Community Workshops of Climate and Disease Management: Facilitator's Guide to the First Workshop



General Workshop Overview

Workshop Objectives

1. Co-develop a personalized understanding of available climate information tools.
2. Co-develop an understanding of the connection between the tools and coffee management in order to equip participants to use the tools.

Workshop Process

- Our Focus is on: (1) facilitating a process of discovery whereby participants understand the connection between climate and weather and their livelihood activities; (2) enabling participates to sufficiently understand the information that will be presented in the text messages; and (3) introducing our text messaging process. The text messages will include both weather and climate information.
- Much of this curriculum is facilitated dialogs in which farmers, climate and weather experts, extension services, and social scientists all contribute to promote social learning.
- We avoid being prescriptive about information use since (1) farmers have unique situations and (2) they bear the risks and therefore should be treated as the decision-maker.
- We begin with a calendar activity to establish an equal stating place among all participants about the connection of climate and weather to their livelihood activities. We focus on the entire calendar so that participants see full range of climate and weather interactions; many of the sections use the calendar as a reference point of their discussions.
- We proceed from the more familiar to the less familiar and therefore address weather before climate.
- We do not use PowerPoint.

Main Roles of Team Participants (AKA "the traveling team")

Person	**Activities**
Zack	Lead facilitator
Donovan	Lead facilitator
Elizabeth	Active participant, CLR expertise
Jhannel	Data collection; participant registration; travel allowance,
Chris	Data collection
Glenroy/Moody	Active participant, climate expertise
CIB Extension	Active participant, coffee agronomy expertise
Malgosia	Active Participant

Agenda Overview

Introduction	20 minutes
Coffee, Climate and Weather, and Management Activities: Developing a Calendar	60 minutes
Introduction to Weather and Climate Information Part 1: Weather Information; Part 2: Seasonal Climate Information	60-90 minutes
Lunch	60 minutes
Weather and Climate Scenarios	75 minutes
Break	15 minutes
Q&A on the Climate and Weather Messaging System	30 minutes
Next Steps for Community Workshops	30 minutes
Total Time	**350-380 minutes; ~6-6.5 hrs.**

Workshop Schedule

	WORKSHOP	DATE
1	Cedar Valley & Richmond Gap, St. Thomas	June 03, 2017
2	Balcarres & Bangor Ridge, Portland	June 06, 2017
3	Woodford & Freetown, St. Andrew	June 08, 2017
4	Middleton & Settlement, St. Andrew	June 10, 2017
5	Hall's Delight & Westphalia, St. Andrew	June 15, 2017
6	Penlyne Castle, St. Thomas	June 13, 2017

Material List

Agenda Item	**Materials**
Introduction	None
Calendar	✓ Laminated vinyl: 80 x 60 ✓ Multiple colors of **WET** erase markers ✓ Rag to wipe vinyl clean ✓ Duct tap and p-chord to hang vinyl ✓ Print outs of precipitation climatology's for each community
Introduction to Wx/Clim Info • Part 1: Weather • Part 2: Climate	
Lunch	
Weather and Climate Scenarios	✓ Print outs weather and climate statements ✓ Print outs of discussion questions provided to each group
Break	
Q&A on the Climate and Weather Messaging System	
Next Steps for Community Workshops	
General supplies	✓ 15 prints of facilitator's guide ✓ Prints of registration sheet ✓ 2-sided tape ✓ AAA batteries ✓ Receipt book ✓ 4k; 3k Jamaican ✓ recorders

Agenda Item 1: Introduction
Time: 20 minutes

Content and Flow:

- Introduce project team (hereafter "team")
- Ask audience if someone wants to give a prayer, a Jamaican custom and sign of respect
- Discuss project initiative and goals
    - Describe team's previous efforts to understand coffee farmer challenges
    - Describe what was learned during those efforts, namely farmers face multiple risks, some of which are weather and climate-related.
    - Describe solutions we heard: more opportunities for training and interaction
    - Describe first workshop in Kingston that included two community members.
    - Discuss today's agenda
        - We want to learn from each other and learn what is going in in these communities
        - Over next several hours well discuss and engage in activities that highlight how you manage coffee…
        - How weather and climate affects coffee and your management activities, including coffee leaf rust…
        - And we will have discuss and interact with example text messages of climate and weather that could be sent to you in the future
    - We are doing this because we'd like to introduce and work with you all to improve a text messaging service that can provide to you information about weather and climate as well as other coffee farming information.
    - Describe project's future and its goals, namely:
        - Progressive workshops, we want to come back here and have several other training and sharing sessions that help us refine the texting system and also provide all with opportunities to learn
        - This is a Pilot study to understand if this activity helps and, if so, in what ways it can be improved
- Discuss guidelines of today's meeting
    - Thank people for their time, recognizing they are busy.
    - We want to hear from everyone.
    - This is pilot study that will improve through time with participant feedback.
    - You all bear the risks of your decisions. We believe knowledge about the weather and climate can help, but we are not hear to tell you how to manage your coffee.

Points to emphasize:

- Thank people for their time
- Their experiences and knowledge are critical; we are not hear to tell you how to manage coffee; our role is hear to help illuminate connections between climate and weather and listen to your ideas
- We want to hear from everyone
- We seek participants experience and guidance and therefore active participation is critical
- This is pilot study that will improve through time with feedback
- This is the first of series of workshops, the content of the workshops can be modified based on feedback
- The workshops will be progressive and therefore it is most meaningful if people attend all workshops.

Agenda Item 2: Calendar of Climate and Weather Conditions and Coffee Management Activities
Time: 60 minutes

Goals:
Discuss coffee lifecycle, farmer management activities, and the role of weather and climate on those activities; establish a shared foundation from which subsequent learning can draw and build upon.

Learning Objectives:
Develop an understanding of (1) the coffee lifecycle, (2) the lifecycle of coffee leaf rust, (3) how weather and climate conditions affect coffee and CLR, and (4) how weather and climate influences management practices.

Format:
Facilitated plenary discussion that develops a crop-climate-management calendar

Content and Flow:
- Facilitator explains activity
- Facilitator starts discussion with the following questions (team member fills in calendar with responses to discussion questions; see activity):
    - In what stage of development is the coffee in each month?
    - In what months do you do the following activities (drawing from prepopulated list)
    - How does weather and climate affect your management?
        - Ask about: Shade Management, Chemical Control, Fertilizer Application, Weed Control
    - What about CLR? Is CLR present? Has it been? Do they know how to management it?
- Facilitator then explains CLR lifecycle as it relates to climate and weather and ideal management activities, filling in the information on the calendar.

Activity Description:
- Locate large vinyl calendar template at the front of the room.
- Prepopulate first column of calendar with the following headings; this is done to help facilitator stay focused and alert the participants to the minimum of the activities we want to discuss.
    - Coffee plant stages; fertilization; chemical control; coffee seedling planting; weed control; planting of cache crops
- Facilitator leads participants through series of questions and a member of the team checks the months that in which the coffee plant stages and management activities occur.
- Facilitator explains CLR lifecycle, filling in the information on the calendar. Lizz uses prints that include: disease lifecycle (intensification, inactivity, extension); tree impacts (defoliation), and timing of management activities (contact fungicide, systemic fungicide, foliar fertilizer, granular fertilizer.

Points to emphasize:
- Weather affects timing of applications of fertilizers and chemicals and other management activities.
- Climate affects preparations for management activities.
- For CLR:
    - Timing and prep of fertilizer and chemical applications are influenced by climate and weather.
    - Even if the recommended number and amount of applications of fertilizers and chemicals is not possible, applying some is better than applying none.
    - Even if you can't see CLR, it could be present.
    - Even if its not a big issue now, it can be in the future.
    - Have to constantly manage CLR.

Agenda Item 3: Weather Forecasts
Time: 60 minutes

Learning objectives:
Participants should learn: (1) what are weather forecasts; (2) the reasons why some people have and have not used weather information; (3) the format in which the climate will be communicated to them in the future part of this project; and (4) some fundamental characteristics of weather information.

Part 1: Discussion of Weather Information (30 mins)

Format:
Plenary discussion

Content and Flow:

- Facilitator progresses through a series of questions referencing the previously developed calendar; facilitator asks:
    - To know about the weather in the next few days, what information have you consulted or looked at?
    - Why did you *use* weather information the past?
        - Can you give an example of how you used it, what did you do differently?
        - When did you use?
        - Was it effective?
    - Why did you *not use* weather information the past?
        - Do you have access, why or why not?
    - Are the forecasts presented with percentages? Are these meaningful? What does a 60% chance of rain mean to you? Is that different from a 80% chance?
    - What are the benefits of using weather information?
    - What are the limitations of using weather information?
    - What about traditional ways of knowing the weather?
- Facilitator summarizes discussion, tying summary back to purpose of our effort: (e.g. although limited, weather forecasts can aid coffee management; each person needs to decide if they are of value).

Part 2: Weather Scenarios (30 mins)

Format:
Small group break out discussions followed by a plenary report back and discussion

Activity:

- Break into 3-4 groups
- Each group is provided one written statement from the following list. The criteria of the statements are as follows
    - They should be realistic for the period in which the workshops occur (e.g. June-August).
    - Each group receives different statements that draw from plausible scenarios across a range of possibilities (e.g. wet to dry).
    - One group receives the actual climate forecast for the upcoming season.
    - Statements should be in a form that is similar to what will be provided via text.

Statements Used:
Weather 1: **XXXX**
Weather 2: **XXXX**

Weather 3: **XXXX**
Weather 4: **XXXX**

- Each group has a facilitator who guides the group discussion using the following 3 questions:
  [Facilitator: Discuss question 1 prior to reading text]
  - Can you recall a time when you acted on a weather forecast?
    [solicit their scope for being flexible] Probe about timing it occurred; the particulars about the forecasts, including their confidence or probability; whether they had more resources then; was it tied to a particular production activity; probe about why did they act on it].

  [Facilitator: Read text then discuss 2-3]
  - Would you do anything in your coffee fields based on the information in the message? Why or why not?
    [Probe about CLR, fertilizers, seedlings, cash crops…; Probe about the forecasts changing what they would do]
  - Is there risk of using the information? Are there obstacles?
- Each group reports back during the plenary discussion addressing the questions.
- The facilitator and questions and probes about:
  - Barriers/challenges of the information (barriers specific to the products), including the probabilistic nature (i.e. uncertainty), understanding of the information, etc.?
    - When in the last couple of years would you have wanted to have had one of these statements?
    - What would you have wanted that statement to have said?
  - Do you see value in the information and how it is presented?
  - Is the information actionable?

Agenda Item 4: Climate Forecasts (following a lunch break)
Time: 60-75 minutes

Learning objectives:
Participants should learn about climate information can influence their coffee management activities; (2) that forecasts are uncertain and how this uncertainty affects their activities; (3) the format in which the climate will be communicated to them in the future part of this project; and (4) some fundamental characteristics of climate information.

Part 1: Introduction to Climate Forecasts (30-45 minutes)

Format*:* Group Participatory Activity

Content and Flow:

- Facilitator transitions to talking about climate, acknowledging that weather forecasts are not the only prediction tools available. There are also seasonal forecasts.
- Facilitator asks participants several questions related to seasonal climate information:
    - Have you used or seen seasonal climate information (likely, very few people will raise their hand)?
    - If some people have used seasonal climate information, facilitator asks for examples of how the forecasts were used.
- Because most people have not had experience with a seasonal climate forecast, the facilitator conducts an "activity."
    - During activity facilitator explains what the shoe represents, and asks participants: "Do any of you have a similar example? Do you look at the environment for hints at what your coffee may do, or maybe at what the price of coffee may be?"
- In the summary of the activity, facilitator clarifies two main points: (1) scientists have hints—the "shoe"—that allow for some prediction of future and (2) prediction is not certain.
- Facilitator then makes remarks, or has met service speak, about similarities and differences between climate and weather forecasts:
    - How are they similar to weather forecasts: (1) use environmental conditions to make forecasts; (2) very rarely are weather forecasts 100% certain and climate forecasts are never 100% certain;
    - How are seasonal forecasts different than weather forecast: (1) they focus on longer time horizons; (2) seasonal forecasts are for general conditions, like averages over 3 month period; (3) climate forecasts do not tell you how much it will rain or hot how it will be during any particularly event during that period; (4) less confident with climate forecast
- If there is time, facilitator asks participants:
    - Are their any activities that you do that can be aided by climate information (referring back to calendar)?

Activity: Shoe Metaphor

- 9 participants are asked to participate and proceed to an open space.
- The facilitator states that the height of each person represents the total amount of rainfall for a 3-month period in each of the 9 years. The facilitator highlights that in some years, we get copious rains in the (e.g. June-July-August) period, pointing to one of the taller people. The facilitator asks people to recall the driest year in their recent memory, and then asks who of the 9 participants represents this (they should identify the smallest person).
- The facilitator then asks the participants to sort by precipitation totals, from lowest to heights (e.g. by height, from smallest to largest).

- The facilitator then asks the people to partition into three groups of three (they remain in a line but make a slight break between the 3rd and 4th person and 6th and 7th person)
- The facilitator states that the objective of the seasonal climate forecast is to give us an indication of which group the total seasonal precipitation will be like.
- Facilitator asks rhetorically: how do scientists do this? And answers by stating they look at the environment for clues. One particularly important clue is the sea surface temperatures in the Pacific Ocean. So, the SST can tell us something about the total precipitation much like a shoe can tell us something about the height of a person.
- The facilitator presents the audience with a shoe and states that this shoe belongs to a person whose height we can guess.
- The facilitator then asks the audience to identify in which of the 3 groups the shoe's owner belongs.
- The owner of the shoe presents him or herself and integrates him/herself into the group based on height.
- The facilitator asks for a raise of hands how many people picked the correct group and how many people choose one of the other two groups.
- [time permitting, the facilitator could presents another shoe, either a very large one or a very small one. This will cause the audience to be more consistent and accurate with their guesses. This is equated to having environmental conditions that allow scientists to be more confident in the forecast than other times.]
- The facilitator then equates this exercise to seasonal forecasts, making two key points:
    - Seasonal forecasts are made using environmental hints—the shoe—that allows for some prediction of future. Scientists often look to the ocean temperatures off the coast of Peru. When those ocean temperatures are warm, scientists' chances for dry conditions are increased. But, looking at the size doesn't mean we are always right.
    - Facilitator asks participants:
        - "Do any of you have a similar example? Do you look at the environment for hints at what your coffee may do, or maybe at what the price of coffee may be?"
    - Our ability to predict the future is not certain. In some years and seasons we are more confident than others. It can be hard to tell exactly how tall the person is just by looking at the shoe.
- Met services further explains
    - Seasonal climate forecasts
    - What seasonal climate information is good for and its limitations

Part 2: Climate Scenarios (30-45 mins)

Format:
Activity 2: Small group break out discussions followed by a plenary report back and discussion

Activity:
- Break into 3-4 groups
- Each group is provided one written statement from the following list. The criteria of the statements are as follows
    - They should be realistic for the period in which the workshops occur (e.g. June-August).
    - Each group receives different statements that draw from plausible scenarios across a range of possibilities (e.g. wet to dry).
    - One group receives the actual climate forecast for the upcoming season.
    - Statements should be in a form that is similar to what will be provided via text.

Statements Used:
Climate 1: **XXXX**
Climate 2: **XXXX**

Climate 3: **XXXX**
Climate 4: **XXXX**

- Each group has a facilitator who guides the group discussion using the following 5 questions:
  [Facilitator: Discuss first 2 prior to reading txt.]
  - What is the difference between weather and climate?
  - What does "normal", "most likely" and "total rainfall" mean to you?

  [Facilitator: Read Text then discuss 3-5]
  - In coffee farming, what do you plan for? Do you ever make plans for the next 3 months?
  - Would you do anything in your coffee fields based on the information in the message? Why or why not?
  - Is there risk of using the information? Are there obstacles?
- Each group reports back during the plenary discussion addressing the questions.
- The facilitator and questions and probes about:
  - Barriers/challenges of the information (barriers specific to the products), including the probabilistic nature (i.e. uncertainty), understanding of the information, etc.?
    - When in the last couple of years would you have wanted to have had one of these statements?
    - What would you have wanted that statement to have said?
  - Do you see value in the information and how it is presented?
  - Is the information actionable?

Concluding statements.

- Facilitator asks audience how weather and climate information are different
- Facilitator can call upon the met service to explain how weather information is similar and different

Agenda Item 5: Q&A on Messaging
Time: 30 minutes

Learning objective:
Participants should learn about the text messaging service and the information that it will contain. Participants will also hear perspectives about the utility and limitations of it.

Format:
Plenary discussion

Content and Flow:

- Facilitator mentions what we are doing again emphasizing that we are developing a text messaging service and that people will have access to information like what we just provided.
- Facilitator calls on Met Service to explain how the weather information is different than what they could have access to otherwise.
- Facilitator conducts Q&A, asking:
    - Is the text form right?
    - Is there more specific information than what was presented that would help you make decisions? (e.g. the number of inches)?
    - Would you want the ability to talk to someone about the content of the message?
    - Will older individuals be reluctant to consult texts?
    - Are there suggestions for other modes of communication (e.g. not texts)?
    - Is there other information that would be useful to communicate?

Points to Emphasize:

- Pilot project
- Participant feedback through the course of this project can help us refine it

Agenda Item 6: Next Steps
Time: 30 minutes

Learning objective:
Provide an opportunity for participants to help shape future workshops.

Format:
Plenary discussion

Content and Flow:

- Facilitator solicit feedback on workshop, asking:
    - Are there elements that we should spend more time discussing? Why?
    - What did you learn that you didn't know before?
    - What should we not do? Why?
    - What would you like to learn more of?
    - Is it clear what we are hoping to do this summer and are you interested in being the community leaders?
    - Do local groups meet? Discuss possibility for working with local groups?

- Discuss date to return and how much time.
- Discuss that we'll be contacting them via phone to get their opinions.
- Open floor for comments.
- Thanks participants and adjourn.

Points to Emphasize:

- Ask them to be critical. We want critical feedback

Notes: