The Caribbean Agrometeorological Initiative (CAMI): Achievements, Shortfalls and the Way Forward

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Caribbean Agrometeorological Initiative (CAMI)

• Implemented by CIMH, CARDI, WMO and Ten National Meteorological Services
• To increase and sustain agricultural productivity at the farm level in the Caribbean region through improved applications of weather and climate information using an integrated and coordinated approach
• www.cimh.edu.bb/cami
Compliments
Caribbean Agrometeorological Initiative: An Evaluation of Climate Services. Stratus Consulting
Specific Activities of the Action 1

• Seasonal Rainfall Prediction through analysis of long-term climatic data and use of seasonal to inter-annual climate prediction models

• Use of rainy season prediction and near-real time weather information to support management decisions such as especially irrigation scheduling

• Working with the agricultural research and extension agencies in developing an effective pest and disease forecasting system
Specific Activities of the Action 2

- Preparation and wide diffusion of a user-friendly weather and climate information newsletters/bulletins

- Organization of regular forums with the farming community and agricultural extension agencies to promote a better understanding of the applications of weather and climate information

- Building capacity of the Meteorological and Agricultural Services and research institutions
Seasonal Rainfall Prediction with use of climate prediction models

Focussing now on temperature monitoring and forecasts
Over past year, much focus on Drought Monitoring and Forecasting
Caribbean climate outlook newsletter

= seasonal climate monitoring

+ seasonal climate forecasts

http://www.cimh.edu.bb/?p=precipoutlook

Next – Early Warning Systems Across Timescales for stakeholder communities
Next – Early Warning Systems Across Timescales for stakeholder sectors

• Development of Seasonal Forecasting capabilities to apply to sectors such as agriculture, water resources, coral reef health, tourism
• EWISACTs - utilized as input into preparedness, risk reduction and adaptation.
• Early warning systems for weather and climate (variability and change) hazards improve the effectiveness and efficiency of sustainable planning, adaptation and mitigation strategies across major weather and climate sensitive socio-economic sectors

Building Regional Climate Capacity in the Caribbean - USAID
Supporting management decisions such as for irrigation scheduling.
Developing forecasting systems for selected pests and diseases

Statistical Analyses

Crop and Irrigation Simulation
Preparation and dissemination of a user-friendly weather and climate bulletins and information
Daily, week ten-daily, monthly, seasonally
But potential for print, radio, television, mobile/cellular, telecentres

An Effective Communication Strategy involving media that can reach farmers with language they can understand
Forums with the farming community and agricultural extension agencies to promote a better understanding of the applications of weather and climate information.

Important for understanding farmers' needs and how to communicate with them.

Means for communication, awareness, education, and feedback. Suggested wet/hurricane and dry season.
Course on Meteorological Applications to Agriculture for Extension Officers and Agriculturists

Building capacity of the Agro-Meteorological Services Supported by research Efficient Human Resource base
Effective Data Management System

- Rescue and Digitise hard copy information
- Data sharing, protocols
- All data to a centralised system
- Global data systems, Remote Sensing
- IT support
Climate Services Partnership (CSP)

Caribbean Agrometeorological Initiative:
An Evaluation of Climate Services

Funded by USAID
Prepared by Stratus Consulting Inc.
CSP Evaluation

• Three years is too short a time to expect CAMI partner countries to develop new agro-meteorological information, create an effective means to share this information with farmers, and convince farmers across 10 countries to change farming activities at a scale where it would be possible to measure increased agricultural productivity.

• However - CAMI partner countries are on the way to achieving this goal.
CSP Evaluation

• CAMI improved networking between meteorological and agricultural officers in each member country
• Networking led to climate outlook bulletins that were developed or are under development in all 10 CAMI partner countries
• Bulletins universally contained high-quality meteorological data
• However - usable information on agriculture impacts and interventions varied significantly from one country to the next; and can be understood mainly by “High Capacity Farmers”
Steps for Analysis

• Information development on weather/climate and agriculture
• Information distribution to farmers
• Information uptake by farmers
• Action by farmers.
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<th>Recommendation</th>
<th>Description</th>
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<td>Fortify cross-agency relationships</td>
<td>Meteorological services staff in CAMI partner countries should look for opportunities to collaborate with their agricultural service counterparts. This will help build the agronomy capabilities with meteorological services and meteorological capabilities in agricultural services.</td>
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<td>Place additional emphasis on agricultural interventions</td>
<td>It should remain a goal of CAMI partners to clearly articulate crop impacts and agricultural interventions of the meteorological and climate data they provide.</td>
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<td>Track information distribution</td>
<td>CAMI partners should track the distribution of climate outlook bulletins to better understand their reach. Options include tracking the number of “clicks” or downloads from websites, tracking the number of hard copies distributed, monitoring attendance at forums, and working with extension agents to track information sharing.</td>
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<td>Use interactive information-sharing methods</td>
<td>CAMI partners should focus on information distribution methods that allow interaction with end-users, such as one-on-one contact between extension agents and farmers, forums, outreach to effective farmer organizations, informal farmer networks, and call-in radio programs.</td>
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<td>Expand the role of agricultural extension agents</td>
<td>Agricultural extension officers could benefit from additional training on understanding and communicating climate data and agricultural impacts in order to communicate climate information with farmers.</td>
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<td>Seek feedback from end-users</td>
<td>CAMI partners should actively seek feedback from farmers on climate outlook bulletins to ensure that key messages are clearly conveyed and that climate services have the information farmers need most.</td>
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<td>Continue to refine outlook bulletins</td>
<td>CAMI partners should continue to refine the content of their outlook bulletins based on changing needs – guided by feedback from end-users.</td>
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<td>Develop metrics to measure success</td>
<td>CAMI has not yet defined how it is measuring the primary goal of “increased agricultural productivity.” CAMI partners should develop a collective set of metrics and begin taking stock of their progress.</td>
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<td>Think long-term</td>
<td>Sustainability of CAMI in the future will be a challenge. CAMI is still in the process of scaling-up its climate service and already must seek new funding sources. CAMI partners should seek more stable, longer-term funding if possible.</td>
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Recommendations for Policy Makers

Adequate Human Resources and structural changes at NMS that support weather and climate services for agriculture.
Financial resources for developing competent staff to deliver agrometeorological services.

Support specialised training for staff of Agricultural Extension Services in agrometeorology.

Policies and protocols put in place within and between government, statuary departments and research institutions that encourage collaboration, data sharing and centralizing of agrometeorological data.

Farmers forums to continue, led by the NMSs, particularly just prior to the beginning of the wet/hurricane and dry seasons.
Radio and television programmes and newspaper articles can be used to supplement the awareness.

Pursue a robust Strategy for Communication with the assistance of communication specialists, at the national and regional levels, ensuring efficient and effective dissemination of information.

Financial resources made available for adequate, well maintained observation networks of higher spatial density that include Automatic Weather Stations.
Particular emphasis should be placed on enhancing the quality and detail of biological information.

National Tri-partite committees, made up of meteorologists, extension officers and farmers as core groups ratified by government and report to the Ministry of Agriculture, particularly at times of threatening weather and climate conditions. These committees can be either expanded to, or play an advisory role of Disaster Risk Reduction Committees in Agriculture.
Thank you