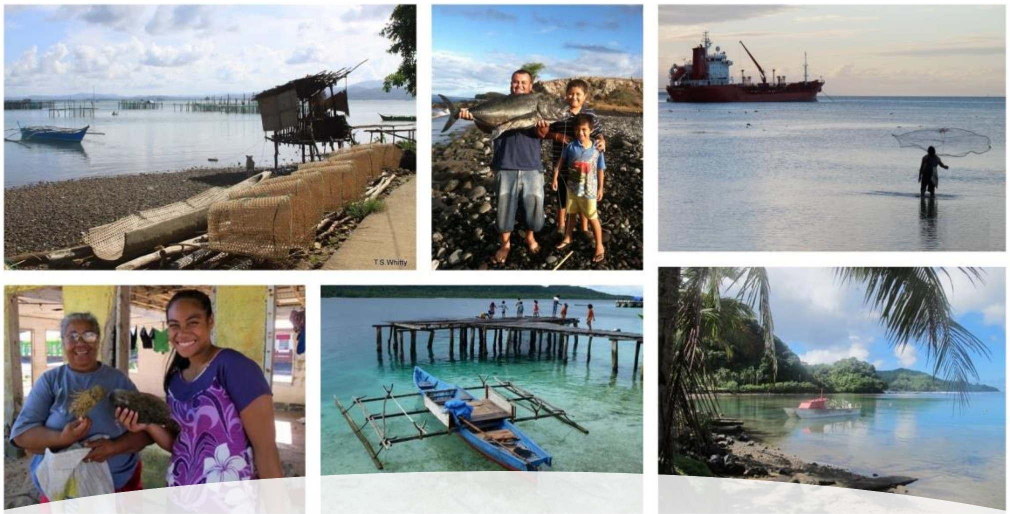

Snapshot Assessment Protocol (SnAP)

Guidelines, Tools, and Tips for Rapidly Characterizing Small-Scale Fisheries

Version 2.0
September 2013

Small-scale & Artisanal Fisheries Research Network
SAFRN

CMBC
SCRIPPS INSTITUTION OF OCEANOGRAPHY
UC San Diego
WAITT FOUNDATION

About SAFRN

Recognizing the need for improved coordination, the Small-scale and Artisanal Fisheries Research Network (SAFRN), at the Scripps Institution of Oceanography's Center for Marine Biodiversity and Conservation (CMBC), was established in 2010 by graduate students as an interdisciplinary hub of students, researchers, and faculty studying small-scale fisheries (SSF). Our goals are to: enhance communication and collaboration across disciplines, projects, and sectors; share research guidelines and methodologies; and connect research to meaningful management actions.

SAFRN has developed the Snapshot Assessment Protocol (SnAP), an interdisciplinary, standardized toolkit for describing SSF holistically, including ecological, social, cultural, economic, and governance-related aspects of these fisheries and the related communities. SnAP is a key part of our 2011-2012 project, "Coordinating Research for Sustaining Artisanal Fisheries", funded by the Waitt Foundation.

Pilot field projects tested SnAP at ten sites in Hawaii, American Samoa, Tonga, Indonesia, Thailand, the Philippines, and Ghana. These data allow us to examine, among other questions, the problems faced by fishing communities, trends in fishing practices, effort, and catch over time; motivations for fishing, potential solutions to environmental problems, and the successes, failures, and mechanisms for governance at these sites.

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Preface

This is the trial version of a standardized protocol for collecting "snapshot" views of small-scale fisheries. It is based on SAFRN's international and interdisciplinary May 2011 workshop, and draws heavily from the SocMon protocol and other questionnaires that have been field-tested in the past. The SAFRN "Snapshot Assessment Protocol", or "SnAP", is a packet of guidelines and materials to efficiently collect basic information on key characteristics of small-scale fisheries. As such, it can be used as a supplementary protocol in concert with more in-depth studies focusing on specific attributes, or as a preliminary protocol that can provide direction for future in-depth studies.

SnAP is part of SAFRN's efforts to support the cohesive, coordinated, and cross-disciplinary growth of small-scale and artisanal fisheries studies. Its over-arching goal is to encourage consistent and comparable data collection to allow for comparison of fisheries around the world. By providing a relatively simple tool we aim to (1) enable researchers of all backgrounds to perform quality surveys with limited training or resources, and (2) promote collection of a wide range of basic information essential to characterizing a fishery. Through coordinated efforts, we can magnify the power of individual projects and elucidate commonalities across sites that may not be immediately apparent when viewed on a case-by-case basis.

SAFRN's SnAP Draft Protocol is a work in progress, and your feedback is invaluable in creating a successful and usable tool. One of the attached worksheets is for your comments on this protocol (**Workbook A**). As collaborators with the global small-scale fisheries network, Too Big To Ignore (TBTI), we hope that these efforts and incorporation of feedback can contribute to TBTI's development of a global database for small-scale fisheries information. In addition to your feedback, a summary of your project and your findings are important for building our understanding of small-scale fisheries around the world.

Other manuals offer extensive information and guidelines for designing and implementing custom, site- and project-specific surveys and are invaluable resources for anyone looking to perform surveys (some recommended references can be found in **Further Resources**).

Thank you for your participation in the further development of SnAP. This protocol is a key part of 2011-2012 Waitt Foundation-funded project, and, thanks to the involvement of people like you, has the potential to be an extremely valuable tool in the field of small-scale and artisanal fisheries studies. We greatly appreciate your involvement!

SnAP Development Team

Citation:

Whitty, T.S., Bassett, H.R., Bonito, L.T., Johnson, A.E., Edwards, C., Palaretti, C., Moniz, T., Sandin, S. 2013. Snapshot Assessment Protocol (SnAP): Guidelines, Tools, and Tips for Rapidly Characterizing Small-Scale Fisheries.

Who Should Use SnAP

SnAP is geared towards use by small-scale fisheries (SSF) researchers (including students) from a diversity of disciplines, as well as managers. While it can be implemented by people with a range of backgrounds and without extensive training, it is critical that all users uphold research and ethical standards. Adequate thought and planning are needed to properly use SnAP, even though it is a "rapid" protocol; exercising basic precautions relevant to any research project (noting caveats, ensuring representative samples or candidly noting where biases may exist, preparing properly for fieldwork) is vital. Additionally, any research that includes human subjects and has social implications must be performed respectfully and appropriately. Please read this manual fully and consult any further resources necessary to ensure that your methods are sound.

How to Use SnAP

SAFRN's SnAP Draft Protocol is designed to address priority topics (see: **Appendix 2**), with three workbooks (sets of worksheets; see **Worksheets Overview**) guiding data collection, entry, and summary. The main methods for collecting data with SnAP are:

Secondary source (SS) review – Gathering all available information pertaining to your study site/fishery of focus from published literature. SS review is key for making efficient use of your time in the field, but must also be approached with a critical eye. In some cases, there may be very few publications on a site or even none at all.

Key informant (KI) interviews – Semi-structured interviews of people whom are particularly knowledgeable about your study site/fishery of focus (key informants). Information from KI interviews can supplement your broad understanding of the system, direct you to other KIs, and provide details that may not be covered in the other, less-extensive methods. Because you are hearing one person's perspective, it is important to cross-check KI information and perform KI interviews with representatives of opposing sides of conflicts in order to reduce the effect of biases.

Household surveys (HS) – Structured interviews of the people of interest (e.g. fishers). HS are particularly import for capturing perceptions of resource management, ecosystem health, and other aspects of the system. HS are the most time- and training-intensive method in the protocol.

Additionally, direct observation (DO) is a generally useful supplementary method to the above. Basically, DO involves observing aspects of the fishery and community first-hand. DO can include vessel ride-alongs, beach walks, landing dock observations, market observation, etc. Much non-biased information can be gleaned from DO and it can provide an easy cross-check on facts gathered in the other methods. For the purposes of this protocol, we do not request that you collect and record any particular type of DO, but we do highly recommend that you incorporate DO practices in your fieldwork, from your initial site survey and throughout your project (see: **Appendix 2** for a suggested template for recording notes).

The SnAP Draft Protocol is designed to use a combination of these methods such that the essential information to attain a well-rounded, general understanding of the fishery of focus is gathered. Depending on the site characteristics, availability of time in the field, and other site-specific considerations, it may be necessary to use one or more methods more heavily than the others or to modify the scope of one or more methods. For example, if time is extremely limited, it may not be possible to do as many HS as would be ideal, so more focus should be placed on KI. It is important that you weight each method appropriately for your project's needs and limitations.

Worksheets Overview

The tools provided are primarily in the form of worksheets which are the template for your SnAP project planning, metadata recording, and data collection during fieldwork. These worksheets are grouped into three "Workbooks", as outlined below. The goal is to fill these worksheets using (as appropriate) KI, SS, and HS. The worksheets are designed to be used during all stages of data collection and ensure that the essential information is collected through one or more means. Detailed instruction on how to use these worksheets are included in the first worksheet (titled "Explanation") of each workbook.

These worksheets can be printed for easy reference and data recording by hand during fieldwork, and can be used on the computer for direct data recording. We have included a PDF copy of these worksheets at the end of this protocol. They will likely need to be adapted for your fieldsite – please keep track of changes and make note of them in the "Feedback on Protocol" worksheet (**Workbook A**).

A. Project Overview & Summary 1. Project Overview 2. Survey Sites Descriptions 3. Profile Template 4. Feedback on Protocol	For providing background information on your project, summary of your findings, and feedback on SnAP.
B. Secondary Sources (SS) & Key Informants (KI) 1. Topics Overview 2. SS-List: List & Assessment of Secondary Sources 3. KI-List: List & Assessment of Key Informants* 4. Worksheets of topics, Organized by Category (1-9)	Explanation of data topics to be collected by SS and KI methods, sheets for recording SS and KI metadata, and lists/data entry templates of topics by category.
C. Household Survey (HS) 1. Sampling Plan 2. List of Houses Approached* 3. HS Respondents* 4. Overview of Questions in HS 5. HS Data Entry ***<u>Word Document (not in Excel workbook):</u>*** Household Survey Template (**Appendix 3**)	Supporting sheets for the Household Survey; template for recording sampling plan, houses approached, and respondents; explanation of the questions in the HS, including potential points of confusion and suggested solutions; template for data entry. The actual questionnaire template is in a separate Word file.

**** = These worksheets must be kept confidential***

When to Use Worksheets and Appendices

Most of the worksheets will be used in various stages of your fieldwork. Below is an outline of when you will likely use the worksheets:

Preparation

Guidelines (this document)	Read through the entire document and refer to additional resources as needed.
Appendix 1: *Guidelines for Planning & Logistics*	Read through this document, focused on the logistics of fieldwork.
Appendix 2	Look over the **Priority Topics Overview** to familiarize yourself with the general topics covered by SnAP.
Workbook A	Start filling in, as best as you can: • **Project Overview** • **Survey Sites Description**
Workbook B	Look over the **Topics Overview** to familiarize yourself with the topics to be covered. Collect as much background information as possible from Secondary Sources; record: • Metadata on SS in **SS-List** • Information from SS in **Worksheets 1-9** (as applicable)
Workbook C & Appendix 3: *Household Survey Questionnaire*	Look over the questionnaire template (Appendix 3) and the **HS Question Explanations** (Workbook C) to familiarize yourself with the topics covered in the HS. Modify the questionnaire as needed to be relevant to your field site and project. This modification will likely continue based on your first KI interviews in the field. Depending on language considerations, start translating if possible.

In the Field

Workbook B	Continue to add to SS data with any SS that are available in the field, and conduct KI interviews. KI interviews should be conducted prior to HS, as KI information will be helpful in guiding your HS sampling. Use this workbook for: • Guidance for SS research & KI interviews from **Topics Overview** • Recording metadata on SS & KI in **SS-List** and **KI-List** • Recording information from SS and KI and **Worksheets 1-9** (as applicable)
Workbook A	As you collect more information about your study sites, fill in the **Project Overview** and **Survey Sites Descriptions.**
Appendix 2	As needed, record any Direct Observation Notes you take using the suggested template in Appendix 2.
Workbook C	Based on KI interview information relevant to sampling (particularly from Workbook B – Worksheet 1 – Logistics), develop your **Sampling Plan.** If useful (i.e., if you are going from house to house to find interviewees), use the **List of Houses Approached** template to keep track of houses you and your team have visited. From each HS: • Record information on the respondent in **HS Respondents** • Enter data in **HS Data Entry**

Data Analysis & Presentation

Workbooks B & C	Ensure that all data from SS, KI, and HS are entered clearly in the proper worksheets
Workbook A	Complete: • **Project Overview** • **Survey Sites Description** • **Profile Template**: As this is not fully developed in SnAP, the format is very flexible. • **Feedback on Protocol**

Part 1. Preparation

Prior to conducting fieldwork, it will be necessary to collect background information about the field site(s) to guide your research and logistics planning. Having some background knowledge of your site will allow you to better plan your fieldwork. For example, do you have access to reliable data on the demographics of your community? Use that to set your sample size and to better ensure that your sampling is representative. Have previous, similar studies been conducted? Make sure that you avoid needless duplication of efforts. Also, pay attention to seasonal weather patterns and fishing seasons. Your particular research question might be best answered during a given season, or your access to remote sites might be significantly limited during the rainy/windy season, etc.

Regarding basic research logistics, ensure that you have the contacts, information, and paperwork necessary to plan and conduct research at your sites.

1.1 Background Research

Workbook B

A. Collecting and Organizing Secondary Sources

This is what we casually refer to as "doing your homework." See what background information on your site already exists in formats that you can access before you leave, and get a sense for what other information you need to seek out at your field site (or in government offices in the country where you will be working, for example).

This will provide you with needed context to better understand your site and plan your work. It is important to know what types and quality of information you will have access to, and to estimate how much time you need to allow to find needed information (e.g., will you need to plan out visits to various offices to look through/copy reports? Will you need to glean all of that information from key informants instead of relying on secondary sources?).

Do a thorough search for Secondary Sources, or SS, including past publications, historical documents, government or organization records, etc. (see tips in the inset box). Obtain a digital or hard copy of useful SS and record their identifying and qualifying information on the **SS List** worksheet, including:

- author,
- year of publication,
- title,
- data collection method, and
- data quality

Tips: Organizing Your Secondary Sources

- As you review your SS, check off the ones you have read on your List of Secondary Sources.
- Color-coding information you record on your SS-KI worksheet by quality of the collected data can help to visually organize and assess the quality of information collected and prioritize which topics need to be given more attention by the other methods.

There may be many sources (hundreds even) so maintaining an organizational system is essential. Assign a code to each SS following the format SS###, where "###" are numbers assigned in succession (e.g. SS001, SS002 and so on). Write the SS code in the appropriate column on the List of Secondary Sources. The SS code will be useful for noting the source of gathered information on subsequent worksheets.

You may be able to find much of the needed information online (e.g., census office websites, previously published papers from your fieldsite), or you may have to spend hours to days going through cabinets of disorganized folders. To save you time and effort, find as much information as you can before you even leave.

B. Extracting and Recording Useful Information

As you review the resources you have gathered, use the **Workbook B's numbered worksheets 1-9** to guide collection of useful information. The SS-KI worksheet covers the gamut of topics that inform our understanding of fisheries and is organized by theme, with specific questions to address or tables to be filled in.

The information you gather on the SS-KI worksheet will provide guidance and context for your work in the field, so ideally, work through all of the topics prior to entering the field. However, if you are unable to do so, you can collect needed information through additional SS and your first Key Informant (KI) interviews in the field.

1.2 Planning & Logistics

Workbook A

For more detailed tips on logistics, see **Appendix 1**. Depending on the amount, quality, and type of information you were able to gather in your SS review, the amount of time you will have in the field, and considering any other limitations to your field research, set your sampling goals using the Project Summary worksheet (**Workbook A**). Consider making modifications to make your time in the field most effective as was discussed in the last paragraph in Section 3. If you are looking to answer a specific questions in addition to, and not covered by, the basic fishery information included in the protocol, add questions or fields where appropriate. Refer to the extensive literature on survey design noted in "Further resources" to ensure you are adding questions that will yield useful results.

A. Reaching Out to Local Collaborators

It is important that you collaborate with local researchers, managers, NGOs, government officials, or others involved in the fishery of focus and engage them throughout the process. It is important to be respectful of work already being done in the region and is often beneficial to everyone involved to coordinate efforts. Local contacts are essential to planning field work, gaining access to sites and resources, as well as ensuring appropriate cultural etiquette.

B. Language Considerations

Interviewing techniques will be used in the field through KI interviews and HS, and all interviews should be conducted in the local language. So, when necessary, questionnaires should be translated into the target language prior to conducting interviews. The translation process must be done carefully, as some words and concepts don't translate readily into other languages, and can take time, so having the questionnaire translated prior to arriving in the field is preferable.

To ensure that the correct message is being conveyed by your questions, translation needs to be conducted with the participation of people familiar with the original intent of the questions. First, a native speaker should translate questions into the target language. Another native

Tips: Useful Equipment in the Field

- GPS units (and the cables needed to transfer GPS data to your computer)
- Extra laptop batteries (if you anticipate having limited access to electricity)
- A portable scanner (very useful for extra data backup)
- A portable printer and many ink cartridges (for printing additional surveys)
- Camera(s)
- Voice recorder(s)
- External hard drive(s)
- Water-resistant paper notebooks
- Water-resistant accordion folders (for organizing surveys)
- Water-resistant single-pocket folders (for transportation of surveys)
- Clipboards (for surveying)
- Stapler
- Pens
- Pencils
- Paper clips

speaker should then translate questions back into the original language. Check the new translated version for accuracy, make corrections, and repeat the process if necessary.

Communicate with the translators and go over confusing concepts, making clear what it is you want to ask (vague or unfamiliar terms such as "sustainable" or "overfished", for example, can be problematic). Note that the questionnaire should be translated to the dialect that will be used in interviews, rather than the official, formal dialect. This must be done carefully, as some words and concepts don't translate readily into other languages.

Make it clear to your field assistants that they need to read the household survey questions verbatim, and thus should translate the questions using the wording that they would actually use in the field (as long as the meaning of the original question is retained).

C. Permits, Permission, and Etiquette

Ensure that you have secured all needed research permits, local permission, and human subjects permission. The latter usually requires that you have a statement to read to the interviewees so that they fully understand the implications of responding to your questionnaire – usually, such statements include mention of the fact that answers will be confidential.

If you have not already contacted local government officials, make "courtesy calls" to inform them of your activities and goals. They, or other knowledgeable community members, can often facilitate your efforts to find interviewees or assistance in the field. If possible, they may call a meeting of local fishers to introduce you and your research.

D. Training field assistants

Spending adequate time and effort to train field assistants properly is vital! Be sure that your field assistants are familiar with the goals of your project, the goals of SnAP, the meanings of questions, and the proper way to conduct interviews. This is particularly important if you are depending on field assistants to translate for you!

Though it's understandable to want to jump right in and collect "real" data, pilot interviews are critical to show you where confusion and weaknesses might pop up in your methods. It's also important that your field assistants (and you) become familiar with asking the questions in your interviews.

Tips for Students:

Working with Your Institution

- If you are part of a university you will need to work with the university's Institutional Review Board (IRB) for "use" of "human subjects". The process has multiple steps and should be started well in advance of your departure. For an example of one IRB see http://irb.ucsd.edu/
- Be aware of your university's policy on boat charters, insurance, and safety.

Prior to implementing the surveys in the field, first have the interview team read through the questions to make sure they are familiar with and understand all of the questions. Identify any points of confusion and edit the questionnaire accordingly. Prior to the pilot interviews, have your field assistant(s) practice the interviews on another field assistant or you. Try making up complicated, unexpected answers to see how they respond.

Next, have interviewers conduct pilot or mock interviews, supervised by someone familiar with the intent of the original questions. Again, make any needed adjustments to the questionnaire and any clarifications to the interview team before proceeding. Ensure that field assistants record data accurately and clearly.

Part 2: In the Field

2.1 Preparing and Performing Interviews

A. Selecting and Finding Interview Subjects

Generally speaking, sample from a variety of places at your site. For example, do not just talk to fishers at a dock or landing site – go to households, community gathering places, and markets, in addition to beachside interviews. This ensures that you find a greater diversity of interviewees. Also conduct interviews at various times of day to make sure that you are not missing key groups of fishers, as some will be out fishing all morning, and others go out in the afternoon.

A local liaison can be very helpful in arranging interviews. In some cases, an introduction to the community can be arranged, where a local official will gather local fishers and tell them about you and your research. You can try to make appointments with fishers for interviews, so that you can identify a time that doesn't inconvenience them for interviews. Of course, it can also be as casual as you walking around the site, finding a fisher who fits your sampling needs (you need a variety of gear types, ages, genders, ethnicities, etc.), and introducing the research project with the statement you've prepared. Consult with your local contacts about the most appropriate methods for contacting potential interview subjects.

Sample Introduction Statement from a pilot study

"We are working with a PhD student of marine biology from the University of California, San Diego, in America. This is part of her dissertation research. She is studying socioeconomics of small-scale fisheries, fishing practices, and fishing interactions with dolphins in Southeast Asia. We are interested in understanding small-scale fisheries and dolphins, so that any conservation measures consider the concerns of small-scale fishers. Information collected from this survey may be used for dolphin conservation and fisheries management in the future, but only with cooperation from local fishing communities. Your answers are confidential. Would you be interested in sharing your valuable information with us?"

B. Introduction statement

In this statement, introduce yourself, with information about your institution, your research team, and your research project. This should also be translated into the local language; if you are able to do so, it's nice to say it yourself, but if not, have one of your field team familiar with the local language introduce you. Use this when meeting local officials or village heads, to inform them of your activities in their area. Depending on how the research permit system works at your site, you may also need to include a polite request to work at your site, and may also want to bring a letter with a summary of your research project for their records.

An adapted version of this statement should also be used before each interview, to be read aloud by the interviewer. In some cases, your human subjects approval might require that you do so, so that your interviewees are aware of how their responses will be used.

C. Conducting the interviews:

Location

Interviews should be conducted somewhere comfortable for the respondent and somewhere neutral (i.e., not a fisheries management office) – this can be their home, on the beach (in the shade), at a public gathering place, etc.

Your role

Whether you sit in on all the interviews will depend on your confidence in your field team to ask the questions in a standardized way. You should watch all interviewers at work before you make this assessment – sit in on their interviews and correct them when needed. Even if you are not familiar with the local language, follow along with the interview and pay attention to the boxes that the interviewer is ticking – make sure that everything makes sense. If you feel unsure about how a question has been answered, interrupt and ask for clarification.

The interviewers should introduce themselves, your project, and read your statement (see above). Make sure that there is one and only one person responding to the questions (sometimes, curious bystanders like to chime in).

Recording responses

Responses should be written in the local language. Make sure all responses are written legibly. If a question is not applicable, write or check "NA"; if a respondent has no response or is unsure, write or check "DK" for "Don't Know." Leaving any question blank can be confusing – did the interviewer forget to ask that question? (Exceptions are when the survey specifies "If no, skip to #x").

Incentives and Gifts

Some researchers like to bring interviewees a token of appreciation/inducement (e.g., beers, cigarettes, a small cash payment, etc.). Some would advise against bringing such items as alcohol and cigarettes, but prefer to bring more general household goods (small instant coffee packets, little notebooks and crayons for children, etc.). When deciding if you will offer interviewees something, consider what would be most appropriate and effective at your site. For example, it might be helpful when the village you are studying has been "over-interviewed" in the past or the local culture places high value on generosity. Always make sure to be culturally sensitive and appropriate.

D. Reviewing interviews

Responses to the interviews should be translated back into the original language ASAP by the interviewer, accompanied by someone who is familiar with the intent of the original questions. Questions where there was any confusion or miscommunication should be noted.

2.2 Key informant (KI) interviews

Workbook B

Performing KI interviews at the beginning of your time in the field will be most beneficial and likely provide you with further information to guide your HS and DO. Use a semi-structured interview format to continue to fill in gaps in your knowledge and corroborate information collected by other means.

For KI interviews, select the topics from the worksheet that a given interviewee will likely be able to speak to, and focus only on those topics during that interview. Particularly knowledgeable KIs may be able to respond to every question – if you feel that they are willing to spend the time to do so, that is great. However, if you are operating with limited time, identify priority topics to focus on (e.g., questions that haven't been answered by other sources).

A. Selecting Key informants:

Key informant interviewees can help you plan your sampling by providing you with information about the composition of the fishing community, where you can find respondents, and the best times to interview people (i.e., so you can avoid trying to do interviews when people are all out fishing, eating meals, celebrating a fiesta, resting during siesta hours, etc.).

A helpful way to identify key informants is to consult with your local collaborators. Visit local government offices and gauge how knowledgeable local officials are (this is also a good place to look for secondary sources). Choosing the number of key informants is somewhat subjective, but a good indication that you have enough respondents is redundancy in responses. Be sure your KI represent all relevant stakeholders.

Use the **Topics Overview worksheet** or the **Worksheets 1-9** in **Workbook B** to guide your KI interviews. Record the interviewer's sense of accuracy and quality of answer from the respondent as well as anything else notable that may have affected the quality of the survey, using the **KI List worksheet in Workbook B.**

If you have a translator for KI interviews, make sure they understand the semi-structured format and that you have discussed the questions that you would like to address in each interview. For more interviewing guidance, see Section 2.1 and other guides listed in "Further Resources".

B. Determining the Sample Size:

There is no strict rule for KI sample size; a good guideline is to choose enough KIs to represent the stakeholder groups of concern. Additionally, an indicator that you have interviewed enough people on a topic is when you start getting redundant responses – in other words, you do not get new information from additional respondents.

2.3 Household surveys (HS)

Workbook C & Appendix 3

HS are the most intensive part of the protocol. They include questions to gauge trends in fish catch, earnings, fishing effort, gear use; perceptions of the environment and environmental values; ties to fishing as a livelihood; and migration. Though SS, DO, and KI provide needed context (and some information you'll need to design your household surveys), your time should mainly be focused on the HS.

A. Selecting Household survey respondents:

How you choose your interviewees depends upon your sampling needs and what kinds of data are available to you regarding the composition of your study community. See below for an example of suggested sampling sizes.

For confidentiality, the respondent's name shouldn't be written on the questionnaire form – however, in some cases, there is reason to go back and talk to a respondent again. So, use the **Respondents** worksheet [this is to be kept CONFIDENTIAL!] to record the names of each respondent, along with the name of the interviewer, date, and survey ID (these should be HS001, HS002, etc.).

Similarly, it is important for the interviewer to record their sense of accuracy and quality of answer from the respondent as well as anything else notable that may have affected the quality of the survey. If you get the sense, early on the interview, that the interviewee is providing highly inaccurate, dishonest information, or if they do not seem to be able to answer most of the questions, politely end the interview early and thank them for their time.

Ideally, the Household Survey questionnaire should be done in completion with all questions answered, but when conditions are such that this is not possible, it is important to adjust the survey in a systematic way. For example, if time is limited and you need to reduce the number of questions, focus on getting answers to the questions on topics you have not found any information on so far or have gotten conflicting or biased information on. Should a question prove intractable in the field and you are forced to omit it, provide a detailed justification for this decision (e.g., it took respondents about 10 minutes to understand and answer this question).

B. Sample Size

The sample sizes below are from SocMon Southeast Asia (Section 3.4, Page 10) and are suggested for providing “a useful understanding of the population”, though not necessarily a statistically representative understanding.   Time constraints, limited funding, and the lack of prior knowledge defining stakeholder groups can make more rigorous sampling difficult. (For more information see GCRMN Manual Appendix B).

Population	Sample Sizes
100	25
200	40
300	60
400	60
500	80
1000	100

Endeavor to sample from the different types of stakeholder groups (age, gender, ethnicity, religion, etc.) in approximately the same proportions that exist in the community. Methods exist for randomizing your sample (e.g., sampling every third household), though in practice these can be difficult to follow, especially given tight time constraints. It is important for you to be explicit about how you chose your respondents and to be open about the limits of your sampling methods when you choose your methods for analysis and when you present your results.

2.4 Direct Observation (DO)

DO is the least time-consuming, structured, and logistically intensive method. It can be performed on your own at any time of the day and can be implemented systematically or simply performed opportunistically.

The suggested method is to do various walking transects – through the “main part” of the village, if one exists; by the beach and docks; through the market – and write down what you see. Ask questions of locals if you do not know what something is, and, if culturally acceptable, take photos to aid you in reviewing the data later (be sure to ask permission first). See the GCRMN Manual’s section on observation for more suggestions (page 92).

It is recommended that you do conduct DO prior to HS, and throughout your time in the field if possible, as it can help you visualize how you will go about sampling for interviews.

Part 3: Data Entry, Analysis, & Presentation

Workbooks A, B, C; Appendix 2

We have not yet developed a standardized framework for communicating your findings to your study communities, collaborators, and broader research community. However, this is clearly a critical part of this process, and we have provided some guidance for how to get started. Too Big To Ignore (TBTI) is developing a global information system for small-scale fisheries for sharing such information, to be debuted in 2014; guidelines for how to present your findings within that framework will be available in early 2014.

Further developing this aspect of SnAP, in concert with other groups such as TBTI, will require feedback from you and will ideally be included in a future stage of SAFRN's work.

3.1 Data Entry

Each workbook includes worksheets that function as data entry templates – these will need to be modified to match any modifications you have made to the template questionnaire and other methods.

DATA TYPE	TEMPLATE FOR ENTRY
Project & Site Descriptions	**Workbook A: Worksheets "Project Overview" and "Survey Sites"**
Secondary Sources: Metadata	**Workbook B: Worksheet "SS List"**
Secondary Sources: Data	**Workbook B: Worksheets 1-9**
Key Informants: Metadata	**Workbook B: Worksheet "KI List – CONF"**
Key Informants	**Workbook B: Worksheets 1-9**
Household Surveys: Sampling Plan	**Workbook C: Worksheet "Sampling Plan"**
Household Surveys: Data	**Workbook C: Worksheet "HS Data Entry"**

Be sure to enter your data in a standardized way, so that all spelling, etc., remains constant; this will greatly facilitate data analysis. It is recommended that you develop data entry codes to simplify and standardize data entry (e.g., some suggestions can be found on the Household Survey Data Entry Template in **Workbook C** and the HS Template in **Appendix 3**).

Additionally, be sure to enter your data as soon as possible. This is often the step that takes the longest to finish, especially if it is not completed during and shortly after fieldwork.

3.2 Summary Profiles

Workbook A functions as an overview of your research project, to provide a summary of your research site(s), project logistics, activities, and some basic data. So, it is important that you properly fill out the worksheets **Project Overview** and **Survey Sites**.

We provided a draft template for a profile (Worksheet "**Profile Template**") as an example of a summary sheet you could adapt for quick presentation of some basic data. We recommend completing a similar summary profile for each of your sites. These templates can be filled using SS, KI, and HS data, but specify what type of data you are using. You can also add figures, maps, and images to a template to create an appealing summary document to share.

3.3 Sharing Data

Sharing information from your site with collaborators, the study communities, and other researchers (including SAFRN) is important. Once you have established what data you are willing to share (and are confident that the parties with which you share it will not use it without your permission), the workbook templates are a useful format for sharing your data over email. The profile template, from Workbook A, is also useful for sharing basic data analyses without needing to hand out your raw data. Consider using results from basic analyses to share with study communities, local collaborators, and managers.

We hope to have more information on how to share information from sites on TBTI's global information system for small-scale fisheries, including refined templates for data entry, by the end of 2013/early 2014.

Further Resources

Refer to our website, **artisanalfisheries.ucsd.edu**, for more resources, including links to websites and a list of useful scientific articles.

Manuals

Global Coral Reef Monitoring Network & Socioeconomic Monitoring Initiatives

More detailed information on these data collection methods can be found in the Global Coral Reef Monitoring Network's (GCRMN) "**Socioeconomic Manual for Coral Reef Management**" (L. Bunce, P. Townsley, R. Pomeroy, R. Pollnac, 2000). Particularly helpful are their regional Socioeconomic Monitoring Guidelines for Coastal Managers (SocMon), found in the "Publications" section of their website; these documents contain guidelines for conducting research as well as sample questions and data sheets. It is highly recommended that you look at the relevant sections of these resources prior to data collection. These, and other guides, are available from GCRMN's website.

Rapid Assessment of Management Parameters for Coral Reefs (RAMP).

In this 1996 report, Richard Pollnac reviews key attributes to be included in rapid assessments, along with detailed explanations of these attributes. Citation: Pollnac, R. 1996. Rapid

Assessment of Management Parameters for Coral Reefs. RAMP Final Report. Coastal Resources Center, University of Rhode Island, Rhode Island.

Books

Bernard, H. Russell. **Research methods in anthropology: Qualitative and quantitative approaches**. ISBN-10: 0759101485 | ISBN-13: 978-0759101487 |

> This book is described as: "the standard textbook for methods classes in anthropology programs. Over the past 13 years, it has launched tens of thousands of students into the field with its combination of rigorous methodological advice, wry humor, common sense advice, and numerous examples from actual field projects." It is accessible to non-anthropologists, and is full of useful, practical information on conducting anthropological research, with topics ranging from sample design to dealing with the various challenges of fieldwork (including difficulties adjusting to living at your field site and safety).

Berkes, F., Mahon, R., McConney, P., Pollnac, R., Pomeroy, R. (Eds). 2001. **Managing Small-Scale Fisheries: Alternative Directions and Methods.** International Development Research Center. ISBN-10: 0889369437 | ISBN-13: 9780889369436. Available **online**.

Chuenpagdee, R. (Ed). 2011. **World Small-Scale Fisheries: Contemporary Visions**. Eburon. ISBN-10: 9059725395 | ISBN-13: 9789059725393

Pomeroy, R., Andrew, N. (Eds). 2011. **Small-Scale Fisheries Management.** CAB International North America. ISBN-10: 1845936078 | ISBN-13: 9781845936075

Future Initiatives

Looking forward, SAFRN will continue providing resources valuable for researchers (particularly students). Potential future initiatives along these lines include:

- Collecting useful references (such as local fish guides, hard-to-find secondary sources)
- Questionnaire examples and explanations of why certain questions were included, how well the questionnaire worked in the field, and suggestions for improvement.
- Training modules and research tips for students and field assistants

If you would like to contribute your references, questionnaires, tips, etc., please let us know! Additionally, if there is anything that you would find particularly useful, we would be happy to hear your suggestions!