Publications and Communications Strategy for Farmers

Workshop Report

April 6th - 7th 2011

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CIMH

Caribbean Institute for Meteorology and Hydrology
Husbands
St. James
BARBADOS

Contents

I. INTRODUCTION

The Publications and Communications Strategy for Farmers Workshop took place at the offices of the Caribbean Institute for Meteorology and Hydrology on April 6th and 7th 2011.

The purpose of the workshop was to clearly identify the resources needed by the project to begin the formulation and implementation an effective communication strategy.

The full agenda is attached at **Annex 1**.

II. REPRESENTATION

Attendees included representatives from the National Meteorological Offices of the ten participating countries and CARDI, along with local farmers and representatives from the Technical Centre for Agricultural and Rural Cooperation (CTA).

(See full list of attendees at **Annex 2)**.

III. WELCOME - Mrs. Shontelle Stoute – CIMH

Participants were welcomed by Shontelle Stoute, Technical Assistant – CAMI Project, to the workshop.

IV. PRESENTATIONS

Day 1

Introduction – Robert Stefanski , World Meteorological Organization

Mr. Stefanski in his introduction, gave brief insight to the role of the World Meteorological Organization (WMO) with respect to agricultural meteorology. He stated that WMO covers both weather and climate on a short term as well as long term scale, and also supports applications of meteorology to the management of agriculture, livestock, forestry, rangelands and fishery sectors. WMO assists Member countries in developing/establishing their agro-meteorological services particularly on:

- Operational use of knowledge concerning weather and climate for sustainable agricultural management through conservation and better use of natural resources.
- Use of weather and agro-meteorological observations, forecasts and warnings for operational purposes.

Mr. Stefanski also highlighted potential users of agro-meteorological information including:

- International officials (i.e. Red Cross, WFP, UM)
- Government officials
- Extension Agents
- Farmers, ranchers, foresters, fishers
- Media
- General public

There are tactical applications that can be applied for weather such as:

- Operational decisions from a few hours to a few days
- Decisions based on crop state and current/forecast weather
- Cultivating, irrigating, spraying and harvesting

Strategic applications can be applied to climate, including:

- Issues and decisions on seasonal or yearly basis or planning
- Specific crop or crop variety to plant
- Designing and planning where or if greenhouses or animal shelters should be built
- Aiding governments in setting agricultural pricing policies

Presentations from Countries

Participants from CAMI countries were asked to highlight what product/services their meteorological service provides:

Antigua and Barbuda - Dale Destin

The main purpose is aeronautical meteorology.

Predictions/Outlooks

- Produce rainfall outlooks on a 3month basis

Customized service

- Public talks on climate change and variability

- Investigations and reports

Monthly rain and temperature values are available to the public upon request. The most popular product online is their daily forecast with drought being their most specialized statement.

Barbados - Sonia Nurse

Products/Services:

- Issuing of monthly averages. These can be found online.
- Concentrate on issuing public forecasts (24hrs) for Barbados, St. Vincent and Dominica.
- 4-day forecasts
- Atlantic Hurricane Season Extended Range forecast
- Agromet Bulletins
    - Potential users – farmers, agricultural managers, water authority, climatologists, hydrologists.

The models used by the Barbados Meteorological Service are the WINGRIDDS, GFS, MM5 and WRF.

Belize - Frank Tench

Currently there are no trained agro-meteorologists.

Products/Services:

- 4-day forecasts
- Agromet forecasts (twice weekly)
- General weather forecast
- Aviation forecast
- Fire forecast
- Marine forecast

Dominica - Vernie Marcellin

Products/Services:

- They use Barbados-produced forecasts and amend as deemed necessary
- Information for aviation
- Hourly observations of meteorological parameters
- Weather hotline updated with current weather and forecast
- Yearly report
- Bulletins and newsletters
- 24-hr forecasts

Grenada - Cecil Mitchell

Products/Services:

- Monthly rainfall summaries provided for the Ministry of Agriculture
- General forecasts
- Bulletins during the hurricane season
- Use Precipitation Outlook from CIMH
- Newsletters

Jamaica - Jacqueline Spence

Products/Services:

- Aviation/marine
- Flash flood watches
- Information disseminated to persons upon request
- Town and city forecasts
- 4-day outlooks
- 3-day outlooks for fishing
- Astronomical and tide forecasts
- Hurricane reports
- Summary of hurricane season

St. Lucia - Venantius Descartes

Products/Services:

- Forecasts 3 times daily
- 3-day forecasts
- Monthly and annual summaries for stations
- Aviation products
- National Drought monitor similar to CIMH's SPI product for the region
- Bulletins and newsletters

St. Vincent and the Grenadines - Joan MacDonald

Products/Services:

- Yearly: rainfall, extreme maximum and minimum temperature, maximum and minimum barometric pressure.
- Monthly: rainfall, rain-days, longest dry spell
- Daily: weather observations and reports for aviation as well as general public.

- Daily forecasts from Barbados Meteorological Service
- Newsletters and bulletins
- Agromet bulletins
    - Precipitation outlooks with SPI (CIMH) – this is not published but they plan to do so.
- Primary dissemination method – email.

Trinidad and Tobago - Arlene Aaron

Products/Services:

- Aviation and general public
- 3-day forecasts
- Bulletins and advisories
- Daily tourist forecast (Tobago)
- Seasonal and monthly rainfall forecasts
- Client requested reports
- Newsletters and bulletins for farmers and extension officers

Translating daily weather forecasts into agro-meteorological forecasts and advisories – Robert Stefanski

There are various types of agricultural advisories which include:

- Sowing/transplanting of rainy season crops based on the onset of the rainy season.
- Sowing of post rainy season crops using residual soil moisture for better germination and plant stand
- Fertilizer application based on wind conditions
- Delay in fertilizer application based on intensity of rain
- Prediction of occurrences of pests and diseases based on weather
- Irrigation at critical stages of the crop
- Amount and timing of irrigation using meteorological thresholds.

There are two questions which one must bear in mind:

- What are the weather/climate events that impact agricultural decision-making?
- How to relate weather/climate information to meaningful agricultural actions/practices?

Translating seasonal climate forecasts into seasonal agro-meteorological advice – Robert Stefanski

In his presentation, Mr. Stefanski indicated that producers use climate information to assist with many decisions. Some of which are:

- Crop choice
- Choice of cultivar
- Mixture of crops
- Fertilizer use
- Pest and disease control
- Time of the harvest

Seasonal climate forecasting has no value unless it changes a management decision. Such decisions may include: which variety to plant given, for example, low rainfall probability values or high risk of damaging frost during anthesis; or, how much nitrogen to apply given current low soil moisture levels and low probability of sufficient in-crop rainfall?

For effective climate communication there are some questions to consider:

- Is the information relevant for decisions in the particular agricultural system?
- Are the sources/providers of information credible to the intended user?
- Are the farmers receptive to the information and to research?
- Is the research accessible to the policymaker or decision-maker?
- Is the information compatible with existing decision models and farming practice?
- Do decision-makers have the capacity to use information?

Some channels of communication include:

- Workshops and meetings
- Presentations and briefings
- One-to-one technical assistance
- Coordination with other ongoing projects
- Work with the local media
- Website development and maintenance
- Media (mass media and information)

Day 2

COMMUNICATONS STRATEGY

Information for Farmers – the CARIMAC experience Patrick Prendergast, CARIMAC, University of the West Indies, Jamaica.

Mr. Prendergast gave an overview of CARIMAC (Caribbean Institute of Media and Communication). This is a "step-by-step/piece-by-piece" approach in linking farmers to information and has partnered with the FAO (Food and Agricultural Organization of the United Nations). CARIMAC extends training opportunities in a more strategic way, including for climate change adaptation and one of their objectives is providing professional training for extension officers.

From his experience, Mr. Prendergast states that there are two levels which farmers need for communication as it relates to climate change adaptation:

- Information for learning new technologies. This allows them to adapt and mitigate climate change impacts.
- "Just in Time" weather information. This allows them to plan and respond to imminent weather related impacts.

Mr. Prendergast also highlighted gaps in the Farmer-Led Process, some of which include:

- Farmer-based technologies not fully documented and tested
- Farmer-based technologies not packaged and shared across the island
- Extension constraints: reduced staff, mileage, equipment and technologies

He also stated that there are advantages and disadvantages of different types of Media. An effective communication strategy usually uses a mix of at least 2 or 3 different types; and the choice of media and format depends on your audience(s), your budget, the communication channels best for your specific audience, how long the communication intervention will continue and how critical it is to encourage genuine participation for social change.

Experiences from Radio Toco – Michael Als, Radio Toco, Trinidad and Tobago

In his experience from Radio Toco, Mr. Als stated that we must consider seriously changing the paradigm and do things in an exciting way. Success in this project is as a result of asking questions. Therefore one of the rules was not to do anything without asking others what they think (this may be in the form of a questionnaire or a discussion).

Mr. Als also indicated that as a farmer you need to pay attention to the weather and climate conditions. He suggested that in the communication of technology there must be hands-on training and one needs to be very clear about what you are suggesting.

Examples of approaches to communicate with farmers and rural communities – Ian Ivey, NEXT Corporation

Mr. Ivey highlighted 4 key things to be considered when trying to communicate information:

1. Communication is 50% talking and 50% listening
2. The customer is king or queen
3. You must give people a gift of time
4. We need to shift from "educating" to engaging as interaction is essential.

Although we need both the real world (face-to-face, public speaking etc.) and digital (face book, twitter etc.), there needs to be a balance between both.

Participants then engaged in the first working group exercise where they discussed what information should be made available to the farmer, the method of dissemination and the possible strengths/weaknesses. From these discussions the three most important outputs were:

- Training to use information. This would be done via small workshops with the advantage of sharing ideas and knowledge.
- Engaging and collaboration. This type would be done through focus groups, feedback, workshops and prototyping. You can learn a lot from regular feedback however, it has its limitations as participation time is required.
- Early warning for weather systems via SMS, media, television and radio. This has the advantage of wide coverage but would be futile where there is infrastructure failure.

The second group exercise involved discussions on what needs to be done, by whom and by when. Listed below are the three main areas which need to be tackled:

- Training for farmers and meteorological service staff to enhance communications. This is to be done by the meteorological service as well as the farmer. Target time – 3 months.
- Hands on help with retrieving of information through SMS etc. The service providers would be responsible for this task. Target time – 1 month
- Training in communications to understand each other's needs. The meteorological service and the farmers are responsible for this task. Target time – 6 months.

It was suggested that 2 – 6 months be added to the target times to allow for the "bureaucratic delays" common in the region.

Review of agro-meteorological bulletins from developing countries – Robert Stefanski

WAMIS (World Agro-Meteorological Information Service) currently has products and bulletins available for 50 countries and organizations. Some of the tools and resources available include climate forecasts, data management, dissemination, drought, feedback and weather/climate data.

A couple of things to keep in mind with respect to the internet:

- Providing agro-meteorological bulletins through the internet is only ONE dissemination method for interacting with users.
- The internet does not replace direct interactions with users or using other media (newspapers, radio, television, etc.).

The type of information within the agro-meteorological bulletins includes rainfall summaries, temperature, agro-meteorological analysis and weather forecasts.

Development of draft bulletins for each country – Robert Stefanski

In his presentation on Guidelines for Newsletters and Bulletins, Mr. Stefanski outlined the contents of agro-meteorological bulletins. They include:

- Significant features of the past and present weather and climatic conditions at the national, regional and local level.
- Presented in the form of graphs, tables, drawings, maps, satellite imagery and text. Average extreme values of meteorological, agro-meteorological and hydro-meteorological elements are also presented.
- Existing agro-meteorological conditions.
- Written text describing the state and phases of development of agricultural crops, forests plantations and farm animals.
- Forecasted meteorological conditions
- Forecasted agro-meteorological conditions
- Possible effects of expected weather and climate on cultivated crops, tree plantations and on farm animals at different stages of development and on their yields.

A basic recommendation given by Mr. Stefanski is to relate the weather data to meaningful agricultural information and implement new products with proper introduction, not overseeing the fact that training and education is an essential component.

Two questions were given, which one should consider when developing a bulletin:

- Which elements would you put in the bulletin?

  - Rainfall summaries
  - Agrometeorological analysis
  - Forecasts
  - Temperature

- Which elements would the meteorological services need assistance from other agencies with? Which agencies?
  - Pest/Diseases -seasonal occurrence / conditions of occurrence (Ministry of Health)
  - Crop status (Ministry of Agriculture)
  - Soil moisture / water balance (Ministry of Agriculture)
  - Data for analysis (other participating countries)

V. WORKSHOP DISCUSSION AND EVALUATION – Adrian Trotman

In conclusion of the workshop the next steps to be taken were highlighted:

- Action items: climate bulletins, crop calendars, create an email list, put products on the web
- Agro-meteorological bulletins should be weekly or every 10 days (monthly would be too long)
- Make agro-meteorological forecasts with the same period of weather forecasts
- Have both national and/or regional bulletins. Some services may and seem to want to provide national information whilst others may initially prefer to be a part of a regional product.

The time frame in which to begin to produce national and regional bulletins would be 3 to 6 months. CIMH will begin to work towards producing a regional bulletin which would have input from participating countries.

Participants were requested by Mr. Stefanski to complete and return an evaluation of the workshop (Annex 3).

VI. ANNEXES

Annex 1

Caribbean Agro-meteorological Initiative (CAMI)

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6-7 April, 2011
Caribbean Institute for Meteorology and Hydrology
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DAY 1

Time	Topic	Speaker
9:00-9:10	Welcome	Adrian Trotman (CIMH)
9:10-9:30	Introduction	Robert Stefanski (WMO)
9:30-10:30	Presentations from Countries	Participants
10:30-10:50 Break		
10:50-11:30	Presentations from Countries	Participants
11:30-12:30	Translating daily weather forecasts into agro-meteorological forecasts and advisories	Robert Stefanski (WMO)
12:30-1:30 Lunch		
1:30-2:30	Hands-on exercise on translating daily weather forecasts	Robert Stefanski (WMO)
2:30-3:00	Translating seasonal climate forecasts into seasonal agro-meteorological advice	Robert Stefanski (WMO)
3:00-3:15 Break		
3:15-3:45	Hands on exercise on translating seasonal climate forecasts	Robert Stefanski (WMO)
3:45-4:45	Analyzing previous weather into agricultural impacts	Robert Stefanski (WMO)

Caribbean Agro-meteorological Initiative (CAMI)

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Day 2

Time	Topic	Speaker
9:00-9:10	Welcome and Background	Adrian Trotman
9:10-9:30	Information for farmers – the CARIMAC experience	Patrick Prendergast
9:30-9:40	Experiences from Radio Toco	Michael Als
9:40-10:10	Examples of approaches to communicate with farmers and rural communities	Ian Ivey
10:10-10:30 Break		
10:30-11:30	Group Session 1	
11:30-12:20	Group Session 2	
12:20-12:30	Session Wrap-up	Ian Ivey
12:30-1:30 Lunch		
1:30-2:00	Review of agro-meteorological bulletins from developing countries	Robert Stefanski (WMO)
2:00-2:30	Guidelines for newsletters and bulletins	Robert Stefanski (WMO)
2:30-3:00	Development of draft bulletins for each country	Robert Stefanski (WMO)
3:00-3:15 Break		
3:15-4:15	Development of draft bulletins for each country (cont'd)	Robert Stefanski (WMO)
4:15-4:45	Workshop Discussion and Evaluation	Adrian Trotman

Annex 2

Publications and Communications Strategy Workshop			
	Participants List		
	Last Name	First Name	Organisation
1	Aaron	Arlene	Trinidad Met Services
2	Agard	Lisa	CIMH
3	Beckles	Emmerson	FAO
4	Brathwaite	Ronnie	BADMC
5	Collymore	Lemuel	MOA
6	Descartes	Venantius	St. Lucia Met Services
7	Destin	Dale	Antigua & Barbuda Met
8	Forde	Michael	BAS
9	Hall-Hanson	Rasheeda	CARDI
10	Hinds	Damien	IICA
11	Holder	Keeley	BAS
12	Holder	Keeley	BAS
13	Ivey	Ian	CTA
14	James	Michael	MOA
15	Kirton-Reed	Lisa	CIMH
16	Marcellin	Vernie	Dominica Met Service
17	Mayers	Trevor	BAS
18	McDonald	Joan	Airports Department
19	Mitchell	Cecil	Grenada
20	Moore	Anthony	CIMH
21	Morris	Opal	CARDI
22	Nurse	Sonia	Barbados Met Services
23	Nyhathu	Nyah	BAMC
24	Padmore	Curtis	
25	Prendergast	Patrick	Caribbean Institute of Media and Communication (CARIMAC)
26	Romeo	Alvin	MOA
27	Singh	Narita	Guyana Rice Development Board
28	Sinha	Anil	CARDI
29	Spence	Jacqueline	Jamaica
30	Stefanski	Robert	WMO
31	Stoute	Shontelle	CIMH
32	Tench	Frank	Belize Met Service
33	Trotman	Adrian	CIMH

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1. How would you evaluate the overall workshop?

Excellent □ *Good* □ *Average* □ *bad* □

2. How would you evaluate the presenters?

Excellent □ *Good* □ *Average* □ *bad* □

3. Did you understand the lecturers? Did they speak too fast? Too Slow?

4. How do you rate the scientific level and quality of the lectures presented, overall?

Excellent	*good*	*average*	*bad*	*Comments?*
□	□	□	□	

5. How do you rate the appropriateness of the cases used, overall?

Excellent	*good*	*average*	*bad*	*Comments?*
□	□	□	□	

7. How do you rate the usefulness of this training workshop for your communications strategy?

Very good	*good*	*average*	*useless*	*Comments?*
□	□	□	□	

8. How do you rate the usefulness of this training workshop for your Agrometeorological work?

Very good	*good*	*average*	*useless*	*Comments?*
□	□	□	□	

9. How do you rate the organization and classroom facilities of this training workshop?

Excellent	*good*	*average*	*bad*	*Comments?*
□	□	□	□	

10. Was the workshop too long? Too short?

11. Please list three presentations or topics that you found the most useful:

1.

2.

3.

12. Please list any presentations or topics that you found not useful:

13. Any other additional comments (please continue on back of page):