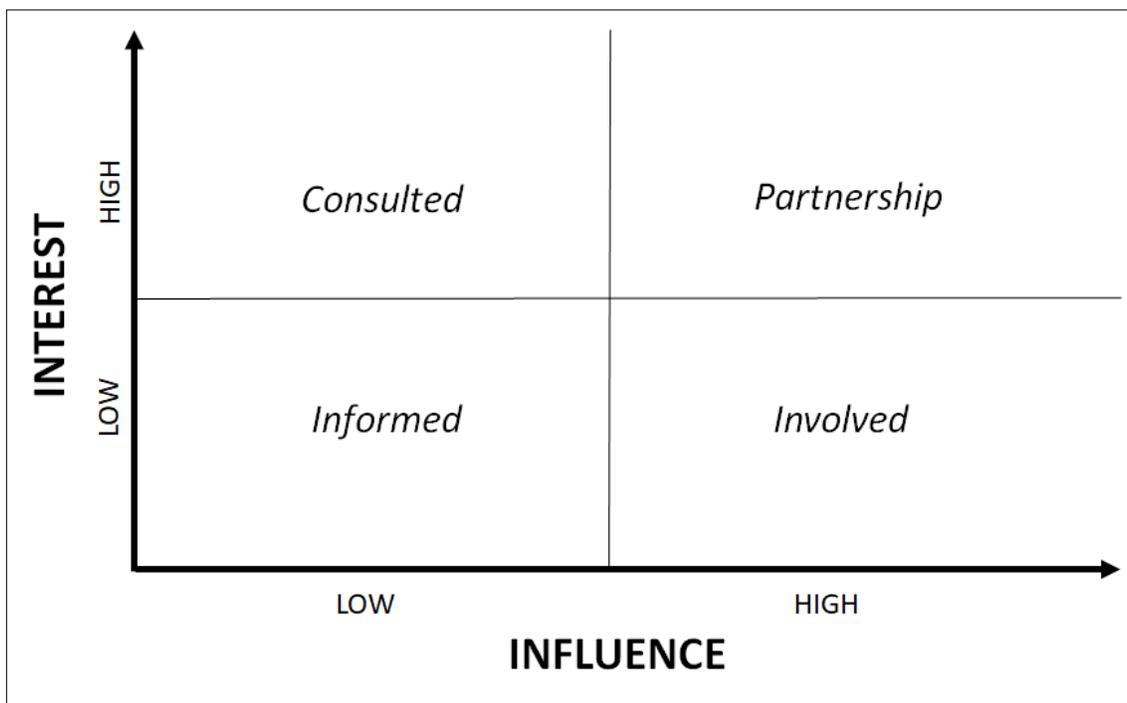

Figure 2. Engagement levels overlaid on the interest by influence grid. These levels serve as a starting point for thinking about how best to engage with different stakeholders, based on their placement on the grid.

We have tailored the levels of engagement for use in coral reef watershed management:

Informed
For stakeholders with low involvement and influence, simply keeping them informed may be satisfactory. They should be made aware of Watershed Partnership Initiative (WPI) activities, goals, and objectives, but will not play a direct role in any activities.

Consulted
Stakeholders with high interest but low influence are often the most affected (i.e., have a high stake in the watershed management process), but do not have power or voice. Consulting with these stakeholders can help bring their ideas into the planning process, even though they may have little

decision-making authority or ability to engage in implementation. Through the engagement process, it is possible that some might find ways to gain influence, which would move them into the partnership category.

Involved
Stakeholders with low interest and high influence need to be involved as they could be potential supporters and could use their influence to support the process. They also have the ability to significantly affect your projects if they are not supportive of your watershed activities. It may be important to convince them of the importance of the project for them and their community/ stakeholder groups. You may also identify ways to increase their interest in the project, moving them into the partnership quadrant, to ensure that your watershed initiatives are successful.

Partnership
Those with high interest and high influence are key stakeholders for watershed management success. They will be important to engage not only as project partners, but also as potential co-owners of watershed management. For those who already support watershed initiative activities, they need to be kept motivated and empowered as "allies." Those who do not already support the initiative but are highly interested and influential will need to be engaged to understand what is driving areas of disagreement, and whether there are misunderstandings that need to be corrected or areas of consensus that are opportunities to work together productively. Engagement with these stakeholders will need to involve greater levels of collaborative decision-making and consensus-building, which is much more time and resource intensive than simply keeping them informed.

Empowered
A final level of stakeholder engagement is "empowered" and a goal of the WPI is to build capacity within the subset of stakeholders at the Partnership level to empower them to willingly accept ownership of ongoing watershed management activities. These stakeholders will play a primary role in planning for the WPI, will have ultimate control over decision-making, and will take the lead on implementing activities. Stakeholders must be engaged on the partnership level prior to willingly assuming ownership or co-ownership of a portion of the watershed restoration effort. These stakeholders will be critical for the sustainability of project successes.

4. Review your work and adjust as appropriate.
Examine where you placed the stakeholder groups or relevant sub-groups on the grid in Step 2. Does this align with the description of what might be needed for engagement? Do you need to rethink placement or groupings of any stakeholders? Refine your placements and fill out the level of engagement in Table 1.

Example:

Step 1. Stakeholder group	Step 2a. Relevant sub-groups	Step 3. Level of engagement (e.g., informed, consulted, involved, partnership, empowered)
Local watershed residents		
	Homeowners association	Partnership
	Fishermen	Involved
	Boaters association	Consulted
	Community volunteer groups	Involved

Use the table below for capturing your work for Steps 1, 2a and 3 as you determine the level of engagement for the various stakeholders and sub-groups in your watershed as they relate to this priority project.

Table 1.

Step 1. Stakeholder group	Step 2a. Relevant sub-groups	Step 3. Level of engagement (e.g., informed, consulted, involved, partnership, empowered)

Next Steps:
Worksheet 2: Developing your Theory of Change, will provide you with an understanding of a theory of change, and define its components: strategies, actions, outputs and outcomes. This worksheet provides examples for how a theory of change may be used to guide your work and asks you to develop strategies, actions, outputs and outcomes for this priority project.

Priority Project: Date:

Purposes of Worksheet 2:
- Understand what a theory of change is and how it can be used as a reference and logical framework for meeting social outcomes;
- Understand how to use a theory of change to link your strategies, actions, and outcomes with your objectives and goals.

Define theory of change

A theory of change (ToC)[1] describes how your project will lead to your desired outcomes. A ToC is a visual illustration or description of a causal logic or causal links. In the case of the Watershed Partnership Initiative (WPI), we will use a ToC to show how a strategy and implementing actions result in outputs and outcomes that lead to achieving objectives and goals for your priority project. Developing and revising a ToC is an iterative process that involves appropriate stakeholder groups identified in Worksheet 1.

Strategy(ies):

Actions ➡ **Outputs** } **Outcomes**

Figure 1: Theory of change and its basic components.

Components of a theory of change and examples

A theory of change could be as simple or as complex as you and your stakeholders deem appropriate. In general, it depends on a situation analysis and the objectives, needs and priorities identified by relevant stakeholder groups. A ToC minimally includes: a strategy, actions, short-term outputs and long-term outcomes. These definitions and examples are tailored towards applying them to the WPI.

Strategy: A broad course of actions with a common focus that has been designed (either alone or with other strategies) to achieve desired outputs and outcomes aligned with implementing a priority project.

Examples:
- *Adopt and maintain erosion control Best Management Practices (BMPs) on agricultural roads through working with farmers and landowners to reduce sediment impacts to coastal waters*
- *Foster citizen science effort to fill coastal water quality data gap through quality controlled volunteer monitoring program*

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[1] A theory of change is often used interchangeably with the causal pathway, logic model, results chain and conceptual models that emphasize how to achieve certain results.

1. **Using the guidance and examples above, list the <u>strategy</u> or <u>strategies</u> that could be employed to achieve results for your priority project here.**

Actions: These could be management, community, or collaborative actions that directly implement recommendations from a Watershed Management Plan (WMP), address the WPI's objectives, or that build enabling conditions to meet those objectives. In certain sites, unless actions to enable conditions or to remove constraints are first implemented (improving planning, increasing access to information, facilitating stakeholder input, building commitment of federal and local agencies, etc.), the program's ability to make progress toward objectives will be limited. Actions can also be referred to as "inputs" or "activities".

Examples:

- *Identify and reach out to groups such as the Soil and Water Conservation District or Agricultural Co-ops to determine capacity and interest in assisting with promotion of erosion control BMPs for roads*
- *Develop hands on training module using local equipment operators as mentors on best practices for farm road erosion control practices.*
- *Identify and convene organizations and individuals interested in water quality monitoring*
- *Fundraise for support of program development*
- *Draft and submit Quality Assurance Project Plan (QAAP) to the Dept. of Health*
- *Develop supporting data management, SOPs, training materials, lab set-up etc.*
- *Train volunteers and institutionalize organizational structure*

2. **Using the guidance and examples above, list the <u>actions</u> needed to implement each strategy associated with your priority project here.**

Outputs: Results that are brought about by project activities in the short term. These are observable preliminary or intermediate results of completed actions. The results occur early along pathways to final ecological and social outcomes and are particularly important milestones that are deemed necessary precursors to achieving desired ecological and social outcomes. The outputs provide evidence for whether or not the theory of change is playing out as expected, may be objectives and sometimes goals of a project, and

also serve as feedback regarding areas of success or adjustments. In some cases, an output needed to achieve the desired ecological outcome may be a social outcome.

Examples:

- *Network and reach into agricultural community is leveraged through partnerships expanding the adoption of farm road BMPs*
- *Adoption of agricultural road BMPs is high, since the messenger is locally based and training provides experiential learning opportunity.*
- *Targeted stakeholders are identified so focused effort can be applied to the steps needed for rain garden design and installation.*
- *Ability to design and install a rain garden is built among land managers, landscape developers and communities as a result of training, related hands on experience,and resource materials provided.*
- *Team is identified and funded to create needed operating procedures, training materials etc. and management structure.*
- *Quality Assurance Project Plan (QAAP) is approved by State.*
- *Trained and managed volunteer program is collecting quality assured data.*

3. **Using the guidance and examples above, list any** <u>outputs</u> **that will result from implementing the actions associated with the strategies for your priority project here.**

Outcomes: Major measurable or observable long-term results of project strategies achieved within the scope and time frame of a project. Often the outcomes are the goals and objectives of a project. They could be ecological targets for conservation, human well-being benefits, or programmatic goals of the WPI process.

Examples:

- *Agricultural road erosion control BMPs are widely adopted and maintained as a normal practice reducing the introduction of sediment into coastal waters*
- *Polluted runoff from coastal properties is treated and infiltrated in rain gardens by a network of capable individuals and groups who build out current sites and encourage adoption of rain gardens in additional public and private spaces.*
- *Coastal water quality baseline is established, source detection of pollutants enabled and engaged.*

- *Increased community capacity to conduct quality citizen science.*
- *Empowered community advocates for healthy oceans.*

4. **Using the guidance and examples above, list any <u>outcomes</u> that could be used to measure the long-term results of implementing the strategies of your priority project here.**

Strategy:

Foster citizen science effort to fill coastal water quality data gap through quality controlled volunteer monitoring program

Actions

Identify and convene organizations and individuals interested in water quality monitoring

Fundraise for support for program development

Draft and submit QAPP to the Dept. of Health

Develop supporting data management, SOPs, training materials, lab set-up, etc.

Train volunteers and institutionalize organizational structure

Outputs

List expected output based on respective work plans

By end of 2019

Team identified and funded to create needed operating procedures, training materials and management structure

By end of 2021

Quality Assured Project Plan is approved by State

Trained and managed volunteer program is collecting quality assured data

Outcomes

Coastal water quality baseline is established, source detection of pollutants enabled and engaged

Increased community capacity to conduct quality citizen science

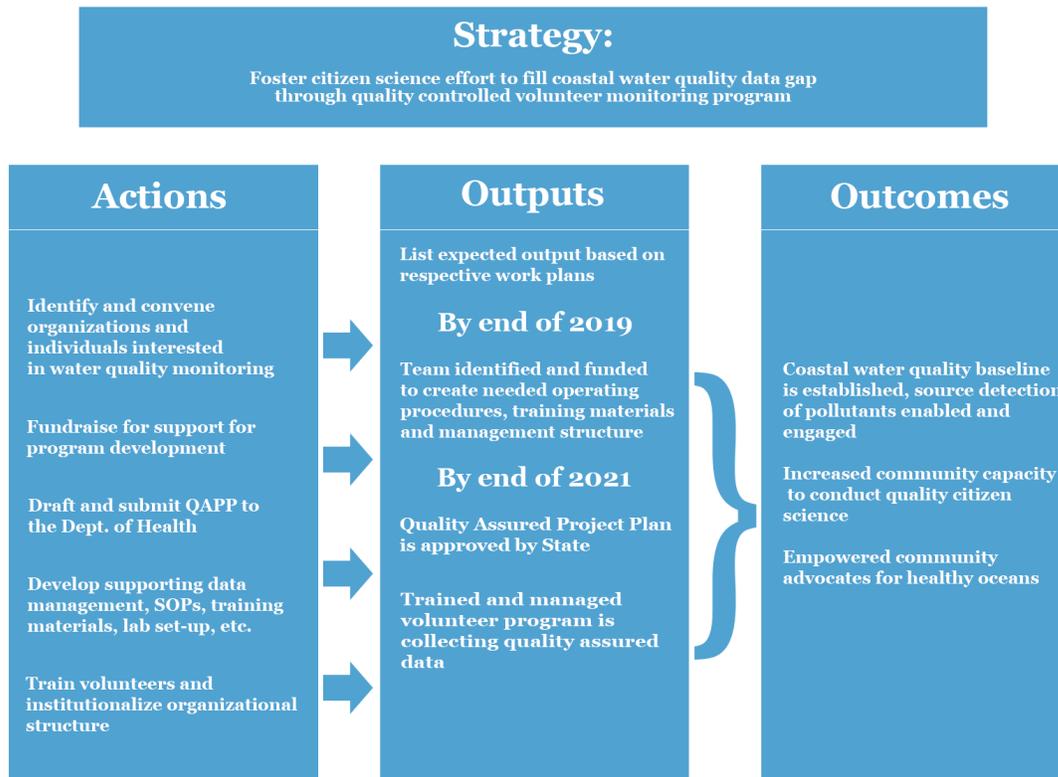Empowered community advocates for healthy oceans

Figure 2: Example of a theory of change

Usually several actions associated with a particular strategy are necessary to achieve desired outcomes, and it may be helpful to show them in chronological order. By doing so, one can identify a series of causally linked results associated with completing these actions, which will be the precursors associated with achieving the short-term outputs or the long-term outcomes in your ToC. Key outputs are good points along your ToC to use as milestones for measuring progress towards meeting your desired outcomes.

Next steps:
Worksheet 3: Stakeholder Engagement Objectives and Indicators, will help you identify stakeholder engagement objectives related to implementing the priority projects for your watershed, and develop indicators to measure involvement of community leaders and/or local government officials and other key stakeholders in the priority projects in your watershed. An intended social outcome of the WPI is to empower and increase the capacity of the local governments and communities to engage in and willingly assume ownership of ongoing watershed management practices that are protective of coral reefs for the long term. Achieving progress towards ownership at the local level can serve as an indicator of sustainability for the WPI.

Priority Project: Date:

Purposes of worksheet 3:
- Identify stakeholder engagement objectives related to implementing the priority projects for your watershed.
- Identify actions to ensure local government and community leadership involvement for watershed restoration projects to increase the likelihood for long-term success and sustainability.
- Identify indicators for the stakeholder engagement objectives of priority projects and contribute to the common WPI indicator: _# of empowered local stakeholder groups who willingly assume long-term ownership of a portion of the watershed restoration efforts._

Documenting stakeholder engagement objectives and indicators for measuring involvement of local stakeholders
The long-term success of implementing a watershed management plan rests in the hands of the entities who will take ownership of the activities that are carried out within the watershed. Many times, the ultimate owner will be community leaders and/or local government agencies. However, the context within specific watersheds and certain projects may identify other entities that will eventually be responsible for ensuring their watersheds remain healthy after these priority projects are completed (e.g., ongoing maintenance of BMPs implemented). The WPI must be sure to engage with local entities and incorporate them into project planning to ensure the success of the project and the long-term sustainability of the activities. During project planning, an objective or multiple objectives are identified. A best practice for establishing Objectives is to make them SMART -- Specific, Measurable, Achievable, Realistic, and Timebound.

Objective: A formal statement detailing a desired outcome of a project.

If the project is well conceptualized, designed, and implemented, realization of a project's objectives should lead to the fulfillment of the project's goals -- these goals will vary from site to site but will be related to the recommendations in the watershed management plan. Projects can have multiple key steps towards achieving the end goal, and objectives can be developed for steps leading to outputs as well as outcomes. Not all steps need an objective however, and objectives representing the milestones of your project could help show progress toward the goal. To measure progress, indicators should be developed for each of the objectives.

The WPI aims to measure the success of building an informed and engaged community[1] and ensure the sustainability[2] of the actions taken in the

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[1] See USCRTF Resolution 28.1; Statement and Decisions #3.
[2] See Watershed Partnership Strategy; Section 3. D. d. iv.

priority watersheds through institutionalizing local government and community leadership and empowering long-term involvement of key stakeholders. Since the objectives will vary by location but a common goal for the WPI is to achieve long-term sustainability of ongoing watershed management activities, a common indicator for the WPI has been identified: <u># of empowered local stakeholder groups who willingly assume long-term ownership of a portion of the watershed restoration efforts.</u> The USCRTF can roll up this indicator and track it across the priority sites of the WPI to show that efforts have been made to sustain the long-term success of watershed restoration activities by engaging with and empowering important community stakeholders.

Indicator: A specific, observable, and measurable accomplishment or change that shows the progress made toward achieving a specific objective.

Indicators can be identified for many steps of project implementation and used to track progress. Like objectives, not every step needs an indicator but indicators for particular objectives addressing key steps will serve to provide evidence of how the project is progressing toward the goal. By making the project objective SMART, it makes it easier to select an appropriate indicator. Using an objective identified for the project in Guánica, Puerto Rico, here is an example of how it can be converted to a SMART objective and how to identify relevant indicators:

Objective: *Reduce maintenance farmers perform on dirt roads.*

<u>SMART</u> Objective: ***By 2020,*** *implement appropriate BMPs on dirt roads to reduce the amount of maintenance time farmers need to perform.*
⇒ Indicators:
# of BMPs implemented
# of hours or days spent maintaining dirt roads

Table 1. Identification of stakeholder objectives and engagement for watershed restoration using an example project from West Maui, HI.

Project Name	Location	Stake-holder Groups Engaged	Level of Engagement	SMART Stakeholder Objectives	Actions	Outputs	Indicators	WPI Indicator: # of empowered stakeholder groups*	Ecological Outcome
Citizen Science Water Quality Monitoring Initiative	West Maui, HI	Community Volunteers	**Empowered** *(Choose one: informed, consulted, involved, partnership, empowered)*	40 committed volunteers trained in quality assured coastal sampling to meet annual sampling needs by the end of 2021.	• Develop training materials • Hold 12 hour training sessions for volunteers in two regions	With minimal support, 40 volunteers have the capacity and commitment to conduct sampling and lab work at 39 sites every 3 weeks	• # of trained volunteers engaging in ongoing sampling • # of trained volunteers observed advocating for ocean health	1 group (comprised of 40 Volunteers)	*Water quality impairments can be addressed to restore water quality now that long term coastal water quality trends are shared widely and understood.*
		Local Groups	**Empowered**	Three local groups pioneer steps needed to implement citizen science water quality initiative by July 2017	• Plan, fund and hold strategic planning session to develop goals, roles and guidelines for cooperation • Secure funding • Collaboratively develop protocols	Highly functional steering committee understands roles and goals to effectively manage citizen science initiative	• # of months of operational funding secured • Dept. of Health approved Quality Assurance Project Plan complete	3 local groups	
		County Government	**Partnership**	County council and Office of Econ Dev't have appreciation for benefits to the community brought by the Initiative by 2021	• Educate County council & employees on water quality findings through presentations	• County support is secured and reflected in meaningful funding received annually • Our data is used by the County to inform decisions	% of water quality initiative annual expenses provided by County funding	N/A	

1. Using information from Worksheets 1 and 2, and working within the context of your priority project, this worksheet will prompt you to identify a SMART objective for key stakeholders that should be engaged in order to achieve that objective. Since these projects are tied to making changes that should ultimately result in ecological outcomes, a space is provided for you to identify the ecological outcome associated with the project. Lastly, to ensure the success and sustainability of the project, it's important to identify actions to institutionalize the long-term involvement of local government and/or community leaders. The table above captures this information using an example of a priority project in West Maui, HI.

For this priority project, identify the components of the table below:

Project Name	Location	Stake-holders Engaged	Level of Engagement	SMART Stakeholder Objectives	Actions	Outputs	Indicators	WPI Indicator: # of empowered stakeholder groups*	Ecological Outcome

Congratulations! For this priority project, you've identified your stakeholder engagement objectives, and linked them to the strategies identified in Worksheet 2 with specific actions to be done with target stakeholder groups identified in Worksheet 1. You've also identified actions to institutionalize local government and community leadership and involvement for your priority watershed restoration projects. These activities should increase the likelihood for long-term success and sustainability of the watershed restoration efforts in your watershed.

To contribute to the WPI indicator, if you are a watershed coordinator for a WPI priority site, please provide a copy of your table to the Metrics Subcommittee Chair[3] upon completion of this worksheet. The number of empowered local stakeholder groups who willingly assume long-term ownership of a portion of the watershed restoration efforts will be compiled and tallied across the WPI sites.

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[3] Susie Holst, NOAA Coral Reef Conservation Program; susie.holst@noaa.gov

In addition to the guided worksheets developed to help watershed coordinators think through how best to engage the various stakeholder groups in their communities, this appendix provides contact information for social science experts who are willing to provide input and guidance to the coordinators to put these worksheets into practice. A comprehensive list of references related to stakeholder engagement is also available below.

Social Science Subject Matter Experts

Contact Information	Physical Location	Expertise:
Arielle Levine Agency: San Diego State University Title: Professor, Geography Department Phone: 619-594-5600 Email: alevine@sdsu.edu	San Diego, CA (San Diego State University, Dept of Geography)	Arielle Levine was a social scientist with NOAA's Coral Reef Conservation Program for 10 years, with a regional focus in the Pacific Islands region. She has expertise in socioeconomic assessments, participatory mapping, traditional ecological knowledge, and community engagement in fisheries management and marine conservation.
Supin Wongbusarakum Agency: Sustaining Nature Title: Principal Phone: 808-463-4686 Email: supinsustainingnature@gmail.com	Honolulu, HI	Supin has worked as a social scientist and program lead focusing on the human dimensions of nature conservation and social resilience. Over the last twenty years, she has been managing and directing projects; providing technical assistance; developing capacity; and conducting monitoring, evaluation and social scientific research. Her expertise includes human well-being in resource management and conservation, climate adaptation and resilience. Using an ecosystem approach and bio-cultural disciplines, she works with communities, resource stewards, and multi-disciplinary partners to balance ecological health with sustainable livelihoods and cultural integrity.
Peter Edwards Agency: Pew Trusts Title: Officer, Program – Research and Science Phone: 202-540-6905 Email: pedwards@pewtrusts.org	Washington, DC	Peter served as the Economist and Social Science Coordinator for the Coral Reef Conservation Program. He has over twenty (20) years of academic training and professional experience in tropical ecology, environmental monitoring, coastal zone management and environmental consultancy. His activities involved leading a team responsible for implementing the social science component of the program's National Coral Reef Monitoring Plan. This component of the monitoring plan included conducting household surveys of residents in U.S. coral reef jurisdictions.

Contact Information	Physical Location	Expertise:
Fatima Sauafea-Leau Agency: NOAA Fisheries, Pacific Islands Regional Office (PIRO), Habitat Conservation Division Title: Fishery Biologist Phone: 684-633-5326 Email: fatima.sauafea-leau@noaa.gov	Pago Pago, American Samoa (NOAA PIRO Field Office)	Fatima has done several community management work and outreaches for American Samoa since the beginning of the Community-based MPA Program under the Department of Marine and Wildlife Resources in 2001. She facilitated and coordinated the watershed project for Faga'alu in 2010 that developed the Faga'alu watershed management plan. She also helped in the development of the Amouli Community Resiliency Plan in 2012. She is currently working for NOAA Fisheries Pacific Island Regional Office (PIRO) in the Habitat Conservation Division as a Fishery Biologist and the NOAA Coral Reef Conservation Program (CRCP) as the Fisheries Liaison for American Samoa. She works to assist the local management community with its coral reef management initiatives and also to evaluate Federal actions in American Samoa for impacts to US trust resources, especially Essential Fish Habitat (EFH).
Kirsten Leong Agency: NOAA Fisheries, Pacific Islands Fisheries Science Center Title: Social Scientist Phone: 808-725-5398 Email: kirsten.leong@noaa.gov	Honolulu, HI	Kirsten Leong has worked in human dimensions of natural resource management for over 10 years, specializing in stakeholder engagement and strategic communication. She has published research in areas such as governance, public participation, and managing human and animal behavior. Current research includes oral histories of artisanal fisheries, broadening ecosystem-based fisheries models to better represent coupled human and natural systems, and communicating risks about sources of seafood and interactions with protected species.
Mary Allen Agency: NOAA Office for Coastal Management, Coral Reef Conservation Program (CRCP) Title: Social Scientist and CRCP Socioeconomics Coordinator Phone: 240-533-0784 Email: mary.allen@noaa.gov	Silver Spring, MD	Mary is a social scientist and socioeconomics coordinator for the Coral Reef Conservation Program. Her expertise is in the human dimensions of coastal-marine resource management, which examine people's values, attitudes, norms, behaviors, and other social psychology topics. Mary has a strong background in indicator and survey development, experimental design, advanced statistics, and integrated social-biophysical research. She has conducted research on topics including Marine Protected Area impacts on fishing communities; procedural justice and resource allocation; community adaptation and resilience; ecosystem services; social carrying capacity; trade-offs and limits of acceptable change.

References

<u>Stakeholder engagement</u>

Bryson, John M. 2004. What to do when stakeholders matter: Stakeholder identification and analysis techniques. Public Management Review 6 (1): 21-53. https://doi.org/10.1080/14719030410001675722

Edmunds, David and Eva Wollenber. 2001. A Strategic Approach to Multi stakeholder Negotiations. Development and Change 23: 231-253. http://www.cifor.org/online-library/browse/view-publication/publication/818.html.

Environment Canada. "Tools of Change: Proven Methods for Promoting Health, Safety and Environmental Citizenship." [Online] Available: http://www.toolsofchange.com/en/tools-of-change/

International Association for Public Participation. "Core Values, Ethics and Spectrum -- The 3 Pillars of Public Participation." 2018. [Online] Available: https://www.iap2.org/page/pillars

International Union for the Conservation of Nature. "A Reef Manager's Guide to Fostering Community Stewardship: Helping People Work Together to Improve the Outlook for Coral Reefs and Communities." [Online] Available: https://www.coris.noaa.gov/activities/stewardship/resources/Managers_Guide_Reef_Stewardship_ebook_smallest.pdf

Hawaii Department of Land and Natural Resources. "Getting Involved in Caring for Hawaii's Coastal Resources: A Community Handbook." 2006. [Online] Available: http://dlnr.hawaii.gov/makaiwatch/files/2014/12/Community-Guide-Book.pdf

National Audubon Society. "Tools of Engagement: A Toolkit for Engaging People in Conservation." 2011. [Online] Available: http://web4.audubon.org/educate/toolkit/.

National Oceanic and Atmospheric Administration. "Introduction to Stakeholder Participation." NOAA Office for Coastal Management, Digital Coast training product. 20 pp., 2015. [Online] Available: https://coast.noaa.gov/digitalcoast/training/stakeholder.html

National Park Service. "Community Toolboxes". NPS Rivers, Trails, and Conservation Assistance Program. [Online] Available: https://www.nps.gov/ncrc/programs/rtca/helpfultools/toolbox/index_comtoolbox.htm

Reed, Mark S. Anil Graves, Norman Dandy, Helena Posthumus, Klaus Hubacek, Joe Morris, Christina Prell, Claire H. Quinn, Lindsay C. Stringer. 2009. Who's in and why? A typology of stakeholder analysis methods for natural resource management. Journal of

Environmental Management 90: 1933–1949. https://doi.org/10.1016/j.jenvman.2009.01.001

United States Environmental Protection Agency. "Getting In Step: A Guide for Conducting Watershed Outreach Campaigns, 3rd Edition." 2010. [Online] Available: https://cfpub.epa.gov/npstbx/files/getnstepguide.pdf

United States Environmental Protection Agency. "Public Participation Guide: Internet Resources on Public Participation". [Online] Available: https://www.epa.gov/international-cooperation/public-participation-guide-internet-resources-public-participation

University of Kansas Work Group for Community Health and Development. "Community Tool Box." [Online] Available: http://ctb.ku.edu/en/toolkits

Wollenberg, Eva., Jon Anderson and Citlalli López. "Though all things differ: pluralism as a basis for cooperation in forests." Bogor, Indonesia: CIFOR, 2005. [Online] Available: http://www.cifor.org/publications/pdf_files/Books/BWollenberg0501.pdf.

Wongbusarakum, S. and R. Pomeroy. 2008. Socioeconomic Monitoring Guidelines for Coastal Managers of Pacific Island Countries (SEM Pasifika). Silver Spring, MD: National Oceanic and Atmospheric Administration and Apia, Samoa: Secretariat of the Pacific Regional Environment Programme http://socmon.org/download.ashx?docid=A0000003799_1 .

Stakeholder and situation analysis

Foundations of Success. "Using Conceptual Models to Document a Situation Analysis, an FOS How-to Guide." Foundations of Success, Bethesda, Maryland, USA. 2009. [Online] Available: http://www.fosonline.org/resource/using-conceptual-models-to-document-situation-analysis.

Bronwen, Goulder and Meg Gawler. "Cross-Cutting Tool, Stakeholder Analysis, Resources for Implementing the WWF Standards." World Wildlife Fund, 2005. [Online] Available: http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CCoQFjAA&url=http%3A%2F%2Fwww.panda.org%2Fstandards%2F1_1_stakeholder_analysis%2F&ei=TvcoU7jfBsLxoASYk4CQCQ&usg=AFQjCNGN-OSi2XqAe1oxStjGLZERzI6THQ&sig2=JuILo-QQGSK_99x1V92Yzrg&bvm=bv.62922401,d.cGU.

The Nature Conservancy. "Conservation Action Planning Handbook. Guidance for Step 5: Complete Situation Analysis." 2007. [Online] Available: http://www.conservationgateway.org/Files/Pages/action-planning-cap-handb.aspx.

International Union for the Conservation of Nature. "Situation analysis: An Approach and Method for Analyzing the Context of Projects

and Programme". [Online] Available: http://cmsdata.iucn.org/downloads/approach_and_method.pdf.

Indicator development

Church, Cheyanne, Mark Rogers. "Designing for Results: Integrating Monitoring and Evaluation in Conflict Transformation Programs: Chapter 4: Indicators." Washington DC: Search for Common Ground: Washington DC, 2006. [Online] Available: http://www.sfcg.org/Documents/manualintro.pdf.

Kusek, Jody Zall and Ray C. Rist. "Ten steps to a results-based monitoring and evaluation system: a handbook for development practitioners." Washington DC: International Bank for Reconstruction and Development/ The World Bank, 2004. [Online] Available: https://openknowledge.worldbank.org/bitstream/handle/10986/14926/296720PAPER0100steps.pdf?sequence=1.

Prabhu, R., Colfer, C.J.P. and Dudley, R.G. "Guidelines for Developing, Testing and Selecting Criteria and Indicators for Sustainable Forest Management." Jakarta, Indonesia: CIFOR, 1999. [Online] Available: http://ciifad.cornell.edu/downloads/ME_CIFORtoolbox.pdf.

Sustainable Forest Management Indicator Knowledge Base. Indicator Category 6: Maintenance and enhancement of socioeconomic benefits, Indicator Category 7: Cultural, Social, Spiritual needs and values, Indicator Category 8: Legal, institutional and economic framework. [Online] Available: http://www.sfmindicators.org/indicators.html

Data collecting methods

Catley, A., J. Burns, D. Adebe, O. Suji. "Participatory impact assessment: A guide for practitioners." Tufts University, Medford, Massachusetts: Feinstein International Center, 2007. [Online] Available: http://reliefweb.int/sites/reliefweb.int/files/resources/DF552E1C45A24AFCC12574F600509CDA-Tufts_Oct2008.pdf.

Chambers, Robert. Participatory Rural Appraisal: Past, Present and Future. Forests, Trees and People Newsletter. UK: Institute of Development Studies, (15/16): pp. 4-9, 1992. https://opendocs.ids.ac.uk/opendocs/bitstream/handle/123456789/139/rc173.pdf?sequence=2&isAllowed=y

Family Health International. "Qualitative Research Methods: A Data Collector's Field Guide." Family Health International, 2005. [Online] Available: http://www.ccs.neu.edu/course/is4800sp12/resources/qualmethods.pdf.

FAO (Food and Agriculture Organization of The United Nations). "Participatory Rural Appraisal (PRA) Manual". FAO: 2006. [Online] Available: http://www.fao.org/alc/file/media/pubs/2006/pra_manual.pdf.

Jackson, W.J and A.W. Ingles. "Participatory Techniques for Community Forestry: A Field Manual". IUCN, Gland, Switzerland and Cambridge. Gland, Switzerland: UK and World Wildlife Fund for Nature, 1998. [Online] Available: https://portals.iucn.org/library/efiles/documents/fr-is-004.pdf.

Schoonmaker Freudenberger, Karen. "Rapid Rural Appraisal (RRA) and Participatory Rural Appraisal (PRA). A manual for CRS (Catholic Relief Services) Field Workers and Partners." Baltimore, MA: Catholic Relief Services. [Online] Available: http://www.crsprogramquality.org/storage/pubs/me/RRAPRA.pdf.

Schreckenberg, K. et. al. "Social assessment of conservation initiatives: A review of rapid methodologies". London: International Institute for Environment and Development (IIED), 2010. [Online] Available: http://pubs.iied.org/14589IIED.html?k=social%20assessment%20of%20conservation.

Wildlife Conservation Society. "Household surveys: A tool for conservation design, action and monitoring." Technical Manual 4. Bronx, NY: Wildlife Conservation Society Living Landscapes Program, 2006. [Online] Available: http://wcslivinglandscapes.com/landscapes/90119/bulletins/manuals.html.

Theory of change

Foundations of Success. "Using Results Chains to Improve Strategy Effectiveness. An FOS How-To Guide." Foundations of Success, Bethesda, Maryland, USA. 2007. [Online] Available: http://www.fosonline.org/wordpress/wp-content/uploads/2010/08/FOS_Results_Chain_Guide_2007-05.pdf

RARE. "Theory of Change for Community-based Conservation." [Online] Available: https://www.rare.org/sites/default/files/ToC_Booklet_Final_Rare.pdf

Wongbusarakum, S., E. Myers Madeira, and H. Hartanto. 2014. Strengthening the Social Impacts of Sustainable Landscapes Programs: A practitioner's guidebook to strengthen and monitor human well-being outcomes. Arlington: The Nature Conservancy. [Online] Available: https://www.conservationgateway.org/ConservationPractices/PeopleConservation/SocialScience/Documents/TNC%20Guidebook%20draft%20070814%20-%20for%20office%20print.pdf

Additional Resources

Horsely Whitten Group. "Coral Watershed Assessment Tool: Decision Support for prioritizing restoration actions". 2017. [Online] Available. https://www.nfwf.org/coralreef/Documents/assessmenttool.pdf