The Caribbean Catastrophe Risk Insurance Facility (CCRIF) is the first multi-country risk pool in the world, and is also the first insurance instrument to successfully develop parametric policies backed by both traditional and capital markets. It is a regional catastrophe fund for Caribbean governments designed to limit the financial impact of devastating hurricanes and earthquakes by quickly providing financial liquidity when a policy is triggered. CCRIF was developed through funding from the Japanese Government, and was capitalised through contributions to a multi-donor Trust Fund by the Government of Canada, the European Union, the World Bank, the governments of the UK and France, the Caribbean Development Bank and the governments of Ireland and Bermuda, as well as through membership fees paid by participating governments. Sixteen governments are currently members of the fund: Anguilla, Antigua & Barbuda, Bahamas, Barbados, Belize, Bermuda, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, Trinidad & Tobago and Turks & Caicos Islands.

CCRIF website: [www.ccrif.org](http://www.ccrif.org)

Board of Directors
Milo Pearson, Chairman
Isaac Anthony, CARICOM appointed board member, representing participating countries
Dr Warren Smith, CDB appointed board member, representing donors
Ken Blakeley, CARICOM appointed board member, insurance specialist
Desiree Cherebin, CDB appointed board member, finance specialist

The CCRIF Team
Caribbean Risk Managers Ltd, Facility Supervisor
Sagicor Insurance Managers Ltd, Insurance Manager
London & Capital Ltd, Asset Manager
EFG Bank (Cayman), Asset Manager
Aon Benfield Group, Reinsurance Broker
Sustainability Managers, Communications Manager
Vision Statement
CCRIF will be a key partner with the Caribbean region in its disaster risk management strategies to support long-term sustainable development goals.

Mission Statement
Our Mission is to serve Caribbean governments and their communities in reducing the economic impact of natural catastrophes. We provide immediate liquidity through a range of affordable insurance products in a way that is financially responsible and responsive to their needs.

CCRIF Customer Values
The clients of the not-for-profit CCRIF are the member countries of the Caribbean Community. CCRIF promises its clients to:
1. Fill a gap in available insurance offerings for natural catastrophes
2. Ensure a joint reserve mechanism for future benefits
3. Provide member countries confidence in its ability to provide financial support
4. Supply tools and strategies for enhanced disaster risk management
5. Provide the highest degree of service at the best possible price
6. Ensure speedy payouts
7. Meet best standards in transparency and accountability
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Acronyms

AOSIS  Alliance of Small Island States
BSc  Bachelor of Science
CaribRM  Caribbean Risk Managers Ltd.
CARICOM  Caribbean Community
CARILEC  Caribbean Electrical Utility Services Corporation
CCCCC  Caribbean Community Climate Change Centre
CCRIF  Caribbean Catastrophe Risk Insurance Facility
CDB  Caribbean Development Bank
CDEMA  Caribbean Disaster and Emergency Management Agency
CDM  Comprehensive Disaster Management
CEO  Chief Executive Officer
CIDA  Canadian International Development Agency
CIMH  Caribbean Institute for Meteorology and Hydrology
COP16  16th Conference of Parties - Cancún United Nations Climate Change Conference
DRRC  Disaster Risk Reduction Centre
ECA  Economics of Climate Adaptation
ECLAC  See UN-ECLAC
FAO  UN Food and Agriculture Organisation
GDP  Gross Domestic Product
HLEM  Hazard Loss Estimation Model
IAC  Insurance Association of the Caribbean
IFRC  International Federation of Red Cross and Red Crescent Societies
IICA  Inter-American Institute for Cooperation on Agriculture
IRI  International Research Institute for Climate and Society
KAC  Kinetic Analysis Corporation
MCII  Munich Climate Insurance Initiative
MMR  Modelling and Mapping Risks
MoU  Memorandum of Understanding
MPhil  Master of Philosophy
MPRES  Multi-Peril Risk Estimation System
MSc  Master of Science
MSI  Mauritius Strategy for the Further Implementation of the Barbados Programme of Action
NGO  Non-Governmental Organisation
OAS  Organisation of American States
RTFS  Real-Time Forecasting System
UK  United Kingdom
UN-ECLAC  United Nations Economic Commission for Latin America and the Caribbean
UN- OCHA  United Nations Office for the Coordination of Humanitarian Affairs
USAID  United States Agency for International Development
UWI  University of the West Indies
UWI-SRC  University of the West Indies Seismic Research Centre
WFP  World Food Programme
WMO  World Meteorological Organisation
WRF  Weather Research and Forecasting
INTRODUCTION

This report, for the period 1 June 2010 – 31 August 2010, is the first quarterly report in the 2010/2011 fiscal year. It aims to provide information to stakeholders and the public on CCRIF’s activities on a more frequent basis than our Annual Report allows. The report is designed as an electronic document and we encourage you to utilise the hyperlinks to access documents mentioned in the report as well as background information on our website and those of our partners.¹

CCRIF is pleased to welcome Ms Desiree Cherebin who was selected by the Caribbean Development Bank in August to be appointed to the Board of Directors and would like to give sincere thanks to Mr Garry Wilkins for his three years of dedicated service to the Board.

During this quarter, final arrangements were made with member countries about their earthquake and hurricane policies for the new policy year which began on 1 June. All 16 members renewed their coverage. Most countries maintained premiums at the same level as last year. However, as a result of increased appreciation of seismic risk following the Haiti earthquake in January, twelve countries increased their coverage limit for earthquakes.

The Real-Time Forecasting System (RTFS) was upgraded during this quarter, adding the ability to provide unique account access for every individual user. Now, more than 100 representatives of ministries of finance, disaster management organisations, meteorological offices and other institutions have access rights. The RTFS product enhanced for Haiti was widely used and received excellent reviews from NGOs responsible for logistics and shelter clusters.

In August the preliminary results of the Economics of Climate Adaptation (ECA) study, conducted in eight Caribbean countries, were released. This initiative is part of CCRIF’s Technical Assistance Programme and was conducted by a team composed of CaribRM, the Caribbean Community Climate Change Centre (CCCCC) and other regional partners, with analytical support provided by McKinsey & Company and Swiss Re. Preliminary findings from the study indicate that annual expected losses from wind, storm surge and inland flooding already amount to up to 6% of GDP in some countries and that, in a worst case scenario, climate change has the potential to increase these expected losses by 1 to 3 percentage points of GDP by 2030. The results were published in a brochure entitled Enhancing the climate risk and adaptation fact base for the Caribbean (Preliminary Results). The results have generated significant interest in the insurance sector as well as among Caribbean governments and are being used in discussions leading up to the COP16 Climate Change Conference to be held in Cancún, Mexico in November/December 2010. At COP16, Caribbean and other small island developing states aim to engage in dialogue regarding

¹Hyperlinks are indicated by underlined text. Click on this text to access the referenced online document or website.
positive actions on adaptation and disaster risk management, thereby potentially garnering financial assistance for the region.

During the quarter, there were three hurricane events that impacted CCRIF member countries – Alex, Danielle, and Earl. Alex and Danielle did not trigger any CCRIF policies. However, Tropical Cyclone Earl passed close to Anguilla on 30 August, 2010 causing damage to buildings and other infrastructure. Anguilla’s hurricane policy was triggered with a likely payout of just over US$4 million to be made after the mandatory 14-day waiting period during which calculations are verified.
MANAGEMENT REVIEW

CCRIF Board of Directors
• A meeting of the CCRIF Board of Directors was held on 3-4 June, 2010 in Nassau, Bahamas.

• In August, Mrs Desiree Cherebin was selected by the Caribbean Development Bank to be appointed to the CCRIF Board of Directors to replace Mr Garry Wilkins, effective on 3 September, 2010. Mrs Cherebin is a banking supervision and financial services consultant working with regional and international agencies, including the Caribbean Regional Technical Assistance Centre and the International Monetary Fund to assist countries with strengthening the regulation and supervision of their financial sectors. CCRIF welcomes Mrs Cherebin to the Board and extends gratitude to Mr Wilkins for his outstanding service over the past three years.

CCRIF Team
• Following an international tender process, Caribbean Risk Managers Ltd. (CaribRM) was retained as the CCRIF Facility Supervisor, effective 1 August 2010, for a three-year period. The Facility Supervisor manages the day-to-day operations of CCRIF, including risk management, financial planning, catastrophe modelling, interacting with participant governments, coordination of the reinsurance placement and supervision of public relations and outreach efforts. The Facility Supervisor also is responsible for research and development that will be designed to improve catastrophe risk management in the region, improve existing CCRIF products and develop and implement new catastrophe-related products. Additionally, the Facility Supervisor is responsible for the implementation and monitoring of the CCRIF Technical Assistance Programme.

• Due to the growth of assets being managed, CCRIF has retained a second asset manager, EFG Bank (Cayman) Ltd. in addition to London & Capital Asset Management Ltd. EFG Bank (Cayman) is a member of EFG International and offers a range of banking, investment and fiduciary services to private clients.

Information Dissemination
• CCRIF distributed over 350 copies of the CCRIF quarterly report for the period 1 June – 31 August 2010 and 350-400 copies of the July 2010 newsletter, CCRIF News Vol. 1 No. 4 and other CCRIF publications including Enhancing the climate risk and adaptation fact base for the Caribbean (Preliminary Results), and A Guide to Understanding the Real Time Impact Forecasting System (RTFS). Recipients included the key contacts in the eight countries who participated in the ECA study; leaders in other Caribbean countries; climate change contacts in regional and international organisations; as well as other CCRIF stakeholders, including officers in donor agencies, and representatives of the insurance, finance, disaster management, meteorology and environment sectors. Also CCRIF distributed these information packages at several fora including the 30th annual conference of the Insurance Association of the Caribbean (IAC) and all other events which CCRIF attended.
FACILITY OPERATIONS

Hazard Event Management

- As is customary, post-event reports were prepared for the three hurricane events – Alex, Danielle and Earl – which occurred in this quarter (see Tropical Cyclone and Earthquake Review section).

- Tropical Cyclone Earl passed close to Anguilla on 30 August, 2010 and was of sufficient magnitude to trigger the country’s hurricane policy. Based on preliminary calculations undertaken using CCRIF’s catastrophe loss model and data from the National Hurricane Center, it was estimated that the payment to Anguilla would be just over US$4M. The Facility Supervisor began the process to facilitate payment to the Government of Anguilla to be made at the end of the 14-day waiting period mandated by the contract to verify the specific calculations.

- CaribRM is working with regional partners, particularly the Caribbean Institute for Meteorology and Hydrology (CIMH), and local disaster management officials in Anguilla to collect on-the-ground information regarding Earl and relevant to future hazard and risk assessment. This demonstrates that beyond offering risk transfer options and making payouts to countries in the region, CCRIF is also engaged in supporting the collection of accurate post-impact information in order to better understand the challenges faced, and therefore inform its own and other regional response mechanisms.

Policy Renewals

- All 16 member countries renewed their policies for hurricanes and earthquakes for the policy year that began on 1 June, 2010. Most countries maintained premiums at the same level as last year. However, as a result of increased appreciation of seismic risk following the Haiti earthquake in January, twelve countries increased their coverage limit for earthquakes. In total, CCRIF issued 29 policies for hurricanes and earthquakes to the 16 countries.

- During this quarter, the Facility Supervisor worked with a few members to complete premium payment arrangements. By the end of the quarter, only two countries had not paid the full premium; in both cases, CCRIF has been working with CDB to secure funds, and full payment is expected shortly.

- Haiti’s premium is being provided via grant funds from CIDA and CDB; no other grant or loan funds were utilised by the other 15 member countries for the 1 June renewal, although 6 countries did take
advantage of the lower Participation Fee requirement for long-standing participants announced by CCRIF earlier in the year.

- All reinsurance arrangements were finalised on time. The reinsurance programme provides $111M of claims-paying capacity from the international markets to CCRIF, covering annual aggregate losses to the one in one thousand year level. CCRIF retains the first $20M of risk beneath the reinsurance programme and an additional 4.5% of the lower tranches of the programme. The top tranche of reinsurance includes $18.5M placed into the capital markets via a catastrophe swap between CCRIF and the World Bank Treasury.

- Parametric model revision, in cooperation with stakeholders, and new market approaches are being implemented with the aim of expanding the reinsurance panel and stabilising and reducing overall risk transfer costs in future years.

**World Bank Operational Review**

- The Facility Supervisor provided scheduling support and technical assistance for a World Bank Operational Review of CCRIF that commenced in August 2010. This is the third review being undertaken by the Bank. Mr Todd Crawford and Mr Jon Palin from the World Bank are interviewing nine countries which, except for Barbados, were not part of the 2009 review.

**ECA Project**

- CaribRM took a leading role in the CCRIF implementation of the Economics of Climate Adaptation (ECA) Methodology in the Caribbean. *Further details of this project are presented in the Programmes, Projects and Partnerships section below.*
TROPICAL CYCLONE AND EARTHQUAKE REVIEW

During this quarter, there were three reportable hurricane events but no earthquake events that affected CCRIF member countries.

Tropical Cyclone Alex
Tropical Storm, later Hurricane Alex, the first named system of the 2010 Atlantic Hurricane Season, made its first landfall at Belize City, Belize on 27 June. Figure 2 shows the track across the Caribbean. The overall impact of Alex in Belize was low, with the model recording a very small loss from this event, well within Belize’s deductible. A post-event report for Alex was disseminated and can be found under “Publications/Event Reports” on the CCRIF website at http://www.ccrif.org/publications/event-briefing-tropical-stormhurricane-alex.

![Figure 2. Track of Tropical Storm Alex.](image)

Tropical Cyclone Danielle
Tropical Cyclone Danielle started life as Tropical Depression Six on 21 August in the mid-Tropical Atlantic, becoming a Tropical Storm the following day and a Hurricane the day after that. Its track curved northwestwards well before nearing the eastern Caribbean and, after threatening Bermuda for a while, made an abrupt turn to the northeast and tracked well to the east of Bermuda. It attained
Category 3 status on 27 August south of Bermuda, but gradually weakened and passed Bermuda as a weak Category 2 storm.

As shown in the Figure 3, Bermuda was well outside of the tropical storm force wind envelope, and the event therefore did not qualify as being an eligible event under the CCRIF policy. As would be expected, the modelled loss from the event was zero. A post-event report for Danielle was disseminated and can be found under “Publications/Event Reports” on the CCRIF website at http://www.ccrif.org/publications/event-briefing-tropical-cyclone-danielle.

**Tropical Cyclone Earl**
Tropical Cyclone Earl began as Tropical Depression Seven and then Tropical Storm Earl on 25 August before intensifying into a hurricane on 29 August. Classified as a Cape Verde-type hurricane, it was the seventh depression, fifth storm, third hurricane and second major hurricane of the 2010 Tropical Atlantic Hurricane Season. Figure 4 shows the wind envelope for Earl.
Earl passed close to the north of Barbuda, and then even closer to Anguilla before passing the northernmost of the British Virgin Islands, Anegada, and heading towards the southern Bahamas. Earl achieved the minimal requirements of a defined event under the CCRIF policy in three member states: Antigua & Barbuda, St Kitts & Nevis and Anguilla. However, modelled losses were insufficient to trigger the policies for Antigua & Barbuda and St Kitts & Nevis. Anguilla’s policy was triggered and, based on preliminary calculations, the country will receive just over US$4M after 14 days, during which time a final calculation of loss and payout will be made. A post-event report for Tropical Cyclone Earl was disseminated and can be found under “Publications/Event Reports” on the CCRIF website at http://www.ccrif.org/publications/event-briefing-tropical-cyclone-earl.
POLICY DEVELOPMENTS

Regional Rainfall Model and Excess Rainfall Product

Since February 2010, the Caribbean Institute for Meteorology and Hydrology (CIMH) has housed, operated and maintained the regional rainfall model. The primary model output is a map of aggregate rainfall for the Caribbean region, produced every 6 hours, which is made available to authorised users throughout the region via a web-based interface. The model provides a 6-hourly rainfall accumulation map at high resolution for the entire Caribbean Basin based on Global Forecast System initialisation data and run with topographic enhancements. The model, developed for CCRIF by Kinetic Analysis Corporation (KAC) in collaboration with CIMH and CaribRM, focuses primarily on quantifying rainfall at high resolution for extreme events. During this quarter, related rainfall forecast outputs by CIMH were used by organisations participating in the reconstruction efforts in Haiti. (Further details of this project are presented in the Programmes, Projects and Partnerships section below.)

The rainfall model forms the foundation for CCRIF’s excess rainfall product. During the next quarter, CCRIF will have accumulated rain climatology and tools to interrogate the model. Following this, KAC, CaribRM and CIMH will create the rainfall index and test the model against known events. Initially, the tests will be conducted on data for Haiti. Once this has been successfully completed, the methodology will be executed regionally. CCRIF’s plans to be able to offer the product by the end of the year remain on track.

Demand in the region is high for the excess rainfall product. Guyana’s Minister of Agriculture, Robert Persaud, has stated that Guyana will be among the countries utilising this new service. The Minister has said that the excess rainfall insurance will “contribute a great deal towards efforts by the Government of Guyana in risk management and agriculture insurance.”

Agriculture Sector

The regional rainfall model provides data on drought as well as excess rainfall and is closely linked with the development of options which can be used in the agriculture sector. CCRIF continued to participate in discussions in support of CARICOM’s development of a coordinated framework for disaster risk management in agriculture. In June, Dr Simon Young, CEO of CaribRM, participated on behalf of CCRIF in the Caribbean Agriculture Insurance Symposium on Disaster Risk Management in Antigua where he indicated that CCRIF “is exploring the possibility of becoming a catalyst for risk management innovation” in the sector. Dr Warren Smith, a Board Member of CCRIF, also attended the Symposium in his capacity as Director of Finance & Corporate Planning at the Caribbean Development Bank.
**CARILEC Product**

Discussions continued with the Caribbean Electrical Utility Services Corporation (CARILEC) regarding a product for the Region’s electric utilities. Regulatory issues to set up the captive are moving forward. CCRIF believes that initial interest will be highest for a relatively simple product and the technical work is proceeding on that basis. The Facility Supervisor met with the International Finance Corporation (IFC) who demonstrated high initial interest in supporting the programme.

**Real-Time Impact Forecasting System 2010**

CCRIF provided its members with real-time hurricane hazard and impact information for the 2010 hurricane season through the RTFS (Real-Time Forecasting System), which was produced for CCRIF by Kinetic Analysis Corporation (KAC).

The system enables users to access real-time estimates of the expected hazard levels and impacts on population for all tropical cyclones during the 2010 hurricane season. By providing potential hazard footprint maps and site-specific hazard and impact data through this platform, national preparedness and response mechanisms within CCRIF member states are enhanced.

During the quarter, over 100 people were registered (i.e. issued with usernames and passwords) to access the CCRIF RTFS (which occurs through the members-only section of the CCRIF website). This group consists of identified persons from all of the CCRIF participating states and in most instances is made up of the CCRIF primary contacts, an official from the national disaster management office and an official from the national meteorological office.

Additionally usernames and passwords were provided – at their request – to a number of regional agencies, including CDEMA, the CARICOM Regional Organisation for Standards and Quality (CROSQ) and a number of international organisations currently on the ground in Haiti assisting in recovery efforts, including:

- IRI (International Research Institute for Climate and Society) at Columbia University Earth Institute
- UN-OCHA (Office for the Coordination of Humanitarian Affairs) who were primarily interested in the information for short-term contingency planning
- IFRC (International Federation of Red Cross and Red Crescent Societies) who led the Haiti Shelter Cluster
- WFP (World Food Programme) who led the Haiti Logistics Cluster

The system has been well-used. Between June and August, the RTFS system was accessed 179 times by users in 7 countries led by Jamaica (110 times), Barbados (32 times) and Haiti (21 times).

In order to provide assistance with using the system, the booklet, *A Guide to Understanding the Real Time Impact Forecasting System (RTFS)*, was produced and distributed to potential users.
RTFS Training
CIMH provides training to meteorologists and other professionals in the region under the terms of the MoU between CIMH and CCRIF. CIMH conducted the final “pre-hurricane season” RTFS training session in June; the participants consisted primarily of persons from development organisations on the ground in Haiti and personnel from IRI at the Columbia University Earth Institute. Countries are encouraged to request further training sessions from the CIMH as the need arises, and CIMH also provides a ‘Help Desk’ facility for the RTFS.

Second Generation Loss Estimation Model
The second generation Hazard and Loss Estimation Model (HLEM) is being revised in response to issues raised by CCRIF’s reinsurers during the introduction of the model prior to 1 June 2010 renewals. A contract was finalised with Kinetic Analysis Corporation (KAC) to revise the model to resolve remaining reinsurer questions and to perform systematic sensitivity analysis, as well as to update administrative areas and input datasets. The result will be version 2 of the second generation model, to be known as the “CCRIF Multi-Peril Risk Estimation System” (CCRIF-MPRES), which will be fixed for three years from 1 June 2011 to allow for consideration of multi-year contracts on both the insurance and reinsurance sides.

Research Proposals
- The Munich Climate Insurance Initiative (MCII) submitted a proposal for CCRIF involvement in a project entitled “Regional institutions, adaptation, and insurance: Expanding coverage for medium level weather extremes in vulnerable countries using risk reduction and innovative insurance solutions coverage,” to the German Environment Ministry (BMU). The project’s goal is to overcome barriers and catalyse solutions to address middle-level weather-related risks and facilitate public safety nets and public-private insurance solutions for vulnerable people. The proposal seeks to bring together CCRIF and the world’s premier microinsurance implementation agency, MicroEnsure, to expand the range of adaptation options related to disaster risk reduction and microinsurance for vulnerable people in the Caribbean. The project will facilitate a process of donor observation and discussion about what elements of the approach could be replicated in other regions. This proposal would support CCRIF’s research and development goals through access to external funding for technical work.

- The Government of the Bahamas (Ministries of Finance and Agriculture) approached CCRIF through the Facility Supervisor to provide assistance in moving forward an index-based insurance initiative started by the UN Food and Agriculture Organisation (FAO). The Board is considering this request at its early-September meeting.
PROGRAMMES, PROJECTS AND PARTNERSHIPS

CCrif is committed to supporting its members in the development and implementation of strategies for disaster risk management by building on existing mechanisms, institutions, tools and capacities. This section describes CCRIF's Technical Assistance Programme and provides an update on strategic alliances with regional institutions.

Technical Assistance Programme
During this quarter, progress was made within two components of the CCRIF Technical Assistance Programme: Scholarships and Professional Development, and Regional Strategic Knowledge Building, as shown in the table below. The initiatives within the two components are further described in this section.

<table>
<thead>
<tr>
<th>Scholarship/Professional Development</th>
<th>Regional Strategic Knowledge Building</th>
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<tr>
<td>• UWI Scholarships</td>
<td>• Economics of Climate Adaptation (ECA) initiative</td>
</tr>
<tr>
<td>• Scholarships for study outside the region</td>
<td>• Technical Assistance for reconstruction of Haiti</td>
</tr>
<tr>
<td>• Professional development for CIMH staff</td>
<td>• Technical Assistance for UWI Seismic Research Centre</td>
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UWI Scholarships
The University of the West Indies (UWI) selected three of the recipients of the first CCRIF scholarships for the 2010/11 academic year. The scholarships have been awarded for students who will be entering their second of three years in the BSc programme for Geography/Geology in Jamaica and Civil with Environmental Engineering in Trinidad. Early in the next quarter, UWI will complete the selection process for the remaining two scholarship recipients, students in the MPhil or MSc programme in Disaster Risk Management at the UWI-DRRC (Mona).

Other Scholarships and Assistance with Professional Development
During this quarter, CCRIF provided financial assistance for Caribbean nationals to undertake further studies and also to engage in professional development opportunities outside the region. This assistance is described below.

- CCRIF provided a grant of £10,000 to Ms Wazita Scott from St Vincent and the Grenadines to attend Reading University in the UK to pursue an MSc degree in Atmosphere, Ocean and Climate. The scholarship will be overseen by the Caribbean Institute for Meteorology and Hydrology (CIMH) under the terms of the Memorandum of Understanding between CIMH and CCRIF. Ms Scott’s goal is to actively participate in weather and climate research, especially specific to the Caribbean region and the topic for her master’s thesis will be developed in consultation with CIMH and CCRIF so that the research addresses issues that are important to the region.
• The Facility granted US$5,000 through the Cayman Insurance Managers Association to Mr Winston Gall, meteorological technician with the Cayman Islands Airport Authority, towards his further studies in Meteorology at the Graduate School of the US Department of Agriculture.

• CCRIF provided assistance to two representatives of CIMH: to facilitate the participation of Dr Andrea Sealy in the International Training Course on Satellite Meteorology held in Beijing, China in late June and to facilitate the attendance of group co-chair Ms Kathy-Ann Caesar at the World Meteorological Organisation (WMO) Virtual Laboratory Management Group, Fifth Meeting held in Beijing in July. Both events enhanced regional expertise in the area of satellite meteorology and in the development of specialised products to improve early warning systems in the region.

CCRIF Grant Recipients.

Economics of Climate Adaptation (ECA) Initiative
CCRIF released the preliminary results of the study on the Economics of Climate Adaptation (ECA) in the Caribbean in a short brochure entitled, *Enhancing the climate risk and adaptation fact base for the Caribbean (Preliminary Results)*. The study was conducted for eight pilot countries: Anguilla, Antigua and Barbuda, Barbados, Bermuda, the Cayman Islands, Dominica, Jamaica, and St Lucia.

The ECA study, launched in February this year, was conducted by CCRIF, with Caribbean Risk Managers acting on behalf of the Facility, and supported by regional partners, the Caribbean Community Climate Change Centre (CCCCC), the UN Economic Commission for Latin America and the Caribbean and others. McKinsey & Company and Swiss Re provided analytical support.

Findings from the study indicate that annual expected losses from wind, storm surge and inland flooding already amount to up to 6% of GDP in some countries and that, in a worst case scenario, climate change has the potential to increase these expected losses by 1 to 3 percentage points of GDP by 2030.
The study provides data for each country to assist in making decisions on the balance between risk mitigation (e.g. constructing sea walls and enforcing building codes) and risk transfer initiatives (e.g. insurance) to address current climate hazards and respond to the growing threat of climate change.

The study provides a sound economic fact base that countries can use to further develop their national climate adaptation and disaster management strategies. For example, the study prioritises areas and sectors at risk and provides clear inputs for building an economically viable portfolio of adaptation initiatives designed to increase each country's resilience. CARICOM Secretary General Edwin Carrington says that the study “makes an important contribution to developing the capacity to address the climate change challenges facing the Caribbean … [and] will be of immense value to both Caribbean policymakers and the business sector, in their efforts to develop and implement sound adaptation strategies and plans.”

CARICOM Secretary-General Edwin Carrington

The brochures were sent to the participating countries and to CCRIF’s wide network of stakeholders and media contacts. CCRIF received positive feedback from many governments and the release of the results generated considerable interest by international media. For example, Dr Simon Young participated on UN Radio and BBC Caribbean where he discussed the preliminary findings and the next steps. Also, Trinidad and Tobago environmental magazine, Earth Conscious contacted CCRIF with the intention to publish an article about the study as its lead story in the September 2010 issue.

**Next Steps**

The ECA study provides a relevant toolkit to aid Caribbean countries to engage in multi-lateral and bilateral funding discussions for climate adaptation initiatives. The preliminary results are being used to assist with preparations for the approaching COP16 Climate Change Conference in Cancún, Mexico on 29 November – 10 December, 2010. A number of organisations have requested CCRIF’s participation in meetings leading up to COP16. These meetings include:

- AOSIS (Alliance of Small Island States) Ministers Meeting on 21 September 2010
- United Nations General Assembly (UNGA) High Level Meeting to review of the Mauritius Strategy for the further implementation of the Barbados Programme of Action (BPOA) for the Sustainable Development of Small Island States (MSI+5) on 24-25 September 2010
- Side event with Barbados Mission during the 2nd Committee of the UNGA –October/November 2010

CCCCC has already agreed to include the ECA work in their coordination of a CARICOM presence at COP16. At this conference, Caribbean and other small island developing states aim to engage in dialogue regarding positive actions on adaptation and disaster risk management, thereby potentially garnering financial assistance for the region.

The results presented in the brochure were generated from the input of regional stakeholders and experts as well as several country representatives. Phase 2 of the initiative will include further engagement with countries via individual workshops to obtain feedback on the initial results,
verification and enhancement of input data and potential areas for more detailed work (e.g. main sectors or hazards of interest). During this quarter, CCRIF entered into dialogue with interested international donors to provide funding for Phase 2.

Following this consultation and subsequent refinement of results for the eight pilot countries, Phase 3 will involve working closely with interested countries and regional institutional and funding partners to enable application of the methodology on an ongoing basis in all Caribbean countries.

**Technical Assistance for Reconstruction of Haiti**
During this quarter – the first three months of the Hurricane Season – CCRIF continued working closely with CIMH to provide tools and data to help planners and relief workers in Haiti to make better decisions about where to re-settle citizens and re-build infrastructure to minimise people’s exposure to flooding and landslides. CCRIF, in partnership with CIMH, provided high-resolution rainfall modelling through the Advanced Research Weather Research and Forecasting (WRF) Model and the Real-Time Forecasting System (RTFS) enhanced for Haiti. CCRIF and CIMH also provided hazard data from the CCRIF Second Generation Model that could be used to inform risk management initiatives.

Data were provided to Haitian Government organisations such as the Civil Protection Directorate and the Centre National de Meteorologie as well as international organisations such as the International Research Institute for Climate and Society at the Columbia University Earth Institute, the International Federation of Red Cross and Red Crescent Societies, and the World Food Programme. This information was used for the management of infrastructure such as refugee tent-camps, key operational centres, and transportation hubs.

Rainfall data were made available through the International Research Institute for Climate and Society (IRI) Haiti weather and climate help desk (http://iri.columbia.edu/haiti) and are being used by Meteo-France Martinique in support of forecasts over Haiti. The National Hurricane Center also has recognised the usefulness of these tools.

CIMH continues to provide technical assistance and training support in the use of the tools when required. CCRIF and CIMH are supporting the development of initiatives to assist with the rebuilding of Haiti’s hydrometric network and the training of meteorological and hydrological technicians.

**UWI Seismic Research Centre**
The University of the West Indies Seismic Research Centre (UWI-SRC) submitted a proposal to CCRIF seeking funds to strengthen the capacity of UWI-SRC in Trinidad and the Earthquake Unit in Jamaica to record ground acceleration ("strong motion") experienced during big earthquakes in the Caribbean. The proposal provides for the purchase and installation of accelerometers throughout the Eastern Caribbean and Jamaica to kick-start a long-pending plan to collect strong-motion data to assist in
seismic hazard mapping and building code design. The proposal was reviewed and endorsed by two external reviewers and is to be evaluated by the CCRIF Board at their early-September meeting.

**Strategic Alliances**

CCRIF continues to collaborate with Caribbean regional and national institutions to implement initiatives that will increase the capacity for effective disaster risk management, especially in the face of increased impacts from climate change. During this quarter, CCRIF had discussions regarding the memoranda of understanding with the Caribbean Community Centre for Climate Change (CCCCC) and the Caribbean Institute of Meteorology and Hydrology (CIMH). These discussions are summarised below.

- CCRIF and the Caribbean Community Centre for Climate Change (CCCCC) are close to finalising the text of a Memorandum of Understanding (MoU) that sets out the terms of collaboration of the two organisations to assist the governments of Caribbean states in understanding the risks of climate change to the economies and people of the region and to identify possible cost-effective adaptation measures to support greater resilience at the local, national and regional level. During this quarter, 5Cs made slight revisions to the draft MoU which has been circulated to the CCRIF Board for final review and approval. The agreement should be signed during the next quarter.

- A draft addendum for the MoU with the Caribbean Institute for Meteorology and Hydrology (CIMH) was prepared to recognise the expanded partnership between the two organisations. In order to facilitate the development of a regional cadre of technical professionals in climate science, CCRIF is providing funding for scholarships at undergraduate and post-graduate level and funding for international training opportunities for CIMH staff and national meteorological officers (offered by CIMH) in the area of climate science. The addendum requires that CIMH manage these scholarships and ensure deliverables from recipients. This fits with the mandate of the CIMH; as the WMO Centre of Excellence for the Caribbean, CIMH is responsible for capacity development within the Caribbean meteorological community. The addendum is under review by the CCRIF Board.
CONFERENCES AND FORA

CCRIF participated in several initiatives aimed at building capacity and supporting disaster risk mitigation and climate change adaptation activities in the region during the quarter. These are summarised below.

- CCRIF provided “bronze-level” sponsorship for the 30th annual conference of the Insurance Association of the Caribbean (IAC) held 13-15 June in Montego Bay, Jamaica. Conference participants included approximately 500 professionals in the insurance industry, including reinsurers. Dr Simon Young, CEO of Caribbean Risk Managers Ltd, CCRIF Facility Supervisor, delivered a keynote address, discussing CCRIF and other parametric and catastrophe insurance and climate change issues and CCRIF information packages were distributed to participants.

- Dr Simon Young also participated in the Understanding Risk Conference held 1-4 June, 2010 in Washington DC. The event was sponsored by the Global Facility for Disaster Reduction and Recovery and the Knowledge Strategy Group, in partnership with the Global Earthquake Model and the United Nations International Strategy for Disaster Reduction and explored best practices in a variety of topics ranging from open source risk modelling to community-based risk assessments.

- The CCRIF Board and Team participated in the Caribbean Agricultural Insurance Symposium on Disaster Risk Management hosted by the Inter-American Institute for Cooperation on Agriculture (IICA) held 16-18 June, 2010 in Antigua. The focus of the symposium was on insurance within the agricultural sector. Board member Dr Warren Smith (representing the Caribbean Development Bank) delivered a speech about agricultural financing in the Caribbean, noting that the absence of adequate risk mitigation strategies is a major disincentive to investment in the agricultural sector. Dr Simon Young, on behalf of CCRIF, delivered a presentation on CCRIF’s role as a potential catalyst and provider of new risk management tools for using index-based insurance in this sector.

- Ms Ekhosuehi Iyahen, Programme Officer at CaribRM, represented CCRIF at the Caribbean Disaster Emergency Management Agency (CDEMA) Council Symposium held on 24 June, 2010 in Barbados. The symposium was designed to apprise and engage CDEMA policy makers on any developments that have impacted or are likely to impact disaster risk reduction (DRR). Ms Iyahen’s presentation provided DRR policy leaders with an update on CCRIF implementation, experience and future plans.
Dr Simon Young participated in the M.O.R.E. 24 Seminar on Modelling and Mapping Risks (MMR) hosted by the Geneva Association for the Study of Insurance Economics in association with Axis Re, held 24-25 June, 2010 in Bermuda. The seminar provided an overview of MMR and their applications linked to the insurance industry with a view to increasing understanding of the impacts of long-term developments such as climate change from both an underwriting and asset management perspective. Dr Young’s presentation was entitled, *A cat model to write parametric insurance for the CCRIF*.

CaribRM represented CCRIF at the United States Agency for International Development (USAID) stakeholder meetings on “Climate Variability, Change and Adaptation” held in St. Lucia and Barbados on 12 and 14 July 2010 respectively. The meetings were convened in conjunction with the Environment and Sustainable Development Unit of the Organisation of Eastern Caribbean States, and the Barbados Coastal Zone Management Unit. The objective of these meetings was to assist in the formulation of a five-year (2011-2015) framework for the USAID climate change adaptation strategy for the Caribbean region to be implemented using “fast-start” financing as part of the U.S. commitment at the December 2009 UN climate negotiations in Copenhagen. The CCRIF presentation provided participants with information on the Facility, updates on its performance to date and initiatives undertaken in area of climate change, with particular focus on the CCRIF Economics of Climate Adaptation (ECA) study.

Ms Ekhosuehi Iyahen represented CCRIF at the Programming Consultation on Comprehensive Disaster Management (CDM) hosted by the Caribbean Disaster Emergency Management Agency (CDEMA) on 19 August, 2010 that focused on new CDM initiatives in the region and a review of regional programming for Haiti. Ms Iyahen delivered a presentation, entitled *CCRIF: Technical Assistance, Haiti* which focused on the high resolution rainfall modelling to inform early warning of potential heavy rain events and their location and the provision of an enhanced version of the RTFS to Haiti. The presentation complemented one delivered by CIMH with whom CCRIF is partnering on this initiative.

CCRIF was included as a best practice case study in discussions at the Small States Biennial Conference hosted by the Commonwealth Secretariat in London, on 28-29 July 2010.
COMMUNICATION AND PUBLICATIONS

CCRIF regularly disseminates information to almost 400 stakeholders. The CCRIF mailing list includes primary contact persons within the ministries of finance of existing and potential member countries, reinsurer companies, as well as almost 300 “general” stakeholders. These stakeholders include regional representatives such as disaster management and meteorological officers, experts in climate change, environmental management professionals, members of donor agencies and international organisations, and interested individuals who request information from the Facility, including an increasing number of students. Persons who attend workshops and meetings in which CCRIF participates are regularly added to this list. In addition to these targeted persons, CCRIF communicates with over 500 members of the press and has developed close working relationships with a number of editors and reporters.

Publications and Features

- During this quarter, the following CCRIF publications were produced and disseminated to over 150 stakeholders:
  - CCRIF Quarterly Report for the period 1 March – 31 May 2010
  - CCRIF Newsletter, CCRIF News Vol. 1 No. 4 June 2010
  - Booklet, A Guide to Understanding the Real Time Impact Forecasting System (RTFS)
  - Brochure, Enhancing the climate risk and adaptation fact base for the Caribbean (Preliminary Results)

- The article, “CCRIF hosts Regional Workshop on Economics of Climate Adaptation” was submitted and published in the June 2010 issue of Earth Conscious magazine, a quarterly magazine published in Trinidad & Tobago that explores issues related to climate change, sustainable tourism, energy, disasters and other environmental issues. The article is provided in Appendix 1.

- CCRIF was featured on Ready 2010, a Barbados-produced television series that focuses on preparedness for natural and man-made hazards in the Caribbean region. Chairman Milo Pearson participated in a one-hour interview, portions of which were used in segments of the five-part series aired during prime time during the period June - August in 17 Caribbean countries. In the interview, Mr Pearson discussed all aspects of CCRIF.

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2 CCRIF publications can be found on the CCRIF website: www.ccrif.org
including the organisation’s objectives, upcoming CCRIF events, the Technical Assistance Programme – with special focus on the Economics of Climate Adaptation (ECA) project, and the payout to Haiti and reconstruction plans after the January earthquake. Also, the Facility provided financial support for the series via a 30-second advertisement about CCRIF which aired during the programme.

Press Releases and Communications
- The following press releases were issued and disseminated during the quarter:
  - Caribbean Countries Renew Hurricane and Earthquake Coverage (1 July 2010)
  - Caribbean Economics of Climate Adaptation Study results released (18 August 2010)
  - CCRIF to make payout to Anguilla after Hurricane Earl (31 August 2010)

- This quarter, approximately 100 instances of articles about CCRIF appeared in the press. Some of these instances of articles were repeats of original articles on other sites. They are included the total count to indicate the range of media that carry stories that mention CCRIF. Coverage focused on the renewal of CCRIF policies, the expected excess rainfall product, CCRIF’s support of the development of agricultural insurance, and the publication of the preliminary results of the ECA study. News about CCRIF appeared primarily in Caribbean and international newspapers and insurance/finance journals. The Notable Mentions section highlights some specific examples of press coverage and formal reports that include mention of CCRIF. Appendix 2 provides details about all the press coverage.

Website
- The new CCRIF website (www.ccrif.org) went “live” in June. The new site was designed to improve CCRIF programme delivery and service, while increasing awareness of the Facility’s mission and role. The new website provides easy access to all CCRIF publications and reports as well as information about CCRIF’s programmes, partnerships and projects and shows the Facility’s collaboration with regional entities. In the secure RTFS section, CCRIF members now have the facility through the website to log in using a unique username/password in order to access the Real-Time Forecasting System (RTFS) which provides real-time estimates of the expected hazard levels and impacts on countries as tropical cyclones occur during the 2010 hurricane season.

- During this quarter, 1,538 persons from the Caribbean, USA, Canada, the UK, Europe, Japan, China and other countries (85 countries in total) accessed the CCRIF website, making approximately
250,000 “hits”. The number of hits from persons in the Caribbean was approximately 90,000 (see Figure 5 below), above the target of 65,000 for 2010/11 as set in the revised CCRIF Strategic Plan 2009-2012. In the members-only area of the website from which the RTFS data is accessed, there were 179 visits by 7 countries led by Jamaica (110 visits - 61 %), Barbados (32 visits - 18 %) and Haiti (21 visits - 12 %), almost all of which was during the week of 18 August.

Figure 5. CCRIF Website Hits per Country Group: June – August 2010.
NOTABLE MENTIONS

CCRIF continues to be recognised in the government, insurance and disaster management sectors globally as an important mechanism to reduce financial risks due to natural hazards and as a key component of comprehensive disaster management in the Caribbean and is being used as a model for other regions in the world, for example, for nations in the South Pacific and states in the USA. The box below highlights some headlines from the more than 100 instances of articles in which CCRIF was mentioned and is followed by some “notable mentions” of CCRIF during the quarter. Appendix 2 provides a more detailed listing of the press coverage for the quarter. The article titles are linked to the actual sources on the internet so that interested persons can see the entire article.

SOME HEADLINES

- CCRIF again sees full renewal for coverage, but not as easy as it looks – Business News Americas (2 July, 2010)
- Caribbean risk pool prepares for "above normal" hurricane activity – Post Online (2 July, 2010)
- CCRIF cuts premiums again – The Jamaica Gleaner (14 July, 2010)
- CCRIF members renew; most increase quake cover and leave hurricane premiums static – Artemis blog (13 July, 2010)
- Caribbean disaster insurance scheme inspires South Pacific countries – Reuters AlertNet (11 August, 2010)
- Caribbean climate change costs could climb – Jamaica Observer (20 August, 2010)
- Climate change likely to increase Caribbean storm damage costs – Green Antilles (23 August, 2010)
- Study to help countries plan for climate change – Barbados Advocate (23 August, 2010)
- Caribbean Catastrophe Risk Insurance Facility could indirectly provide crop insurance – AgroInsurance.com (21 July, 2010)
- Crop-insurance hope for Jamaica's agriculture – Frontiers of Risk Management (20 July, 2010)
- Excessive rain insurance by year end – Stabroek News (30 August, 2010)
- Guyana Pushes For Caribbean Insurance Facility To Cover Floods – Guyana Information News Agency (29 August, 2010)
- Regional body agrees to provide flood, drought insurance – Kaiteur News (29 August 2010)
- Anguilla to receive insurance payment following passage of Hurricane Earl – CARICOM News Network (31 August, 2010)
Some “Notable Mentions”

Caribbean disaster insurance scheme inspires South Pacific countries

South Pacific nations threatened with rising sea levels linked to climate change are looking to adopt a regional disaster insurance plan based on a lauded Caribbean scheme which aims to soften the economic impact of natural catastrophes. ... As scientists predict more extreme climate change-related weather, the Caribbean insurance plan is being viewed as a model for countries seeking to incorporate a financial safety net in their disaster risk management, especially small storm-hit nations. Efforts to draw up a similar insurance scheme for island nations in the Pacific and Indian oceans are already underway.

Reuters AlertNet (11 August, 2010)

Swiss Re, Alabama Debut First-in-the-Nation Parametric Coverage for State Fund

The Alabama State Insurance Fund signed a deal with Swiss Re for what the insurer is calling first-in-the-nation parametric coverage for the fund’s catastrophic hurricane exposure. ... [SwissRe’s] DaVictoria Lobo offered Haiti as an example of parametric coverage working. In the aftermath of the Haití earthquake, the government received a check in 10 [sic] days that it used immediately to pay police. Swiss Re is the lead reinsurer of the Caribbean Catastrophe Risk Insurance Facility, a risk-pooling facility owned, operated and registered in the Caribbean for Caribbean governments.

InsuranceNews.net (27 July, 2010)

60 Seconds with...Eugene Gurenko

The insurance industry has a vital role to play in covering both current and emerging risks associated with a globalised economy, explains Eugene Gurenko, lead insurance specialist at the World Bank. ... [Public, private initiatives] are something the bank started 12 years ago .... Since then we’ve come a long way in building public private partnerships on a large scale that include global donors, banks, governments and businesses to deal with the consequences of natural disasters. One example, which was a great innovation, was the Caribbean Catastrophe Risk Insurance Facility (CCRIF), which provides parametric risk coverage against hurricanes and earthquakes to 16 countries of the Caribbean.”

Lloyd’s.com (8 August, 2010)

Publications and Reports

Key publications and reports in which CCRIF was included during this quarter are presented below.

- **Insurance as an Adaptation Option under UNFCCC** by authors from INFRAS, International Research Institute for Climate and Society at Columbia University, and SwissRe. Background paper that builds upon the Swiss proposal “Funding Scheme for Bali Action Plan: A Swiss Proposal for global solidarity in financing adaptation” (UVEK 2008) and existing proposals on insurance. July 2010.

- **Does disaster insurance have a role in climate change adaptation?** Article by Christian Aid. June 2010.


Caribbean Catastrophe Risk Insurance Facility (CCRIF) hosts Regional Workshop on Economics of Climate Adaptation

CCRIF has recently launched a project to produce a quantitative knowledge base for key climate change risks and adaptation strategies for decision making across the region, building on and contributing to the Review of the Economics of Climate Change (RECC) process.

On 12 and 13 May, over 50 representatives from Caribbean governments and international agencies met in Barbados to discuss the initial results from a recent investigation into the Economics of Climate Adaptation (ECA) in the Caribbean. This study, part of CCRIF’s technical assistance programme, will enhance the development of a fact base for developing sound climate change adaptation strategies in the region.

Since the launch of the project in February, a team composed of Caribbean Risk Managers on behalf of CCRIF, the Caribbean Community Climate Change Centre (SC’s) and other regional partners, has been intensely involved in data collection and analysis for a number of countries with analytical support provided by McKinsey & Company and Swiss Re.

The workshop, which was held at the Caribbean Development Bank, provided an introduction to the Economics of Climate Adaptation approach and its application in the Caribbean and focussed on:

• sharing the findings of the study with the participants
• examining the key insights and results for wind, sea level rise/coastal flooding, inland flooding and salinisation of groundwater

The final outputs of this study will include a risk baseline which will provide transparency about current and future expected losses from climate risks under three climate change scenarios; and assessment of adaptation measures – identification of feasible and applicable measures to adapt to the expected risks based on quantitative analysis of total cost and expected benefits of risk mitigation and transfer measures.

The results of the study will assist decision makers throughout the Caribbean region in defining and developing sound adaptation strategies and business cases which can be incorporated into national development plans. The recent Climate Change Conference in Copenhagen reconfirmed the commitment to provide funding and technical assistance for climate adaptation to developing countries. The ECA study will help Caribbean leaders develop programmes that will be strong candidates for adaptation assistance.

The innovation of the ECA methodology lies in its positioning across different knowledge sectors, spanning climate science, the financial industry and economic research. The analysis is based on joining four main elements:

1. Climate change scenarios based on the most recent available scientific evidence
2. Hazard models forecasting the occurrence of hurricanes or other damaging events
3. Economic damage functions linking the intensity of events to economic impact
4. Value distribution models describing each country’s economic and population exposure to hazards in a granular, precise way
Instances in which CCRIF was mentioned during this quarter are presented below arranged by topic covered.

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<th>Article Title</th>
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<td><strong>Policy renewals</strong></td>
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<tr>
<td>Dominica and other Caribbean countries renew catastrophic risk insurance</td>
<td>The Dominican</td>
<td>2-Jul-10</td>
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<tr>
<td>Regional states renew earthquake and hurricane insurance policies</td>
<td>The Antigua Observer</td>
<td>2-Jul-10</td>
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<tr>
<td>CCRIF members renew policy for natural disasters</td>
<td>Stabroek News</td>
<td>5-Jul-10</td>
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<tr>
<td>Renewed CCRIF hurricane policies</td>
<td>RJR News (Jamaica)</td>
<td>5-Jul-10</td>
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<td>Calls to renew hurricane and earthquake policies heeded</td>
<td>Voice of Barbados VOB 92.9 Local News</td>
<td>7-Jul-10</td>
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<td>CCRIF cuts premiums again</td>
<td>Jamaica Gleaner</td>
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<td>CCRIF cuts premiums again</td>
<td>CaribDaily.com</td>
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<td>Caribbean Countries Renew Hurricane, Earthquake Coverage Members Renew CCRIF Membership</td>
<td>Insurance Journal</td>
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<td>CCRIF members trade wind for quake cover after Haiti</td>
<td>Trading Risk magazine</td>
<td>15-Jul-10</td>
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<td>CCRIF sees all 16 members renew before '10 season</td>
<td>Insurance Day</td>
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<td>CCRIF again sees full renewal for hurricane, earthquake coverage</td>
<td>Business News Americas</td>
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<td>Business News Americas</td>
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<td>With Model Set, CCRIF Looks Towards the Capital Markets</td>
<td>Risk Market News</td>
<td>7-Jul-10</td>
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<td>More opportunity beyond peak cat risk for ILS-Secquaero</td>
<td>Thompson Reuters</td>
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<td>Caribbean Countries Renew Hurricane and Earthquake</td>
<td>ReliefWeb</td>
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<td><strong>Coverage</strong></td>
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<td>CCRIF members renew; most increase quake cover and leave hurricane premiums static</td>
<td>Artemis blog</td>
<td>13-Jul-10</td>
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<td>Caribbean Catastrophe Risk Insurance Facility (CCRIF) renewed for 2010: World Bank transfers portion of catastrophe risk to the capital markets through cat swap</td>
<td>World Bank</td>
<td>23-Jun-10</td>
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<td>Caribbean Countries Renew Hurricane, Earthquake Coverage</td>
<td>Insurance Journal</td>
<td>2-Jul-10</td>
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<td>Caribbean Countries Renew Hurricane, Earthquake Coverage All members of CCRIF renew for 2010/2011</td>
<td>Quote Freely insurance website</td>
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<td>CCRIF renueva políticas de cobertura por huracán y terremoto</td>
<td>Reactions website</td>
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<td>Caribbean countries renew hurricane and earthquake coverage</td>
<td>Redhum³ website</td>
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<td>Regional states renew earthquake and hurricane insurance policies</td>
<td>CaribArena Antigua</td>
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<td>Caribbean countries renew hurricane and earthquake</td>
<td>Jamaica Observer</td>
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³ Humanitarian Information Network for Latin America and the Caribbean
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<td>Regional states renew earthquake and hurricane insurance policies</td>
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<td>The Caribbean talks about Risk and prepares for the Hurricane Season with McKinsey &amp; Company and Swiss Re. Obviously, Climate Change makes it all worse. CCRIF into 3rd year with 10 percent rate cut CCRIF renews with a further rate cut</td>
<td>SustainabiliTank.info website</td>
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<td>Agriculture Insurance</td>
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<td>Looking Inward for Agriculture Insurance Solutions - CCRIF Sees Potential for Expanded Role in Agriculture Risk Management</td>
<td>Caribbean Media Vision</td>
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<td>Looking Inward for Agriculture Insurance Solutions - CCRIF Sees Potential for Expanded Role in Agriculture Risk Management</td>
<td>Caribbean Net News</td>
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<td>CARICOM website</td>
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<td>Crop insurance hope for Jamaica’s agriculture</td>
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<td>Crop insurance hope for Jamaica’s agriculture</td>
<td>The Punch</td>
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<td>CARICOM seeks crop insurance model</td>
<td>Stabroek News</td>
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<td>Caribbean Catastrophe Risk Insurance Facility could indirectly provide crop insurance</td>
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<td>Frontiers of Risk Management</td>
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<td>Baptiste calls for action</td>
<td>Antigua Daily News</td>
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<td>Consensus Reached On DRM Symposium’s Resolution</td>
<td>Antigua &amp; Barbuda Ministry of Agriculture Website</td>
<td>18-Jun-10</td>
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<td>CCRIF sees potential for expanded role in agriculture risk management</td>
<td>CARICOM News Network</td>
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<td>Three -Day Regional Symposium begins with Public Sector’s Perspectives</td>
<td>Antigua &amp; Barbuda Ministry of Agriculture Website</td>
<td>16-Jun-10</td>
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<td>The region’s vulnerability to disaster is a development deficit: Dr. Vincent Little tells Disaster Management Symposium Region's vulnerability to disaster a development deficit, says IICA official</td>
<td>Government of Trinidad &amp; Tobago News</td>
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<td>Excess Rainfall Product</td>
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<td>Guyana pushes for Caribbean insurance facility to cover floods</td>
<td>Guyana Chronicle</td>
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<td>Excessive rain insurance by year end</td>
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<td>Regional body agrees to provide flood, drought insurance</td>
<td>Kaitleur News</td>
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<td>Guyana pushes for Caribbean insurance facility to cover floods</td>
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<td>Govt pushing for CCRIF's planned rainfall coverage to be ready by year-end</td>
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<td>Guyana pushing for Caribbean rainfall cover by year end</td>
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<td><strong>ECA Study Results</strong></td>
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<td>Caribbean Economics of Climate Adaptation Study Results Released</td>
<td>Grenada Broadcast</td>
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<td>Caribbean climate change costs could climb</td>
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<td>Climate study</td>
<td>NationNews.com (Barbados)</td>
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<td>Study finds climate change could seriously affect Caribbean countries</td>
<td>Caribbean Daily News</td>
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<td>Climate change increasing Caribbean storm risk</td>
<td>Insurance ERM website</td>
<td>20-Aug-10</td>
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<td>Study Says Rising Risks from Hurricanes, Extreme Weather Could Cost Caribbean Nations Up to 9% of Annual GDP by 2030</td>
<td>ProgramBusiness.com</td>
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<td>Caribbean faces rising hurricane risks</td>
<td>Insurance Daily</td>
<td>19-Aug-10</td>
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<td>Caribbean Storm Damage Costs May Rise 50% with Global Warming</td>
<td>Bloomberg Business Week</td>
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<td>Caribbean can avoid 90% of climate losses</td>
<td>Insurance Day</td>
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<td>Caribbean risk pool prepares for &quot;above normal&quot; hurricane activity</td>
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<td>Caribbean Countries Renew Hurricane, Earthquake Coverage</td>
<td>Insurance for Less</td>
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<td>Climate Change Could Take Heavy Toll on Caribbean</td>
<td>P&amp;C National Underwriter</td>
<td>19-Aug-10</td>
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<td>Caribbean storm damage could increase by 2030: Study</td>
<td>Businessinsurance.com</td>
<td>19-Aug-10</td>
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<td>Study finds climate change could seriously affect Caribbean economies</td>
<td>CANA website</td>
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<td>Adaptation Costs in the Carribean</td>
<td>Adaptation Online</td>
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<td>Long-Term Outlook Cloudy for Caribbean Cat Market</td>
<td>Insurance Networking News</td>
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