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TRACKING BEHAVIOR CHANGE AND ITERATIVE PLANNING

TOOLS FOR IMPLEMENTERS

microREPORT #182

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I. INTRODUCTION

Many of the interventions needed to make value chains competitive and to facilitate broad-based growth are rooted in catalyzing behavior and social change in communities and among value chain players. The types of behavior change that a value chain development project may facilitate can be segmented as follows:

a) *Perform a new behavior*—behavior unfamiliar to the target group. The target group does not know about the issue or is not conscious of their underperformance. In many cases, facilitating adoption of the new behavior requires three types of interventions over time: information and capacity building to understand and have the skills to perform, motivation to take on the new behavior, and support to sustain the behavior.

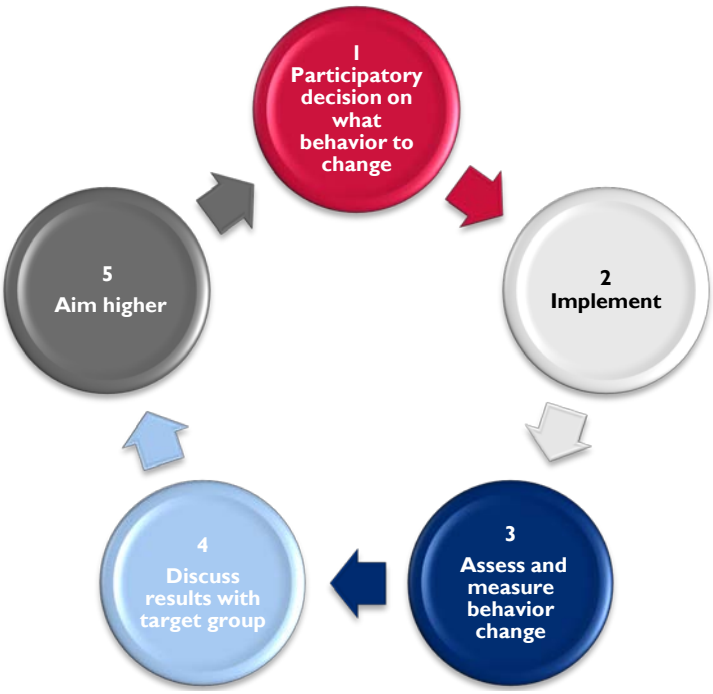
b) *Perform existing behavior*—behavior familiar to the target group but not widely performed. Projects promote such behaviors to become the rule rather than an exception. The general objective is to increase the frequency, duration or intensity of the behavior. For example, if farmers sometimes practice grading and sorting, a project may want to persuade them to be more conscientious and consistently sort in a particular way. The primary need is for a supportive intervention, such as the creation of positive consequences through feedback and recognition. In some cases, value chain actors consciously choose not to perform the behavior, and then the primary need is for a motivational intervention. If the information that has been presented regarding the advantages of the new behavior has not produced the desired result, the target group needs to either be provided with more effective information tailored to the members' perspective, or be exposed to initiatives that demonstrate these advantages to motivate them to start taking action. Once started, they will need motivation to continue. Motivation may be created through the use of incentives such as premium prices and/or peer pressure.

c) *Decrease and ultimately stop behavior*—cease ongoing bad behavior. An example of this may be to decrease the tendency of lead firms or buyers to extend payment terms beyond the agreed period, which not only creates mistrust but can lead to the collapse of micro enterprises.

Figure 1 outlines the key phases in facilitating behavior change. In many cases, in order to prioritize interventions, a project focuses on the small percentage of behaviors that are responsible for a large percentage of the problems in a supply chain, and facilitates the change in incremental steps (one step at a time) to encourage uptake. Measuring and assessing behavior is a vital (although challenging) part of the project design, implementation and evaluation process. The purpose of behavioral assessment is to delineate behavioral deficits, appropriate and inappropriate behaviors, and the frequency with which different behaviors occur in various situations.

Changing a behavior requires time and patience. Projects should regularly monitor, measure, and modify behavior change interventions throughout the project cycle. The greater the number of observations, the more reliable the data becomes as the market actors' true behavioral pattern can be established. Stakeholders' participation in the observations engenders a collective sense of ownership of the process. The data from the observation process allow the project to examine trends and identify areas that need improvement. It is then possible to reinforce good behavior while implementing corrective actions where less effective behaviors persist. It also provides the project with insights as to which interventions are effective in bringing about the desired change. Feedback is the key ingredient of any type of improvement initiative. The main role of the project is to help target groups understand the issues, overcome their constraints to change, and coach them as they make the changes.

Figure 1: Key Phases in Facilitating Behavior Change



A major challenge in facilitating behavior change is to understand what influences people to behave in a particular way in the first place. Behavior serves a purpose: it allows an individual to "get" something desirable, "escape" or "avoid" something undesirable, or communicate a need. Different target groups might perform the same behavior for different functions or purposes (as shown in Table 1 below). Understanding what purpose the behavior serves for the target group is key to identifying factors that motivate them to change the behavior.

Table 1: Illustration of Same Behavior Serving Different Functions

Target Group	Behavior	Function
Food handlers 1	Non-use of personal protective equipment, especially for tasks that only take seconds to complete	Avoid peers' criticisms of being too meticulous or of being afraid of small risks
Food handlers 2		Perceived benefit of saving time

Context also greatly affects behavior. Behaviors can be brought on by the physical setting, such as when farmers start practicing good hygiene in a newly renovated farmers' market or when people throw litter in a garbage can because the surroundings appear to be clean. Behaviors might also vary according to the duration of activities, such as not using recommended protective gear if the task takes only about five minutes.

A basic tenet of behavioral analysis is that behaviors are a function of a person and their environment—something happens preceding behavior (the antecedent) that causes or influences the behavior, and the behavior then results in a consequence. A value chain development project cannot change a person, but it can influence the way they behave by shaping the environment within which they function. Both desirable and undesirable behaviors are learned through interactions with the social and physical environment.

Observation data can assist in identifying the conditions that account for a behavior, and suggest what conditions need to be altered to change the behavior. Assessment of the functions of behavior (why is the behavior occurring) can provide useful information necessary to develop effective strategies to address those behaviors that interfere with learning, upgrading, and good relationships in the chain.

This toolkit is designed to help value chain development projects map, assess, and track behavior change initiatives in value chain development projects through the following three complementary tools: a) Direct Observation; b) Self-Report Activity Sticker Diary; and c) Peer Observation. Guidelines on how to plan the monitoring and evaluation of behavior change interventions are presented in the following sections.

II. CHALLENGES IN BEHAVIOR MEASUREMENT AND ASSESSMENT

Everyone watches people every day, but some discipline and an understanding of the behavior in focus is needed for an observer to know what to look for and how to analyze what they see, in order to assess intervention design. Observing the wrong things is similar to asking the wrong questions in a survey. Similarly, one photograph can generate various interpretations from different individuals. Below is a summary of the common issues and challenges in behavior observation and measurement and how these will be addressed in the toolkit.

1. **Observing behavior change can be costly and time consuming**. Capturing real behavior from direct observation of a representative sample of target groups for extended time periods might stretch the resources of value chain development projects. To address this, the toolkit presents the following behavior data gathering options:

   Table 2: Methods of Gathering Behavior Data

Setting	Tool
Tasks/activities performed in a group setting or common area	Videotaped observation
Individual activities/work sites/remote areas	Sticker time diaries
Activities performed with peers	Peer observation

2. **The Hawthorne effect**. When people become conscious that they are being observed, they might change or modify their behaviors. This "Hawthorne effect" can be minimized by getting people accustomed to being observed. SDCAsia's target groups, for example, behave more naturally with the staff assigned to their area, whom they see on a weekly basis. Behaviors change when senior staff visits the site, as they are less familiar to the target groups than the area coordinator/technical staff. Likewise, members of the target groups tend to forget the presence of a video two weeks after it has been installed. Peer observation also becomes a usual routine after several rounds.

3. **Target groups are reluctant to write down their observations**. If they do write them down, they tend to be selective, especially if observation is focused on just one specific aspect (e.g., handwashing behavior). There is a tendency to try to write what they think is correct or what the project wants to see rather than what they actually do. Writing per se poses problems for target groups with low literacy.

   To eliminate biases usually associated with self-reports on "focused measurement of behavior of interest"— where the respondent knows what is being measured and is hence prone to be biased — projects should encourage respondents to record all daily activities rather than informing them of the specific behavior(s) being monitored. The use of pictorial stickers can make it easier for respondents to record their daily activities and minimize tendencies to copy suggested practices from the manual. The stickers should show both the desired behavior and the common behavior of the target groups.

4. **Potential for observer bias**. There is a tendency for observers to write their interpretations of what they have seen rather than what they actually saw. Empathy can be taken too far; observers may assume that the way they personally feel in a situation is the way that everyone else feels.

   The toolkit provides guidelines on how to define target behaviors in a manner that is observable, measurable and specific. To be observable, the target behaviors must be defined in terms that are readily apparent to

more than one individual (observer). Training and practice are essential for standardization of observation and to minimize the effects of differences in perception among different individuals. The reliability of observations can be increased by training observers to look for the same information, record data similarly and use similar vocabulary and meanings. The development and use of checklists or other simplified observational data collection tools can help to standardize observation, but the overuse of such systems can result in losing the spontaneous, unique information that can be provided by observational research. Tool 3 (Peer Observation) provides guidelines on how to train observers.

III. BEHAVIOR CHANGE OBSERVATION FRAMEWORK

The first task in behavior change facilitation is to specify objectives in terms of measurable behaviors. It is necessary to specify which of the target groups' behaviors should be changed and which new behaviors should be introduced. The behavior has to be defined in such a way that there is little question about whether it occurred. Below is an example of a framework aimed at providing the team with a common understanding of what needs to be monitored, observed, and measured vis-à-vis the intervention.

Background Information on the Sample Behavior Change Observation Framework (Table 3): Handwashing

The target group consisted of Muslim women involved in milkfish processing for the first time. Although handwashing was familiar to them, the natural tendency was to wash their hands only when they were visually dirty. The common mindset was that as long as one cannot see any dirt, the hands are clean. The interventions were structured in such a way that the women first got used to washing their hands before starting work whether they saw dirt or not, and then incrementally progressed toward the adoption of proper handwashing techniques and the consciousness to wash their hands after each activity that could potentially cause contamination.

Table 3: Sample of a Behavior Change Observation Framework

Target Behavior	Food handlers wash their hands using proper techniques for specific work activities for which handwashing is recommended			
Intervention	**Implementation Schedule**	**Incremental Behavior Objective**	**Indicators of Achievement of Behavior Objective**	**Observation Schedule**
Orientation on food safety and why it is important and its benefits (personal, business, buyers) Transect walk to identify possible ways that their hands can be contaminated from the time they took a bath and arrival at the plant	March 15	Food handlers wash their hands prior to handling raw fish/food preparation	Prior to starting work and putting on clean gloves, food handler washed hands under running water Used soap Dried hands using clean paper or clean towel	March 21 - 25
Poster on proper handwashing technique posted in work area; demonstration and practice	March 31	Food handlers wash their hands using proper technique prior to starting work	Placed hands under running water Used soap Vigorously scrubbed hands for at least 20 seconds including cleaning between fingers and under fingernails Vigorously scrubbed arms above wrists for at least 20 seconds Rinsed hands thoroughly under running water	April 11 - 22

Target Behavior	Food handlers wash their hands using proper techniques for specific work activities for which handwashing is recommended			
Intervention	**Implementation Schedule**	**Incremental Behavior Objective**	**Indicators of Achievement of Behavior Objective**	**Observation Schedule**
			Dried hands and arms with a single-use paper towel Disposed paper towel in covered garbage can	
Glow germ exercise and follow-through workshop on food safety Posters reminding when food handlers should wash their hands posted in work area	May 5	Food handlers wash their hands using proper techniques for specific work activities for which handwashing is recommended	Proper handwashing procedures observed (refer to above row for indicators) Food handlers wash hands: - When starting shift - When returning to the work area (after eating, texting, phone calls, etc.) - When returning from the bathroom - Before putting on clean gloves - After sneezing, coughing, or using a handkerchief, scratching head, touching/combing hair - After touching anything else that may contaminate hands	May 9 - 13

Source: From ICCO-SDCAsia Project: Integrating Coastal Communities in the Mari-culture Industry

GUIDELINES FOR PREPARING THE FRAMEWORK

The target behavior is the behavior to be observed and measured; it is the focus of change. The behavior objectives should generally be stated in small, progressive steps—sequences of incremental objectives on the way to the target behavior. The incremental behavior objective specifies the kind and amount of change the project expects to achieve within a given timeframe for each intervention. For each behavior objective, there should be a corresponding indicator or set of indicators that provides a measurable description of the behavior changes the project expects to see and defines the criterion of acceptable performance. These indicators will guide the behavior observation and assessment design, allowing the project to track progress, document success or identify where interventions are not having the intended effect as planned. This will provide opportunities for early assessment in time for corrective action by the project.

Below are the key points to remember in defining measurable and observable behavior objectives and indicators:

a. Indicators of achievement of behavioral objectives should be clear and specific so that another person unfamiliar with the behavior could measure it consistently. Be certain that the definition is precise enough that others can easily recognize whether or not the behavior occurred. It is advisable to break down behavior into single observable actions. Put only one behavior in each statement. If there is an "and" in the sentence, make it into two separate behaviors.

b. A precise definition pinpoints when and under what conditions the behavior must occur. The objective should have three parts: i) the situation or conditions under which the behavior is expected to occur; ii) the behavior definition; and c) the criteria for acceptable performance.

c. Avoid the use of vague and immeasurable words such as "properly," "improve" or "correctly." These terms involve several behaviors and are not directly observable. Word the definition so that it tells the reader which actions comprise the behavior.

Table 4: Examples of Behavior Definitions

Bad Definition	Good Definition
Food handlers wash their hands properly. *People or observers even within a project team can have different interpretations of what is "proper" handwashing.*	Food handlers: - place their hands under running water - use soap - vigorously scrub hands for at least 20 seconds - clean areas between fingers and under fingernails - vigorously scrub arms above wrist for at least 20 seconds - rinse hands thoroughly under running water - dry hands and arms with a single-use paper towel - dispose paper towel in covered garbage can
Factories recycle their garbage. *The boundaries of the behavior are not clearly delineated so that responses can be easily included or excluded depending on observers' knowledge and interpretation.*	Factories: - separate glass, cans, paper, and organic material - store glass, cans, paper, and organic material in separate containers until the appropriate pick-up day - put out the appropriate material (glass, cans, paper, and/or organic material) on the correct day - put organic garbage out for collection in the morning so that dogs and other animals do not scatter it during the night - use fertilizer from recycled waste materials

d. Allow enough time for outcomes to occur. Avoid the pitfall of making an observation immediately after a training, as it may present an unrealistic picture. Allow ample time for target groups to settle back to their routine and then assess changes in behavior.

TOOL 1:

DIRECT OBSERVATION

I. WHEN TO USE DIRECT OBSERVATION IN BEHAVIOR DATA COLLECTION

Direct observation is a procedure by which observers develop operational definitions of the targeted behaviors of interest, observe the subjects, and systematically record their behavior. Observation can be an effective method for collecting behavioral data and for validating information obtained from individual surveys. It measures behavior directly rather than through reports of behavior or intentions, and thus does not depend on the respondent's ability to interpret a question correctly or remember past behavior. Nor is it influenced by any tendency to rationalize behavior to make it appear in the best light.

Although survey and direct observation are usually thought of as distinct and competing methods, they should not be considered mutually exclusive. It is possible to employ them productively in combination. Observation, whether casual, systematic, or qualitative, deals with behavior in its natural setting, not with attitudes and beliefs. Survey results, on the other hand, tell the project what the value chain players think rather than how they act. If the project is interested in what the target groups do or how they actually behave after training or a benchmarking visit, observation would be the best approach. The project can complement direct observation data with interviews and questionnaires to gather opinions and beliefs related to the behavior. The strength and effectiveness of direct observation are enhanced when employed in conjunction with survey methods. Some of the powerful uses of observation tools are as follows:

- To provide contextual information needed to frame an evaluation or assessment and make sense of evaluation data collected using other methods.
    - *Example:* Observation as a complementary tool to a training evaluation to assist facilitators in understanding which skills participants are mastering and which still need further emphasis in follow-up courses and coaching sessions.

- To develop insight into the learning (and teaching or facilitation) context, the environment, events, activities and interactions in relation to the behavior of value chain players and other stakeholders. Observational data is essential when people cannot accurately give information. It can point to issues requiring further exploration using other methods.
    - *Example:* Respondents often hesitate to report that they break formal rules such as proper calibration of weighing machines. Yet they do not care if they are seen doing such things, because they and their friends find such behavior acceptable.

- To collect information about how a change in behavior has (or has not) been implemented independently of participant perceptions. Observational data can provide information about real-life situations and circumstances that are useful in designing or understanding what is happening in a value chain development project and why it is happening.
    - *Example:* In a survey conducted among target groups engaged in food processing, about 80 percent reported that they practice correct handwashing procedures. Actual observations indicated that although target groups indeed practice handwashing, only about 30 percent of the attempts were considered correct. The most common mistake was the lack of proper hand drying with a paper towel. Many observed participants used aprons or their clothes to dry their hands.

- Sensitive social issues are better suited to observational research. For instance, value chain players usually feel uncomfortable when asked about prejudice and ethics. Self-reports of prejudice are often biased. A project has a higher potential of getting more accurate data by observing the interactions between players from different levels of the value chain (e.g., farmers and traders) during trade fairs, marketing events, and other activities.

Direct observation is generally more costly in terms of time, money, and resources than other assessment tools. Direct observation is economically viable (especially for value chain development projects with small budgets) under the following conditions:

- *Collective setting*: target groups work in common areas such as service facilities, communal farms, and farmers' markets. The observation can be done both in-person or through the use of video technology.
- *Qualitative observation* (e.g., to vet the results of a self-reported assessment): The project can work with a small representative sample of the target group because statistical significance is not of primary importance.

In general, observation is a good source for the following types of information:

a) Setting/physical environment within which the value chain actors are operating.

b) Human/social environment: The way in which value chain players interact and behave, what various actors do, and how they allocate resources.

c) Nonverbal cues about what is happening in the project (e.g., how do participants express opinions, physically space themselves during discussions, and arrange themselves in their physical setting).

II. USE OF VIDEO TECHNOLOGY IN BEHAVIOR OBSERVATION

In-person direct observation can sometimes be limited by barriers such as expense, time, and travel. In-person observation also relies on the researcher's ability to catch spontaneous and sometimes fleeting behavior events. Reliability of data from in-person direct observation hinges on the accurate recall of the event and the communication skills of the staff/researcher writing the report. The use of video technology can lower the cost of behavior observation and monitoring and improve the validity and integrity of the data. Collection of behavioral data through video technology has become increasingly popular because it eliminates the need for observers to be in the field for extended periods and provides a permanent record of the behavior of interest.

Videotaping is practical only when the activities are conducted in a central or common location. A fixed video camera is placed in one or more locations where the behavior of interest occurs. In areas where there is an internet connection, the project can use a camera hardwired to a modem to allow remote viewing on a computer or 3G phone. The main benefits of using video technology are the following:

- *Better management of data collection and analysis.* Using video technology to record and review behavior, antecedents, and consequences allows for a visual analysis to detect patterns between environmental events and behavior. The problem with in-person observation is that the observer has a single pass at data collection. The observer has to make decisions about what is important to record and cannot review alternative data later. With a video recording, the observer can control the session, pausing it to take notes or repeat a section to enhance understanding. Individual actions can be stopped, rewound, slowed down and viewed by multiple people from different viewpoints. Observing behavior via videotapes provides the observer with a more detached, objective environment to facilitate focused observation and detailed recording. The recorded observation can be shared with colleagues and other stakeholders for additional input or to show stakeholders the effect of the behavior on business competitiveness.

- *Unobtrusiveness.* A mounted video camera set to record for a fixed time is less obtrusive than an in-person observation. Target groups are aware that a camera has been mounted, but they are not provided any indication as to what is specifically being observed. Likewise, people tend to get used to the presence of the camera after several days and revert to their natural behavior. Nevertheless, knowing that they are being observed can sometimes provide the psychological stimulus for improved performance.

- *Remote real-time observation* (in areas where there is internet connection). Observers can remotely pan and tilt the camera, observe and listen to the activities, capture still images and record videos using a computer and web browser. This offers the project the ability to reach more target groups in more locations at less cost and time than in-person observations.

- *Feedback and communication.* The target groups under observation can participate in the analysis of their own behavior using visual images and with the aid of observation form templates. Likewise, the video is a useful tool in the discussion of feedback to target groups and in the further exploration of the specific details leading to the behavior. In doing this, project staff should take care to avoid embarrassment to any of the target groups.

Subjectivity is an inherent aspect of video recording. The selection of what to observe and record can be influenced by the researcher's values, knowledge, and biases. The use of a video camera in research requires objective decision making about what to observe and record. Likewise, without an exceptionally wide-angle lens, no video camera can

record all that goes on in one setting. If such a lens is used, then the wide view will preclude being able to see enough detail to understand much of what is going on. To overcome these limitations, set-up of video cameras should be guided by the behavior observation framework. It is also advisable for projects to begin their research with a preliminary period of onsite direct observation. This can clarify the most appropriate time to videotape activities and behaviors of interest and determine where video cameras should be placed and how many should be used. Onsite direct observation can assist the researcher in becoming more familiar with the setting and with the behaviors to be observed in video recording. During the monitoring period, supplementary onsite direct observation may also be necessary to capture behaviors that occur outside of the camera range.

III. GATHERING AND RECORDING BEHAVIOR OBSERVATION

A. STANDARDIZING DATA COLLECTION

Reliable data collection through observation requires a shared understanding of the type and level of information to be collected by all observers. Below are some guidelines for promoting this common understanding.

- Define indicators based on what the project expects to find in the environment, product or process as a result of interventions. (See behavior change observation framework.)
- Observers should have a clear understanding of the operational definitions of the behavior dimensions. Videotaped examples and role playing can be useful to demonstrate each category. Observers must be trained to look for the same information, record data similarly, and use similar vocabulary and meanings. If possible, have all observers observe the same situation and fill out their forms separately, then compare their responses. Discuss differences in the level of detail and content. This analysis will help create a common understanding of what level and type of information should be collected.
- Conduct a pilot observation to validate operational definitions of behavior and check inter-observer agreement on behavior occurrence. Data can be considered reliable if observers agree on 80 percent or more of the items. Inconsistent measurement can add variability, making data more difficult to interpret. Determining the agreement between two observers also decreases the likelihood of individual observer bias.

B. CONDUCTING BEHAVIOR OBSERVATION

1. Target groups might already be accustomed to being observed during monitoring visits. Nevertheless, it is advisable to inform the stakeholders at the start of the project that staff will be conducting direct observation of their behavior regularly in relation to project interventions. To reduce behavior distortion among target groups (e.g., behaving according to what they think the staff would want to see), the project may want to inform the group of the general aspects of the observation to be conducted rather than the specific behavior of interest.
2. Public and private information should be treated differently. Informed consent is necessary when project staff observe private behavior, but not when observing public behavior. Private information should be reported in ways that mask the individuals' or firms' identities, such as reporting group averages. To determine whether information is considered private or public, project staff should consider two factors: a) whether the information is sensitive and thus regarded as private (common examples are religious beliefs, negotiations with suppliers, and details of business operations); and b) whether the information was obtained in a public setting such as a festival, or a private setting, such as a home or place of business.
3. The nature of the target behavior of interest will determine what kinds of observations are required. Below are the general aspects one should observe to identify antecedents and consequences in addition to the occurrence of the target behavior itself.

Table 5: Aspects of Behavior to Observe

Category	Aspects	Points to Take Note Of
Appearance	Clothing, age, gender, physical appearance	Anything that might indicate membership in groups or in sub-populations such as social status, socio-economic class, religion, ethnic group, etc.
Verbal behavior and interactions	Who speaks to whom and for how long; who initiates interactions; tones of voice	
Physical behavior and gestures	What people do, who does what, who interacts with whom, who is not interacting	How people use their bodies and voices to communicate different emotions; what individuals' behaviors indicate about their feelings toward one another, their social rank, religious groups, ethnic affiliation, etc.
Personal space	How close people stand to one another	Personal space and their behavior to one another
People who stand out	Identification of people who receive a lot of attention	The characteristics of these individuals; what differentiates them from others; whether people consult them or they approach people; whether they appear to be well-known to the rest of the group

Source: Qualitative Research Method: A Data Collector's Field Guide. Family Health International

4. Look for non-verbal clues. Facial expressions and body language convey a great deal of information about people's attitudes and feelings. This nonverbal data becomes especially crucial when people do not articulate their emotions.

5. Be discreet. Try not to stand out or to affect the natural flow of activity. Limit intrusions into their environment and actions. Stay out of people's way as much as possible, and don't direct their actions.

6. Avoid distracting behavior during the observation (e.g., frowning, moving about, or whispering to teammates).

7. Resist the temptation to give any kind of verbal or nonverbal input or feedback during the observation.

8. Avoid mapping people into constructs or categories that cannot be directly observed or measured. The focal point in conducting direct observation is what the person does—not what sort of person he or she is. When an observer puts a "label" on the person or target groups he or she is observing, there is a danger that he or she may overlook some important behavior or incorrectly assume the person to be similar to someone else with the same label.

9. Observers must be aware of their potential bias. They must be clear with themselves and with the group on their initial biases and expectations at the outset and guard against these during the recording of the observations.

10. The length of time of each observation period should be carefully considered, taking into account the frequency of events of interest, and the difficulty for observers to maintain concentration for long periods. Most people's span of attention is about twenty minutes, which means that regular breaks are needed if the observation requires a long period of time. This issue, however, is not crucial when using video technology, as one can always pause and replay the scenes at any time.

11. Observers should document what they observe, taking care to distinguish it from both their expectations and interpretations of what they have observed. To interpret is to impose one's own judgment on what has been seen. For example, an interpretive description of a wet market may be "it was dirty and overly crowded." An objective description may be "there was garbage everywhere and there were so many people that it was difficult to move." The danger of not separating interpretation from observation is that one's interpretations can turn out to be wrong.

12. Record even the obvious or the seemingly unimportant. What is obvious to one observer might offer insight to another. Seemingly unimportant details sometimes turn out to be the key to facilitating behavior change.

C. COLLECTING AND RECORDING BEHAVIOR DATA

There are three primary ways of collecting observation data. These three methods can be combined to meet data collection needs.

1. RECORDING SHEETS AND CHECKLISTS

This is the most standardized way of collecting observation data and includes both preset questions and responses. The form usually involves a Yes-No option (present/not present) or a rating scale to indicate extent or quality of a behavior. These forms are typically used for collecting data that can be easily described in advance.

Table 6: Data Collecting Form with Rating Scale

Example: Communication Skills of Farmer Cooperative Members							
Aspect	**Needs to Improve (1)**	**Beginning (2)**	**Developing (3)**	**Advanced (4)**	**1st Eval**	**2nd Eval**	**Change in Score**
Self Expression	Resists sharing of thoughts, feelings; shy	Wants to express thoughts, feelings but struggles to do so	Expresses feelings, thoughts in safe situations	Expresses thoughts, feelings even in difficult situations			
Listening	Routinely ignores inputs from others	Listens to friends but ignores inputs from others	Listens carefully to inputs from others	Questions others to get different viewpoints			

Source: Adapted from Bonnie Hermann, Milwaukee Country, 1966.

2. OBSERVATION GUIDES

This is a structured guide that lists the interactions, processes, or behaviors to be observed with space to record open-ended narrative data.

Table 7: Sample Observation Guide

Example: Shopping Behavior of Urban Consumers in a Supermarket									
1.	Sex		Male		Female				
2.	Estimated Age								
3.		Hurried			Unhurried				
4.	Using shopping list			Yes		No		Uncertain	
5.	Product area shopped								
6.	Read container labels			Yes		No		Uncertain	NA
7.	Examines for freshness date			Yes		No		Uncertain	NA

Example: Shopping Behavior of Urban Consumers in a Supermarket									
8.	Selects generic brand		Yes		No		Uncertain		NA
9.	Compares brands		Yes		No		Uncertain		NA
10.	Selects "best buy" among all brands available		Yes		No		Uncertain		NA
11.	Other shopping practices								

Source: Adapted from Worden, 1987.

3. FIELD NOTES

This is the least structured way to record observation. Field notes are open-ended narrative data that can be written or dictated into a tape recorder. The description must be factual, accurate, and thorough without being judgmental or cluttered by trivia.

D. SAMPLE TEMPLATES

Below are examples of templates that value chain development projects may use depending on the objectives of the direct observation.

1. ANTECEDENT – BEHAVIOR – CONSEQUENCE TEMPLATE

This template is used to record observations aimed at helping projects to understand why the behavior is occurring. Information that can be recorded in this template includes the following:

- Operational description of behavior
- Prediction/approximation of times and situations of behavior
- Definition of function
- Identification of variables that maintain behavior

Table 8: Sample Antecedent-Consequence Template

Example: Recording handwashing behavior at start of work						
Target Behavior:		Food handlers wash hands as per procedure before starting work				
Intervention:		Glow germ exercise, follow through workshop, posters				
Frame Reference						
Record #	**Setting**	**Activity**	**Antecedent**	**Behavior**	**Consequence**	**Comment**
Start: 5/9/2011 06:30 **End: 5/9/2011 07:00 am**	4 food handlers arrived at the plant by 6:40 am.	Arrival and preparation for work. Putting on of uniform and washing of hands.	Food handlers put on their aprons, masks, and boots.	Lined up at handwashing station on a first come, first served basis. Each one washed their hands according to procedures.	Went to their work stations and started cleaning their area. Supervisor praised them for their punctuality.	Had ample time for handwashing and to prepare themselves for the work. No importance given to handwashing.
Start: 5/9/2011	7 food handlers	Preparation for work.	Food handlers put	The 2 food handlers joined	2 food handlers rushed to their	Short cuts taken when in

07:05 am End: 5/29/2011 7:35 am	have just arrived. Greeting and talking among each other. Supervisor already in the plant giving orders.	Putting on uniform and washing hands. Arrival of newly harvested fish.	on uniforms while talking animatedly with peers. Supervisor called out 2 of the 7 food handlers to receive the newly arrived fishes. Orders given to prepare ice chest.	a peer washing hands and shared the faucet. Washing done in less than 10 seconds by the 2 food handlers and used apron to dry their hands. The person who was already washing her hands continued as per procedure.	station to receive the fish. Supervisor smiled at them. 4 people waiting for their turns started making jokes that her hands must be dirty.	a rush. Food handlers rank the order from superior to be more important than following handwashing. Queue at faucet, especially during rush hour, contributes to improper handwashing. Mentality that those who take time to wash their hands are perceived to be "dirtier."

Guidelines for Completing Template

Setting: Where and when did the behavior occur? Who were the people around at that time? What kind of behavior does the setting encourage, permit, discourage, or prevent? Note particularly those people who interacted with the subjects of the observation before, during, and after the behavior.

Activities and interactions: What is going on? Is there a definable sequence of activities? How do people interact with the activity and one another?

Antecedent: What happened right before the targeted behavior that the subject might be responding to? An antecedent is an event or activity (a verbal cue, activity, event or person) that immediately precedes the expected occurrence of a target behavior.

Behavior: This refers to the target behavior of interest. Describe whether behavior occurred or not, and if it occurred, how it was performed.

Consequence: What happened after the behavior occurred? A consequence is not necessarily always something that somebody purposefully does as a result of the behavior, so one must observe and record as many details as possible about the reactions of people or the subject himself/herself and any changes that have occurred in the environment. The consequence may be for the person involved, other people, the organization in general or a wider audience. The consequences for the person involved are the most important in decreasing, increasing or sustaining behavior. Positive consequences may include praise, bonuses, recognition, promotion, increase in social esteem, and reduced stress. Negative consequences may include reprimands, ostracism, and stress. Sometimes, the lack of consequences is as important as the presence of consequences. "No consequence" is in itself a consequence.

A disadvantage of using this template is that sometimes it can be difficult to see patterns quickly, and the data may need to be summarized to look for patterns related to antecedents and consequences.

2. FREQUENCY OF BEHAVIOR TEMPLATE

This is particularly useful for monitoring behaviors that the project hopes target groups will adopt as a lifetime habit rather than just a one-time action such as registering a business. Frequency is measured by simply counting the number of occurrences of the behavior. It is important to note the timeframe during which the data is collected. In the use of protective gear among food handlers, for example, it has been noted that food handlers tend to skip using protective gear during peak hours. Similarly, food handlers tend to be conscientious in washing their hands properly at the start of the day but tend to be lax about it near the end of their shift.

Table 9: Sample Frequency Template

Example: Frequency of Handwashing				
Target Behavior	Food handlers wash their hands for 20 seconds using soap during each of the identified handwashing opportunities			
Date	13 May 2011			
Intervention Implemented	Posters on proper handwashing and when to wash hands mounted in strategic places in the plant			
Observer	JD			
Time Period	**Description of Setting**	**Frequency**		
		Properly Done	**Not Properly Done**	**Not Done**
6:30 – 7:00	Food handlers for shift 1 start arriving; getting ready to start the deboning; 5 handlers in the plant.	5		
7:00 – 7:30	10 food handlers finish putting on their aprons. Start to line up to wash hands.	8	2	
8: 45 – 9:30	4 food handlers doing the deboning called to assist in sorting newly arrived fishes. 3 almost done with deboning a fish. The 3 went ahead while the other one is still finishing.	2	1	1
10:15 – 10:30	15 handlers finished their snack break and reported back to work station.	12	3	
1:00 – 1:30	Handlers return from lunch break. Put on aprons, nets, and masks. One by one returning back to work station.	14	1	
2:00 – 2:30	One by one, the food handlers finish deboning the fish assigned to them. Prepare to start marinating activities.	9	1	5
3:00 – 3:30	Resume after snack break; plant supervisor reminds group in an urgent and demanding tone that 20 kilos of deboned fishes should be marinated and smoked before shift ends.	6	6	3
4:30 – 5:00	Supervisor enters the plant and tells food handlers to start packing; smoked fishes already lined up for packing.	6	4	5

Event recording is usually the method of choice when the project wants to increase or decrease a behavior. To use event recording, the behavior must be observable and have a clear beginning as well as a clear ending. It is not advisable to use this method if the behavior occurs at such a high rate that an accurate count is impossible or if the behavior occurs for extended periods of time or continuously.

IV. DATA ANALYSIS AND ITS USE IN INTERVENTION PLANNING

As mentioned earlier, projects can influence behavior by shaping the environment in which target groups function. This can be done by manipulating antecedents and consequences so the desired behavior is attained, and competing undesired behavior is eliminated or reduced. Analysis of "Antecedent-Behavior-Consequence" data together with frequency data does not identify those interventions that will be effective, but rather the powerful reinforcers of the target behavior that can be used in the intervention.

GUIDELINES FOR ANALYZING AND SUMMARIZING BEHAVIOR OBSERVATIONS[1]

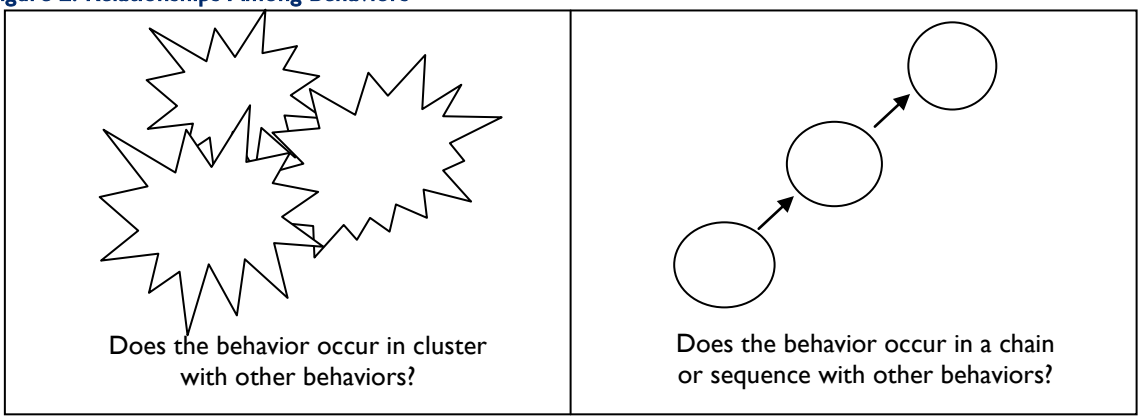
1. Examine the data sheets for patterns of antecedents and consequences.

Table 10: Sample Data Sheet of Antecedents and Consequences

Behavior: Improper washing of hands/No washing of hands			
Antecedents		**Consequences**	
This behavior is most frequently preceded by:	**This behavior is least frequently preceded by:**	**This behavior is most frequently followed by:**	**This behavior is least frequently followed by:**
Late arrival of food handlers and need to rush to their work station to avoid reprimand from supervisors/peers	At the start of working hours after they have put on their aprons	Quick response to supervisor's orders or request from colleagues	Reprimand from supervisor
Food handlers being suddenly pulled out to do other tasks	Punctual arrival at plant, with ample time for washing	No consequence/ comments from peers or supervisors re: improper handwashing	Negative comments from peers
The later part of the day —peak production hours			
A queue at the faucet			

2. Consider how the behavior (e.g., improper washing) may relate to other behaviors.

Figure 2: Relationships Among Behaviors



[1] Adapted from Functional Assessment, Center of Early Education and Development, University of Minnesota

3. Analyze the data to determine the factors in the environment that maintain the problem behavior.
   - When does the behavior occur/not occur?
   - How often does the behavior occur?
   - With whom does the behavior occur?
   - Where does the behavior occur/not occur?
4. Determine the function(s) of the problem behavior.
   - Behavior usually occurs in response to a specific person, event, or request to perform an activity
   - Behavior often occurs when something has been denied or taken away—it is not specific to a particular person or event
   - Behavior usually occurs when specific individuals are present—it is specific to a particular person, not to an event or location
   - Behavior occurs anytime, anywhere; it is not specific to a particular person, event, or location but may occur more often when under stress
5. When the function of problem behavior has been identified, interventions can consist of:
   - Altering antecedent variables
   - Altering consequent variables
   - Teaching alternative behavior

Intervention strategies may involve modifying subjects' environment by introducing antecedents and consequences that are associated with desirable behavior in other situations. For instance, in the handwashing behavior, a food handler may be motivated to practice correct handwashing behavior if the supervisor reminds her to wash first her hands before responding to a request (antecedent event) or if co-workers refuse to let a food handler who has not properly washed her hands handle ice, especially when her previous task involved degutting (consequence).

TOOL 2:
SELF REPORT –
ACTIVITY STICKER DIARY

I. FEATURES OF THE TOOL

In many studies of behavior change, target groups work individually in their own homes or farms, leading the project to rely on self-reports to measure and assess behavior change. In self-reporting, the target groups are responsible for providing data without the physical presence of researchers or project staff. Despite the widespread use of self-report surveys for assessing behavior in natural settings, these surveys are known to suffer from the following issues and disadvantages:

Image 1: Project Participant Filling out Sticker Diary

- Self-report assessments are vulnerable to distortion, particularly with behaviors that are less socially acceptable. In their desire to make a good impression, respondents tailor their answers to conform to behaviors they believe are socially acceptable or in line with the project's expectations.
- Respondents do not remember all of their behaviors.
- Respondents have difficulties in expressing themselves via writing or are not keen to write down their activities.
- Respondents use varying terms in their self-reports and may not have the same definition of terms.

The activity sticker diary, a self-observation data collection tool, aims to address the above issues through the following features:

- The time diary format allows respondents to describe all of their major activities for specific periods of time during the day rather than just the behavior targeted by the project. By not focusing sharply on the "interest behavior," there is a higher potential to minimize selective recall and reporting bias. Moreover, the diary technique gives respondents minimal opportunity to distort activities to present themselves in a particular light.
- The diary relies primarily on pictures, which reduces the need for writing and facilitates recall. However, there is a space for respondents to write a brief assessment of their day, when possible, which helps projects to contextualize the information in the time diary.
- The set of stickers consists of pictures of activities ranging from bad to good behavior. The creates a standardized, closed format that allows for more consistent data collection and simpler data analysis than an open format.
- The diary enables researchers to collect a record of all daily activities over a period of one or more weeks, ensuring that data reflects "regular" behavior. A space for respondents to write a brief assessment of their day helps projects to contextualize the information in the time diary.

Image 2: Page from an Actual Sticker Diary

The process of self-reporting is in itself an intervention that facilitates self-reflection and can trigger respondents to question their choices and everyday behaviors. As the respondent monitors his or her behavior through the

sticker diary, it enhances the possibilities of positive behavior change. The tool also enables project staff to learn from the perspective of the target groups why certain behaviors happen. It is critical that value chain development projects understand the mindset of the respondents in order to design interventions that lead to long-term behavior change.

ADVANTAGES AND DISADVANTAGES OF A DIARY IN MONITORING BEHAVIOR CHANGE

Advantages

- Useful when respondents are scattered or difficult to reach.
- Provides a means of overcoming the problems associated with collecting sensitive information through personal interviews.
- Can be used to supplement interview data.
- Templates can be created that provide standardized data formats, making the process simpler for respondents and analysts.

Disadvantages

- Diary studies rely on the subject being able/willing to complete the diary.
- Recall of the activities is subjective; participants tend to remember the completion of the task as better or worse than it actually was.
- The large time requirement placed upon the subject means that the diaries must be straightforward and simple to complete. This can have implications for the breadth and depth of the data collected.

Self-reporting can also provide insight into the private and mobile aspects of people's lives that are often difficult to access through traditional methods of observation and interviews. Research has shown that self-reports of sensitive behaviors improve as assurance of privacy and confidentiality are increased.

While preparation of the sticker diaries can be costly, overall implementation is not as time- or cost-intensive as direct observation. The benefit of the sticker diary (vis-à-vis on-site direct observation) is that it can be conducted economically across a large and dispersed population, which helps to generalize the research findings.

Although the sticker diary is very useful in capturing the activities people do on a daily basis, it may not capture things people do infrequently. Thus, activities that happen monthly might be missing from the diary unless the randomly chosen days happened to be when that activity occurred. Likewise, in the first field trial of the tool, researchers observed that respondents often excluded daily activities that happened frequently but took very little time (e.g., washing hands or texting).

II. PREPARATION OF THE STICKER DIARY KIT

A. IDENTIFICATION OF MAJOR ACTIVITIES AND ASSOCIATED BEHAVIOR

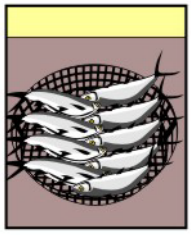
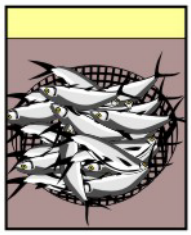
After identifying a representative sample of respondents, project staff can hold a focus group discussion to determine the key activities and behaviors that are necessary to include in the sticker diary. This can also be done using direct observation (refer to Tool 1).

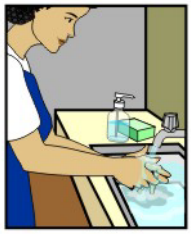
- Ask the participants to write down the activities they carried out the day before, in chronological order. Participants should indicate with an asterisk any activities that they do not perform on a daily or weekly basis.
- Using the information gathered from participants, jointly determine the major activities that take place during a typical day and week.
- Identify the time period that behavior(s) targeted by the project generally occur (to be done by facilitator and/or project team members only). Then ask participants to describe the range of behaviors associated with activities that fall within the time period identified. This may be done via role playing. In some cases, it may be necessary to conduct direct observation.

B. DEVELOPMENT OF STICKERS

Prepare a set of stickers depicting the different ways (good and bad) that the activities are carried out, paying particular attention to the activities related to the target behavior. Do not place any markings or descriptions on the stickers to indicate whether behavior is good or bad.

Table 11: Examples of Sticker Sets per Activity

Wearing of Uniform		**Smoking of Fishes**	
T-shirt and slippers		Fishes arranged properly	
Complete/Proper Uniform		Overflowing and disarranged	

Entering the Plant		Handwashing	
Via entrance door and stepping in foot bath		Washing of hands with soap and running water	
Via exit door		Washing via dipping hands in bowl of water; without soap	
Jumping over foot bath		Using apron to wipe hands	

C. DIARY TEMPLATE

Figure 3: Sample Cover Page for Sticker Diary

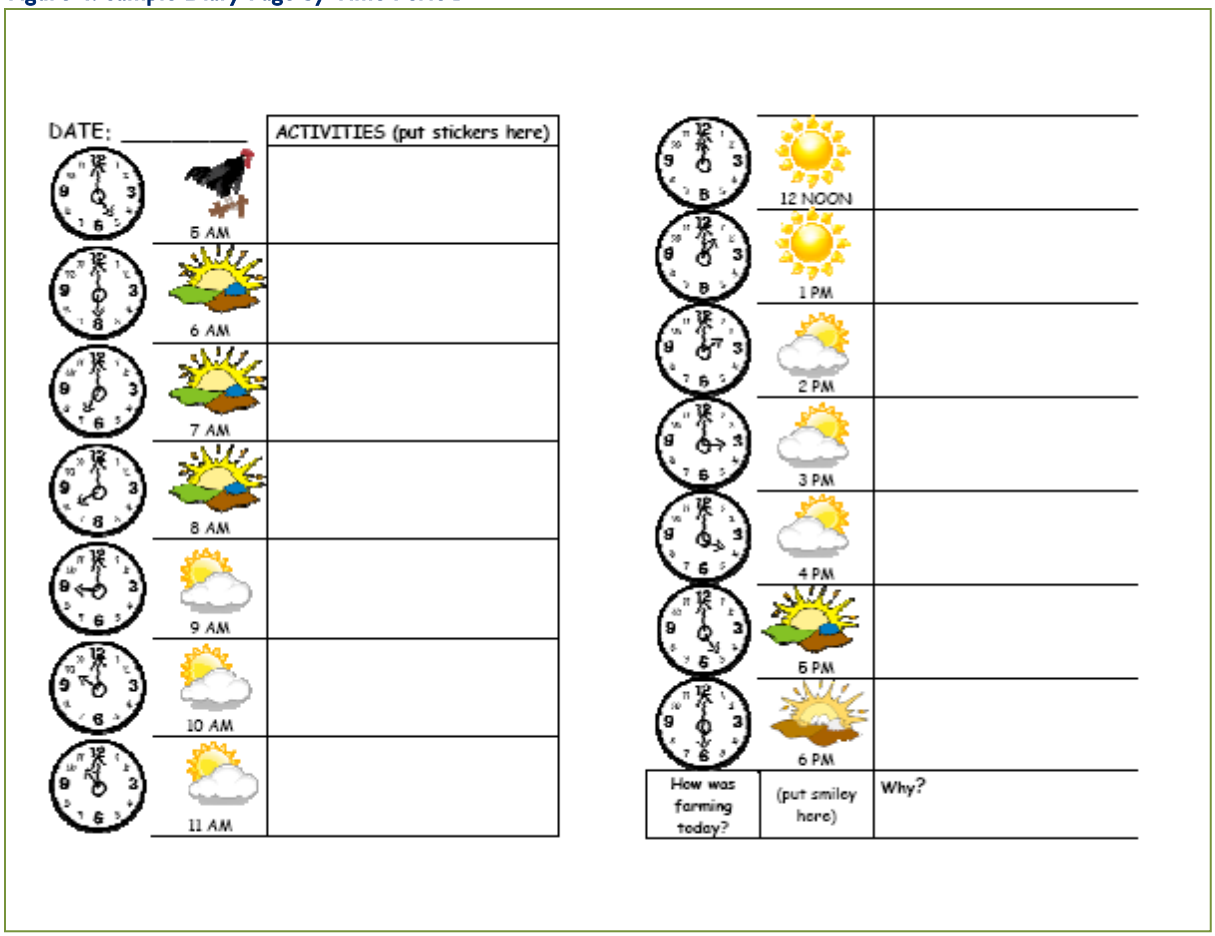
1. The first page of the diary may be allocated to basic socio-demographic data. As much as possible, do not make it look like a questionnaire. Instead make it fun and personalized—just like a real diary.

2. Decide on the most suitable time interval between activity slots in the diary. This will vary depending on what behaviors are being studied and how frequently they occur. The intervals can be fixed, random, or a combination of the two. In fixed-schedule designs, researchers choose schedules using either specific times of the day (e.g., 10 AM, 4 PM, 9 PM) or specific time intervals (e.g., every 30 minutes, hourly, or every afternoon). Variable schedules involve the assessment of activities according to a random pattern that is undisclosed to the participants. Users of variable schedules are often concerned with momentary experiences, such as psychological states. For example, researchers studying the eating behaviors of children at school may be interested in time- or day-based differences and would want to know how the children felt about school that day or who they were eating lunch with.

   When using a fixed schedule, the spacing of intervals is an important consideration. Too long an interval may cause respondents to forget or exclude important intervening actions and behaviors. Thus in many cases, it is best to keep the time interval very short (not more than one hour).

3. Each page should clearly denote the time period it covers, with prominent headings and enough space to paste the stickers and write additional information.

Figure 4: Sample Diary Page by Time Period



4. It is also useful to include a section at the end asking for the respondents' own assessment of his or her day to help the project contextualize the information provided.

III. DATA RECORDING AND ANALYSIS

Image 3: Women Food Handlers Complete Sticker Diary

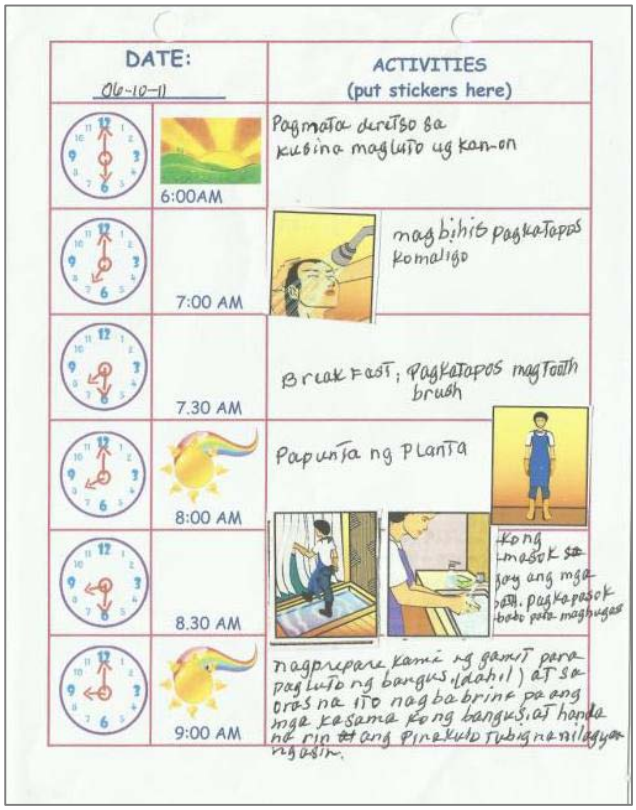
During the first day of using the diary in the Philippines, the quick learners coached their peers on how to complete the diary. They were also regularly reminded to immediately record the activity after its completion to facilitate recall. After three days, recording activities became routine for the majority of the food handlers.

Image 4: Women Coach Peers on Sticker Diary

A. GUIDE ON HOW TO COMPLETE THE DIARY/RECORD EVENTS (FOR RESPONDENTS)

1. To the extent possible, respondents should record each activity as soon as it is completed. Long periods of time between when the activity occurred and when it was recorded in the diary can increase the risk of biased retrospection, which diary research explicitly seeks to minimize.

Figure 5: Completed Page from Sticker Diary



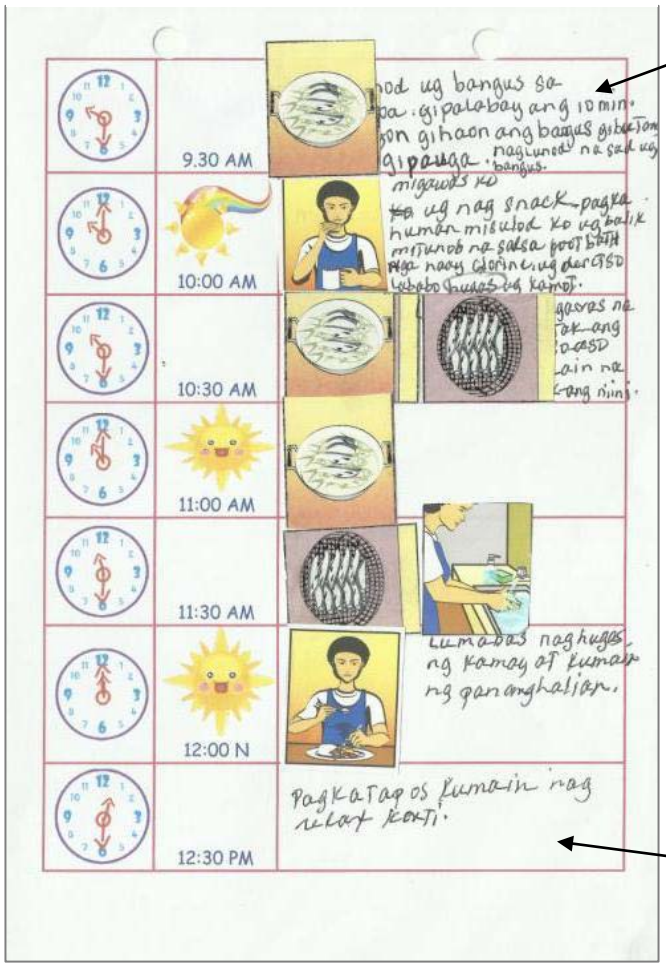
Target behavior: Food handlers wash their hands using proper techniques for all relevant work activities.

Although the project was primarily interested in handwashing behavior, the diary covered activities from 6 am to 6 pm.

Image 5: Woman Completing Sticker Diary

2. The respondent should paste the sticker in the diary that most closely depicts how he or she carried out an activity. If there is no sticker to show the activity, respondents should write down a description of the activity.

Figure 6: Page Two from Completed Sticker Diary



Encourage respondents to write down their thoughts and other information that they want to share related to the activity.

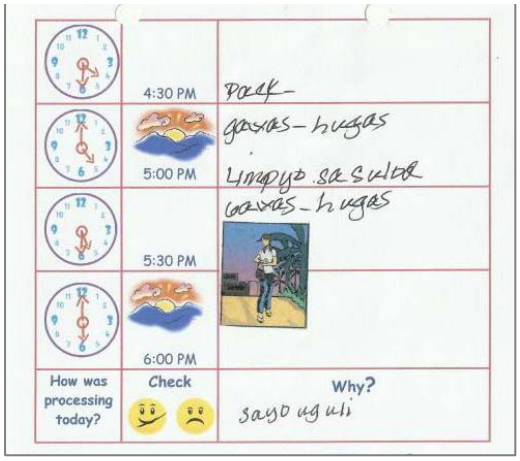
Image 6: Pasting Stickers into Diary

This description translates to: "After eating, I took a short rest."

To the extent possible, the project should ensure that the diary kit contains stickers for the complete range of activities respondents are likely to conduct. Without stickers to guide them, respondents may describe the activity in a generic way.

3. Respondents should provide a brief assessment of their day.

Figure 7: Final Page from Completed Sticker Diary



Translation: "I had a good day. I was able to finish my tasks and went home early."

B. EXAMPLES OF INFORMATION THAT A PROJECT CAN GATHER FROM STICKER DIARIES

1. FREQUENCY AND REPETITION

A large portion of everyday behavior is repeated in various intervals, which can turn the behavior into a habit. A habit is a recurrent, often unconscious pattern of behavior that is acquired through frequent repetition in a stable context. By showing the frequency of behavior, the sticker diary can give insight into the habits of the target population and how the habits impact behaviors. The sticker diary can also demonstrate adoption rates for certain types of target behaviors that the project is aiming to make habitual among the respondents.

Example: Target Behavior – Proper Handwashing

An important and relevant measurement that this tool facilitates is the frequency that behavior occurs and the way it was performed. To facilitate data tabulation and analysis, it is advisable to pre-code the activity stickers.

Below is an example of a table showing the number of times that food handlers washed their hands (properly and improperly) based on the 5-day diaries of 24 food handlers in a community-based fish processing plant. The total number of handwashing opportunities, 846, was determined by multiplying the number of times that respondents were supposed to wash their hands by the total number of respondents. With the handwashing opportunities as the base, percentages were then calculated for the number of times that respondents washed their hands properly and improperly for each activity.

Table 12: Sample Table of Behavior Compliance among Participants

Handwashing Opportunities		Handwashing Compliance			
Description	No.	% of Compliance	Washed Hands Properly	Washed Hands Improperly	Handlers did not wash hands
Before entering the plant, after putting on uniform/at the start of work	120	100%	120 (100%)	0 (0%)	
After deboning - before lunch break	96	81%	63 (66%)	15 (16%)	18 (19%)
After lunch break/before entering the plant	120	100%	120 (100%)	0 (0%)	0 (0%)
Before going out for break	120	80%	78 (65%)	18 (15%)	24 (20%)
After break or going to the bathroom	120	100%	120 (100%)	0 (0%)	0 (0%)
After deboning, when shifting to packing of fishes	36	42%	9 (25%)	6 (17%)	21 (58%)
After cutting and preparing/mixing the marinade	12	75%	6 (50%)	3 (25%)	3 (25%)

After removing the gloves when soaking the fishes in the marinade	12	75%	6 (50%)	3 (25%)	3 (25%)
After cooking and before packing of smoked milkfish/bangus in plastic bags	36	92%	27 (75%)	6 (17%)	3 (8%)
After marinating and before shifting to cooking and/or packing smoked milkfish	54	56%	30 (56%)	0 (0%)	24 (44%)
After touching and cleaning utensils, table tops and floors	120	65%	66 (55%)	12 (10%)	42 (35%)
Total	**846**	**100%**	**645 (77%)**	**63 (7%)**	**138 (16%)**

The table above provides the project with information on how the target group performed this critical good practice during processing and product handling. It also enables the project to identify situations where handwashing is usually done incorrectly or altogether skipped. In this example, the rates of appropriate handwashing were significantly higher before food preparation than in conjunction with other work activities.

2. ANTECEDENTS AND CONSEQUENCES OF BEHAVIOR

Diaries can help determine the antecedents and consequences of behavior. A vital activity in the preparation of the stickers is the identification of the possible range of antecedents and consequences. The tool can then help project staff identify correlations in behavior. For example, if the majority of respondents who enter through the back door then wash their hands improperly, the project can look into reasons why this happens and possible solutions (e.g. the back entrance lacks a faucet, so the project could encourage the plant to install one there). Written descriptions of respondents' thoughts and emotions is especially valuable in determining why behaviors happen the way they do.

3. MODELING THE CHANGE PROCESS OVER A PERIOD OF TIME

The activity sticker diary can help projects track the change process and its evolution over a period of time under different circumstances or conditions. Information from the diaries can provide insight on how target groups change and whether there have been improvements or fluctuations in the adoption of the target behavior. This can be done in a period of a few weeks for some types of behaviors (like handwashing, below) or could be done by following up with the same respondents after a period of 6 months or a year to see how adoption of behaviors has progressed.

Example: Day 1 vs. Day 5

One of the advantages of using the activity sticker diary tool is that projects can assess single or multiple activities and the progress towards the desired behavior(s). In this example, the project evaluated handwashing behavior for several activities as well as other practices related to personal and workplace hygiene. The data from the diaries helped the project track the change process over five days and identify areas for improvement and further intervention.

Table 13: Progress Towards Proper Handwashing – Day 1 vs. Day 5

	# of Respondents = 24	Day 1: June 7				Day 5: June 11			
#	Handwashing Opportunities	# of Handwashing Opportunities	# of Handlers Washing Properly	# of Handlers Washing Improperly	# of Handlers That Did Not Wash	# of Handwashing Opportunities	# of Handlers Washing Properly	# of Handlers Washing Improperly	# of Handlers That Did Not Wash
1	Before entering the plant, after putting on uniform/at the start of work	24	24	0	0	24	24	0	0
2	After deboning - before lunch break	24	12	6	6	24	21	0	3
3	After lunch break/before entering the plant	24	24	0	0	24	24	0	0
4	Before going out for break	24	9	9	6	24	21	3	0
5	After break or going to the bathroom	24	24	0	0	24	24	0	0
6	After deboning, when shifting to packing of fishes	12	0	3	9	N/A	N/A	N/A	N/A
7	After cutting and preparing/mixing the marinade	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
8	After removing the gloves when soaking the fishes in the marinade	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
9	After cooking and before packing of smoked milkfish/bangus in plastic bags	N/A	N/A	N/A	N/A	12	12	0	0
10	After marinating and before shifting to cooking and/or packing smoked milkfish	N/A	N/A	N/A	N/A	18	15	0	3
11	After touching and cleaning utensils, table tops and floors	24	12	0	12	24	18	3	3
	Total daily opportunities	**156**	**105**	**54**	**33**	**174**	**159**	**6**	**9**
	Handwashing percentage based on total opportunities	**100%**	**67%**	**12%**	**21%**	**100%**	**91%**	**3%**	**5%**

TOOL 3:

PEER OBSERVATION

I. BACKGROUND AND DESCRIPTION OF THE TOOL

This peer behavior observation tool is intended for use by value chain development projects in situations where peer cooperation and collaboration are critical to achievement of the project's behavior change objectives. Several features of peer observation make it effective for facilitating behavior change. First, as Johnson and Johnson (1990) note, people may be encouraged to change by the feeling that they are part of a larger effort. Collegial support can help increase target groups' belief that they are engaged in a joint venture ("we are doing it"), a public commitment to and by peers to positively transform their behavior ("I will try it"), peer accountability ("they are counting on me"), a sense of social support ("they will help and assist me"), and self-efficacy ("if I make the effort, I will be successful"). Peer observation also helps people change by giving them the opportunity to see, understand, discuss, contrast and practice targeted behavior with a group. To effectively apply new behavior, people need feedback about current practice, and peer observation is one way of gaining such feedback—preferably in the natural setting or even in structured, role-play learning settings (Rogers 1990). Lastly, individuals who are similar to each other generally make the greatest impact when attempting to influence behavior because they view each other as more likeable and trustworthy (Cialdini, 2001).

This tool provides the project with information on progress toward behavior change while instilling ownership and commitment among value chain actors. It aims to engender group and individual reflection. The Peer Observation tool has the following features:

- Emphasizes development and collective responsibility
- Avoids duality (good/bad; praising/fault finding)
- Allows for group reflection while respecting individual confidentiality
- Enables the dissemination of good practice
- Builds capacity by creating an ongoing process of learning among stakeholders that is based on the learning cycle of experience, reflection, conclusions, and lessons learned

The Peer Observation and Feedback tool consists of two components:

a) Peer observation: This is usually done via a checklist (especially if target groups have a low literacy level) containing a list of pre-determined behaviors specific to a practice. Peers observe one another while on the job or performing the practice, noting occurrences or non-occurrences of behavior.

b) Analysis and feedback: The completed checklists are collected, compiled, and shared with the group. The group facilitated by project staff assesses the situation to identify or eliminate any environmental or design hindrances to performing the target behavior.

A. PREMISE FOR PEER OBSERVATION

The use of the peer observation and feedback process in introducing, supporting, and maintaining target behaviors is based on the following behavior concepts:[2]

[2] Geller, 1996

- Behavior is directed by activators/triggers and motivated by consequences.
- People are motivated to maximize positive consequences and minimize negative consequences.
- Feedback can be a powerful consequence.
- Although negative consequences can lead to behavior change, they may have undesirable side effects.
- People view behavior as correct and appropriate to the degree they see others doing it.
- Long-term behavior change requires people to change not only in their observable behavior (change on the "outside") but more importantly in their mindset, assumptions and beliefs (change on the "inside").
- When people feel empowered, their positive behavior spreads to other situations and practices.
- People feel more personal control when working to achieve success than when working to avoid failure.
- Choice increases commitment, ownership, and involvement.

The focus of peer behavior observation is not to have the participants making criticisms, monitoring, or judging their colleagues' skills. They should not perceived the activity as a performance evaluation. Below are the basic differences between evaluation and peer behavior observation.

Table 14: Differences Between Evaluation and Peer Behavior Observation

Aspects	Peer Behavior Observation	Evaluation
Who does it and to whom?	Peers observe each other; not a superior-subordinate relationship	A superior or a person of authority conducts the observation
Purpose	Build capacity, ownership of results, mutual reflection, multi-stakeholder accountability	Identify underperformance, confirm probation, appraisal, promotion, quality assurance
Outcome	Analysis and discussion; stakeholders involved in decision-making on next steps	Report/judgment; recommendations
Source of Evidence	Peer shared perception	Authority; expert diagnosis
Relationship of observer to the observed	Equality/mutuality	Power and/or expertise
Judgment	Non-judgmental; constructive feedback	Pass/fail score
Who Benefits?	Both parties	The person being observed

Source: Adapted from Gosling, 2002.

B. ADVANTAGES AND DISADVANTAGES OF PEER OBSERVATION TOOL

There are several benefits in using the peer observation and feedback tool to monitor behavior change in value chain development projects, namely:

a) Participation in the process of analysis keeps the stakeholders engaged in the project's behavior change objectives.

b) It creates community ownership and helps close the gap between the way project staff and target groups interpret the target behavior.

c) Observing and offering advice benefits not only the one being observed but also the one observing. When a person observes a peer, the observer can discover new ways of doing things and understand how "bad" behavior can influence outcomes. Involving both the observed and the observers in project discussions helps everyone learn about the behavior and reflect on their own actions.

d) It is a non-judgmental and open forum. Participants in peer observation gain reassurance from receiving positive feedback from a peer. Positive feedback gives them the confidence to be innovative.

e) It is less expensive than hiring someone external to the working environment to conduct the observations. Since peers are often in the same environment, they can observe performance more closely and more often than can project staff or outside consultants.

In one case, observers saw fish cage caretakers making a shortcut in the feeding process to have more time for personal activities. To ensure the observers did not adopt this behavior, the feedback session was carefully facilitated to ensure everyone understood the negative consequences of that shortcut and brainstormed ideas for more efficient but correct ways of feeding.

f) It encourages a deepening of trust and empathy between participants.

g) It helps develop a meaningful shared language between project staff and participants based on mutual experiences.

h) It can lead to feelings of increased self-worth as colleagues report positively on issues and/or learning outcomes.

The main disadvantages and constraints of using a peer observation approach are the following:

a) A participant seeing a peer with a behavior "worse" than hers might think that she does not need to change, as she is better than the rest. It can be difficult or impossible to spot this thought process in participants, but the project can try to counter it by having observation tasks that ask participants to reflect on what they learned as well as what they can teach the person they were observing. The project can also make sure participants get useful feedback when they are observed, that they get rewarded for consistently adopting the behavior, and that everyone gets to observe someone who has something to teach them as well as someone they can teach.

b) Participants need training on how to observe and be observed. The process can be hindered not only by lack of understanding and skills, but by negative attitudes. It can also be difficult if some stakeholders are not accustomed to being asked for their opinion. This is especially true when social and cultural practices discourage the involvement of certain marginal groups (e.g., women, youth, or ethnic groups).

c) Others may view the process as a way of getting back at someone, or the feedback session may become argumentative. If it is a problem of clashing personalities or bad feeling between two particular people, letting people choose their own observation partners or choosing them carefully so they can avoid each other are possible solutions. The best way to avoid this is to ensure proper training, well-defined observation tasks, and clear feedback forms.

d) There may be possible bias relating to the observer's own beliefs. (See following section for the most common biases and strategies for mitigating them.)

e) Peer observation may not be a valid method for all evaluation purposes. Target groups tend to accept peer observations when the results are used for constructive diagnostic feedback rather than the basis for administrative decisions or judgment of the group (like determining their potential for accreditation). Observations are more truthful when target groups are given the assurance that this will not be used for "punishment" or but rather to help them further improve. Furthermore, summative evaluation (where the study is an assessment of learning, rather than for learning) generally requires that the evaluator is of a higher rank or competence than the one being evaluated.

f) The feedback may not be useful. To prevent this, feedback sessions should promote collaborative dialogue: 1) ask questions that stimulate reflection, but do not pass judgment; 2) base the feedback on observations, so that any constructive criticism is justifiable; 3) assume that participants have reasons for doing what they do, but seek to understand what those reasons are (root cause analysis); 4) look for interesting approaches or behavior/practices that are worth sharing with colleagues; 5) develop solutions to common problems collaboratively.

C. MITIGATING BIAS IN PEER OBSERVATION

There are several types of bias that may occur among observers when monitoring their peers. Projects should attempt to be aware of these potential types of bias and take steps to mitigate their impact.

- **Halo effect**: observation tends to be based on the observer's overall impression rather than on the specific behavior being targeted. For example, in one Muslim community the women believed that older women and the wife of the Imam in particular, knew more and had wider experiences than the younger generation. Consequently, during peer observation, there was the tendency to always interpret older women's behavior as correct. To mitigate this risk, the project conducted a second round of facilitated group discussion to further define correct behavior including both young and older women in the role play scenarios.

- **End aversion bias/extreme response bias**: end aversion bias is avoiding extreme comments or ratings on a scale. For example, observers would avoid the extreme numbers (e.g. 1 and 5 in a scale of 1 to 5) to avoid giving too strong a response. Alternatively, observers may have extreme response bias and choose only those ratings on the highest or lowest end of a scale. This bias is difficult to detect because these scores may also be due to observers' honest ratings or the halo effect. To mitigate end aversion and extreme response bias, projects can encourage peer observation surveys that have observers simply note whether the target behavior was done properly, improperly, or not at all.

- **Acquiescence Bias**: In certain cultures, participants may try to be agreeable at all times so as not to hurt or disappoint the other person. This causes the "observee's" performance to appear much better than it really is. To address this, the first few observations can be submitted anonymously and the project should assure participants that results will be presented as group feedback rather than individual.

- **Gender/ethnicity bias**: Stereotypes can affect observation. For example, a behavior that has the stereotype of being a "women's task," such as fish sorting, may cause observers to be more critical of men performing the same task (especially when they are observed together with the women). Same-sex grouping can be a solution to this. Likewise, among Muslim communities there are hierarchies that correspond with perceptions of bravery, honesty, etc. When conducting the activity for the first time, grouping by social/ethnic divisions may also be important. After participants are used to the process and develop objectivity, cross-gender and cross-ethnic grouping may be more feasible.

- **Incompetence bias**: When the observer lacks confidence or feels that he or she lacks experience with the observation process for the behavior, there can be a tendency to give positive observations. To address this,

the project should conduct several group sessions showing proper and improper behavior until everybody feels confident that they could clearly delineate the differences.

- **Buddy bias/back-scratching bias**: Friendship and degree of acquaintance can inflate peer observation results. With back-scratching bias, there may be an agreement within the group to provide favorable observation comments for each other. If this may be a factor, the project should use teams of three or more and assign groups randomly on the day that the peer observation will be conducted (see below for different peer observation groupings).

II. STEPS IN A PEER OBSERVATION AND FEEDBACK PROCESS

A. ORGANIZATION OF A GROUP FOR PEER OBSERVATION PROCESS

Trust is one of the greatest predictors of success in a peer observation process. As such, it is recommended to use this process only after target groups have more or less experience working with each other and there is an element of trust among the group. To be most effective, projects should ensure that during the peer observation:

- Everyone who observes also has to be observed
- The system and questions used by the observers when observing has to be the same as that used when they were being observed
- All participants who were involved in the observations must take part in the subsequent discussion and analysis

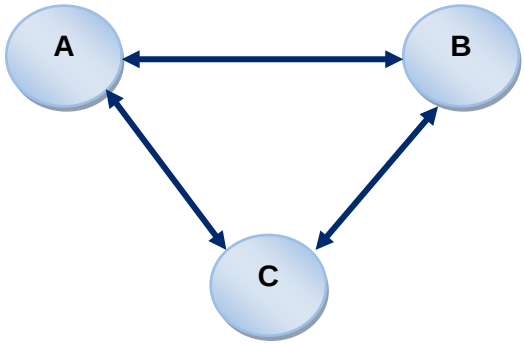
Figure 8: Peer Observation Process

* It is recommended to start the process with a briefing session

There are three possible ways to organize participants in a peer observation and feedback process:

1. Buddy System: Two colleagues agree to act as observer and observed. The first round of observation is followed by a reversal of the roles at a later date.
2. Circular: Colleague A observes colleague B, colleague B observes C, and so on until they have all been observed.
3. Teams of three: Participants are organized within teams of three as in the diagram. Each colleague is observed twice.

Figure 9: Peer Observation in Teams of Three



B. PRE-OBSERVATION MEETING/ BRIEFING

The pre-observation meeting provides an opportunity for the project to establish an effective working relationship with and between the parties concerned. Without a secure foundation and shared understanding of procedures, peer

observation may be construed as a policing action, which is counterproductive and contrary to the spirit and intention of the process. The main agenda items for the pre-observation meeting should be the following:

a) Discussion of the following principles underlying the peer observation and feedback process:

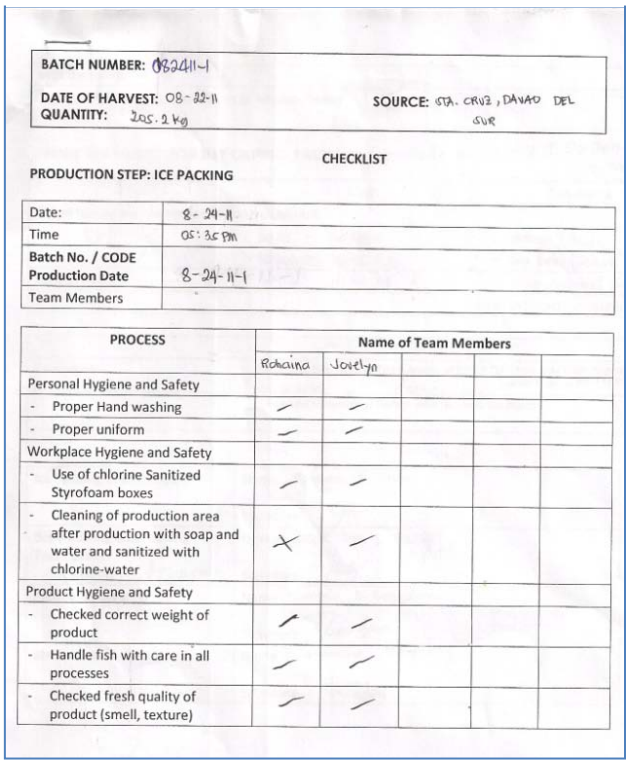
- The principle of confidentiality in the feedback to each individual participant
- The separation of this process from other processes, such as appraisal or accreditation of suppliers
- The emphasis on development rather than judgment

b) Setting of ground rules, definition of behavior to be observed, and method of observation. Projects should:

- Encourage participants to own the process
- Give contextual information that will help the observers to appreciate what they see
- Make sure that the observers are aware of the areas on which feedback would be particularly helpful
- Throughout the meeting, encourage the observers to listen and ask questions to clarify the target behavior being observed
- Ensure that the observers and those being observed agree on how to record observations (see below for possible methods)

c) Development of the behavior observation form.

Figure 10: Sample Behavior Observation Form



BATCH NUMBER: 082411-1

DATE OF HARVEST: 08-22-11
QUANTITY: 205.2 kg

SOURCE: STA. CRUZ, DAVAO DEL SUR

CHECKLIST

PRODUCTION STEP: ICE PACKING

Date:	8-24-11
Time	05:35 PM
Batch No. / CODE Production Date	8-24-11-1
Team Members	

PROCESS	Name of Team Members				
	Rohaina	Jovelyn			
Personal Hygiene and Safety					
- Proper Hand washing	✓	✓			
- Proper uniform	✓	✓			
Workplace Hygiene and Safety					
- Use of chlorine Sanitized Styrofoam boxes	✓	✓			
- Cleaning of production area after production with soap and water and sanitized with chlorine-water	✗	✓			
Product Hygiene and Safety					
- Checked correct weight of product	✓	✓			
- Handle fish with care in all processes	✓	✓			
- Checked fresh quality of product (smell, texture)	✓	✓			

After selecting target behaviors, define them together with the target groups in a way that is easy for everyone to understand and see. The development of behavioral definitions also helps target groups to "internalize" the behavior.

The three most common instruments to record observations are checklists, rating scales, and open-ended narratives (written analysis). When choosing observation instruments, keep in mind that:

- Checklists help standardize observations, making the observation more reliable. When working with target groups with low literacy, a simple checklist is recommended.
- The blank sheet observation is not reliable, and observers may have a tendency to stray away from the target behavior/s. However, notes during the observation can be useful for prompting discussions. Keep in mind that target groups with low literacy are not usually keen on writing notes or may lack the capacity to do so.

The checklist can be specific to a task, as shown in the example. It is recommended to start with a small number of behaviors and progressively add more behaviors as target groups become more experienced in the observation techniques and comfortable with the process. At the end of the checklist, include a summary stated in positive terms (percentage of achievement of target behaviors). This frames the whole exercise around achievement, rather than failure. The process of observing and recording the frequency of occurrence of target behavior provides an

opportunity to make participants conscious of how they act. When the project shows the collective results of a behavioral observation to individuals or groups, they receive the kind of information that enables them to improve performance.

It is important to include a date on the checklist or observation sheet to facilitate the tracking of changes in behavior over time and, consequently, knowing whether project interventions are creating the change sought.

C. OBSERVATION

The observation stage is not a fault-finding procedure; rather, it is a fact-finding learning process to facilitate monitoring of the change process. With the permission of the observed person, the observer watches him or her perform a particular task or set of tasks. Occurrence or non-occurrence of target behavior is indicated on the behavior observation form and serves as a point of discussion during the feedback session. Observers should be reminded to avoid subjective interpretations of events by gathering descriptive data on what they have seen rather than "evaluating" what they saw. Static environments (fixed locations such as inside a processing plant or a market stall) are the most applicable settings to conduct peer observation.

One of the greatest potential challenges in peer observation is participants' fear of getting a reprimand for bad behavior or carrying the stigma of somebody who is "misbehaving." To reduce fears as well as avoid retaliation and revenge issues, it is recommended that names of the observed and observer are not indicated in behavior observation forms during the first few rounds of implementation. However, as the process continues and target groups begin to trust that the information on the behavioral checklists is used to improve their own opportunities and not to identify problematic people, the names of the observed and observer may be noted on the checklist. In SDCAsia projects, names of observed persons or at least basic socio-demographic information are indicated to help in shaping follow-up interventions.

D. FEEDBACK

Once a round of observation is complete, projects should collect and compile the observation data from individual checklists and share the results with the participants during a group feedback session. This information can then be analyzed to identify behavioral categories needing special attention or follow-up interventions. The feedback session is usually the most difficult part of the process, since participants may find it difficult both to give criticism and to receive it. Facilitating a feedback session demands professional tact and sensitivity. Below are basic guidelines for handling feedback sessions:

a) Focus comments and feedback on the target behaviors rather than on the person or personalities involved.

b) Be specific and provide examples rather than generalities.

c) Be descriptive rather than evaluative. When expressing negative comments, try to do this in a constructive way so that improvement (rather than judgment) is seen as the ultimate outcome. Avoiding judgmental language reduces the need for an individual to respond defensively. Some techniques are:
   - Reveal your own position or feelings by starting your comments with an "I" message such as "I have noticed," "I have observed," or "I have seen." For example "I am not clear with what you meant…" rather than "you are not making yourself clear …" sounds less judgmental.
   - Avoid labeling the behavior as "irresponsible" or "immature;" it is best to describe the behavior and refer to the agreed definition of what is proper or not proper behavior.
   - Do not exaggerate or bring up matters unrelated to the observation. It is important not to ascribe actions that were actually observed into general character traits of the person, such as saying "you are

always late for meetings" instead of "you arrived late when the observation was conducted." State only observations, not interpretations.

- To the extent possible, avoid "need to" phrases: "You need to check your weighing machine" or "you need to weigh properly" are not really performance feedback. These statements imply that the observee did not do something well but do not explain exactly what happened. Providing clarity on what occurred is the aim of feedback.

d) Observation forms should not be shared individually. Reports generated should have a minimum number of data sheets (e.g. > 10) included so that individual observees cannot be determined from the information publicized.

e) Provide positive feedback before suggesting areas for improvement. Skilled providers of feedback often use a "praise sandwich," where positive behavior changes are highlighted at the beginning and end of the feedback session, with a few (no more than three) development points discussed and agreed in the middle.

f) Focus on things that the participants can change or control.

g) To be effective, feedback should be limited to the amount of information that the group can make use of. Depending on the aptitude of the participants, including their attention spans, discussions may need to focus only on one or two behaviors. The events should also be fresh in everyone's mind; if there is a long delay in the feedback the constructive value of it can be lessened (1 to 3 days after the observation is generally appropriate).

E. ACTION PLAN

If observations indicate that significant improvement in the target behavior has not occurred, the project team analyzes and discusses the situation and refines the intervention or chooses another intervention approach. On the other hand, if the target reaches the desired frequency, the project can turn their attention to another set of behaviors. The project may add new critical behaviors to the checklist, thus expanding the domain of behavioral observations. Alternatively, the project may design a new intervention to focus only on the new behaviors. It is recommended to involve the group in the action planning and to understand the incentives or disincentives underlying the target behavior as well as the conditions that may promote or hinder positive change. An effective behavior change strategy requires a careful analysis of the context in which desirable and undesirable behaviors occur.

Below are excerpts from an action plan prepared by women food handlers after a feedback session:

"Objective: To avoid incidence of spoiled fishes and for these fishes to reach the consumers/buyers.

1. We will follow protocol in receiving fishes and apply the same rules and diligence to all suppliers even if they are family members or relatives. We will not accept fishes that are not fresh and we understand that those placed in containers are not clean.

2. We will weigh the fishes and compute the ice required rather than just estimating this through visual inspection. We will use the guide posted in the receiving area.

3. When we notice that something seems to be wrong, we will communicate this to our team leader and/or inform the receiving party for the next processing step. We will not just keep quiet and pretend that everything is okay as we have done in the past for fear of reprimand or being held accountable. Team leaders will also not get angry at the one reporting but will conduct an immediate investigation and ensure that fishes of doubtful quality are properly segregated.

4. We will continue to provide constructive feedback to our peers even outside the peer observation sessions conducted by the project. We will avoid back-biting and gossip. We will help each other rather than compete with each other.
5. We will check every product as per the steps in the poster and will not rely just on visual inspection, especially during deliveries to our buyers. We will not be lazy nor be lax in quality control especially when it is already almost time for us to go home."