Caribbean Climate Outlook Forum (CariCOF) and link with Caribbean NCOFs

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The Caribbean Institute for Meteorology and Hydrology: MANDATE

“…to assist in improving and developing the Meteorological and Hydrological Services as well as providing the awareness of the benefits of Meteorology and Hydrology for the economic well-being of the CIMH member states. This is achieved through training, research, investigations and the provision of related specialized services and advice”.
Functions of the Caribbean Institute for Meteorology & Hydrology

- WMO Regional Training Centre – meteorology, hydrology and associated sciences
- Operate as a centre of research in meteorology, hydrology and associated sciences
- Regional Climate Data Centre - Data collection, storage, & dissemination
- Regional Instrument Centre – Develop, maintain, repair, and calibrate meteorological & hydrological instruments
- Regional Centre of Excellence for Satellite Meteorology
- More recently Caribbean Centre for Climate and Environmental Simulations
- Advisor to regional governments on matters related to meteorology, climate & hydrology
- Provide specialized services to industry
- WMO Regional Climate Centre (Demonstration Phase) – a natural extension in function

An arm of the Caribbean Meteorological Organisation (CMO) and an organisation of the Caribbean Community (CARICOM)

Sixteen Member States
### RCOFs and NCOFs

<table>
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<tr>
<th>RCOFs</th>
<th>NCOFs</th>
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<td>• These forums bring together national, regional and international climate experts, on an operational basis, to produce regional climate outlooks. Also assess the likely implications of the outlooks on the most pertinent socio-economic sectors in the given region and explore the ways in which these outlooks could be made use of.</td>
<td>• Adapting the global and regional scale forecasts to the national context. • Tailoring products and translating key messages for users (Multidisciplinary Working Groups). • Facilitating user-provider interaction and feedback. • Evaluating the impact of expected conditions (with existing vulnerabilities).</td>
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Regional Climate Outlook Forums in the Climate Services Information System

Global Level

Global Producing Centres

Regional Level

Regional Climate Centres

National Level

NMHSs

Sectoral Users: Agriculture, Water, Energy, etc.
RCC

Strong/NCC

National stakeholders

Weak NCC/Facil.

National stakeholders

Requires:
• RCC has a good knowledge of national stakeholders and the confidence of national stakeholders.
• RCC must have access to national databases to effectively support needs of national stakeholders.

Understanding and strengthening Regional Relationships – two types...
CONSENSUS SEASONAL CLIMATE OUTLOOKS
Provider-User COF Roles
CARICOF CLIMATE OUTLOOKS – CURRENT STATE AND ONGOING WORK
Long-Range Forecasts – Consensus-based Through the CariCOF- forum of meteorologists/climatologists

Future Heat Waves Flood Potential Outlooks

Max Temp
SON; DJF 2015

Min Temp
SON; DJF 2015
More extensive newsletter at the beginning of each of the two Caribbean basin seasons – wet and dry.
CariCOF drought alert outlooks
Tailoring – from rainfall to a drought alerting system

Drought alert map

Activity began as a collaboration between CariCOF, CACOF and IRI

+ current drought situation, short- and long-term drought outlooks

<table>
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<tr>
<th>ALERT LEVEL</th>
<th>MEANING</th>
<th>ACTION LEVEL</th>
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<tbody>
<tr>
<td>NO CONCERN</td>
<td>No drought concern</td>
<td>✓ monitor resources ✓ update and ratify management plans ✓ public awareness campaigns ✓ upgrade infrastructure</td>
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<tr>
<td>DROUGHT WATCH</td>
<td>Drought possible</td>
<td>✓ keep updated ✓ protect resources and conserve water ✓ implement management plans ✓ response training ✓ monitor and repair infrastructure</td>
</tr>
<tr>
<td>DROUGHT WARNING</td>
<td>Drought evolving</td>
<td>✓ protect resources ✓ conserve and recycle water ✓ implement management plans ✓ release public service announcements ✓ last minute infrastructural repairs and upgrades ✓ report impacts</td>
</tr>
<tr>
<td>DROUGHT EMERGENCY</td>
<td>Drought of immediate concern</td>
<td>✓ release public service announcements ✓ implement management and response plans ✓ enforce water restrictions and recycling ✓ enforce resource protection ✓ repair infrastructure ✓ report impacts</td>
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The basis for a flood potential outlook. As like the drought alert the use of rainfall being tailored.

The same methodology currently being investigated to look at hot spells (heat waves) with many applications (health, animal husbandry). Also dry spells with application to agriculture.
Stakeholder meetings bring meteorologists/climatologists and the user-community together to discuss climate forecasts and other information; and provide feedback. Builds trust and understanding. **Means for communication, awareness, education, and feedback.**
CariCOF – Focus on the two main seasons

- CariCOF delivered for the **two main seasons** – dry and wet (*does not fit northern Guyana that has two wet and two dry*)
- The **climatology of the season** presented
- Forecasts presented
- Focus on supporting **understanding and interpretation** of products
- Discussions on **implications for the various sectors**...
- ...water resources, agriculture, DRR, health (*next CariCOF with a health focus particularly heat stress*)—four of the current GFCS areas of focus
- The sector discussions begins in **sector groups** then plenary
- Information **updated every month** thanks to the collaboration of the NMHS/NCC
Innovative ways to communicate

• Any form of message communication can be explored
• Awareness and product interpretation built through interactive and other practical activity
• Message communicated in drama, song and dance...
• Media support
Support from the Social Sciences community

The IRAP Programme

Collaboration between IRI, UA, CIMH
“...supports risk management through research-based improvements in design, development, and provision of climate information, particularly as they contribute to national and regional development goals”

Limited access, misunderstandings, and the inadequacy of existing information often cause the information to be underused – seeking to bridge that gap

Climate Vulnerability
Seasonal Climate Forecast Communication Networks
Disasters – better prepared with seasonal information?
Evaluation – meeting the goals of Climate Information Services?
Opportunities for Future CariCOFs – meeting stakeholder needs
Identifying Research Gaps

Similar role for social sciences linked with NCOF
Where from here for CariCOF (and NCOFs)?

- Enhancing and sustaining regional research to support product enhancement and future development of new relevant products
- Tailoring of forecasts/outlooks to sectors – maintaining and sustaining and using the Caribbean Climate Impacts Database (what are/were the impacts from the recently concluded drought?)
- Promoting the understanding of Caribbean and National Climatology amongst the general public and within sectors. If you don’t know your climate you cannot understand variability and how it may impact.
- Supporting infrastructure for technical delivery – e.g. interactive web portals (e.g. CARISAM for agriculturists), GIS platform(s), support with automation (less strain on human capacity)
- More needed towards building capacity at NMHS to support NCOFs – recommended that attention be paid toward financial support, capacity (critical mass and competencies) and structure of NMHS
- Greater thrust toward more effective communication and outreach (support from BRCCC and others – Communications Strategy)
- Need for greater interaction with and support from the social sciences community – translating the science ...begun under BRCCC, HED and IRAP
- Closer ties, more interaction with GPCs
- Sustained financial support needed – capacity, operations ...an opportunity here for pooling resources?
Thank you