



FINAL
REPORT
OF THE
FIFTY-SIXTH MEETING
OF THE
CARIBBEAN
METEOROLOGICAL
COUNCIL



CHAIRPERSON:

Honourable Dr. Clarice Modeste-Curwen,
Minister of Tourism and Civil Aviation of
GRENADA

VENUE AND DATE:

Radisson Hotel, Grand Anse,
St. George's
GRENADA
10-11 NOVEMBER 2016

1. OPENING OF THE SESSION AND ELECTION OF CHAIRPERSON

1.1 At the kind invitation of the of the Government of Grenada, the Fifty-Sixth Session of the Caribbean Meteorological Council was held at the Radisson Hotel on Grand Anse, St. George's on 10-11 November 2016. The Caribbean Meteorological Council is the Governing and policy-making body of the Caribbean Meteorological Organization (CMO).

1.2 *Mr Earl Charles* of the Grenada Airports Authority, commenced the Opening Session of the Meeting by extending words of welcome, after a prayer by *Ms. Gloria Thomas* and the National Anthem rendered by *Mr David Edwards*.

1.3 *Mr Tyrone Sutherland*, Coordinating Director of the CMO, delivered remarks that focussed on the value of a well-developed and properly supported National Meteorological Service that will deliver the most credible, reliable and timely information to policy- and decision-makers, as well as to every citizen and resident of our nations. In this regard, he noted the challenges to the Meteorological Services in responding to new and rapidly changing technologies that impact on their work and thus on what reaches the users and the public. Specifically, because of the growing and popular use of online mechanisms as their first choice to access information, Meteorological Services have to decide on how best to use these online systems...including social media...to deliver their products to the public and all sectors who need them. He called on Governments to provide the necessary internal structural support – largely an improved IT capability – that will move the Services with the times.

1.4 *Mr Oscar Arango*, the World Meteorological Organization's Representative for North America, Central America and the Caribbean, addressed the Council on behalf of the WMO Secretary-General, *Prof. Petteri Taalas*. Mr Arango highlighted the fruitful and continuous cooperation between CMO and WMO over the years and especially mentioned Mr Sutherland's important contributions to the Executive Council of the WMO and the benefits that the Caribbean region had obtained from his participation in this body and its expert groups.

1.5 He also referred to the work being done by WMO in the Caribbean through its main regional bodies and the results that had been obtained in many areas, but especially in the priority areas of the *WMO Integrated Global Observing System (WIGOS)*, the *WMO Information System (WIS)*, *Aeronautical Meteorology*, *Disaster Risk Reduction*, the *Global Framework for Climate Services*, *Tropical Cyclones* and *Hydrology*. He reminded the Council of the upcoming Session of the Regional Association IV (North America, Central America and the Caribbean) in 2017 and mentioned proposals that the Association maintain the previously decided regional priorities including, but not limited to, the enhancement and operation of the network of RA IV *Regional Climate Centres* and the Regional Climate Outlook Forum (RCOF).

1.6 The feature address was delivered by *Dr. the Honourable Clarice Modeste-Curwen*, Minister of Tourism and Civil Aviation of Grenada. Dr. Modeste-Curwen gave a brief history leading to the establishment of the Caribbean Meteorological Organization in 1973 as one of the Caribbean Community's first functional institutions, noting the evolution from its colonial predecessor, the *British Caribbean Meteorological Service*, that was established in 1951. The Minister also noted, within that development, the evolution of the Caribbean Institute for Meteorology and Hydrology as an organ of the CMO. In her remarks, she focussed on the work done by the organs of the CMO and their value to the CMO Member States in assisting the development of National Meteorological Services and their own contributions to the safety and well-being of citizens through improved forecasts, warnings and disaster management. Minister Modeste-Curwen called on the Delegations to Council to look for new horizons for meteorological services, to deliberate on problems and obstacles and methods of resolving them collectively for the benefit of the region.

1.7 After the feature address, a vote of thanks was given by **Mr Hubert Whyte**, Manager of the Meteorological Service of Grenada.

1.8 The Meeting selected Minister *Dr. Modeste-Curwen* of Grenada as the Chair of the Caribbean Meteorological Council for its 56th session and the intercessional period until the next annual meeting of the Council.

2. ADOPTION OF AGENDA AND PROCEDURAL MATTERS

2.1 The Agenda adopted by the Meeting is shown in **ANNEX I** of this Report. The Meeting fixed its hours of work and determined the order in which it would conduct its business. The list of Delegates attending the Meeting is attached as **ANNEX II** to this Report.

3. CMO EXECUTIVE REPORTS

3(a) Coordinating Director's Report

3.1 The CMO Coordinating Director presented his report on the activities and issues concerning the CMO Headquarters Unit since the previous session of the Council. The Council first engaged in a brief review of the impacts of weather in the region in 2016, noting that 2016 was quite different to 2015, in that general drought conditions that started in 2015 continued into the first half of 2016 as the El Niño conditions weakened. Regular rainfall generally returned to the region towards the start of the normal wet season. There were two main weather producing features of 2016. *Hurricane Earl* took a direct hit on Belize in early August, producing enormous rainfall and flooding, a storm surge along the coast, damage to 2,000 homes, and overall damage, primarily to the agricultural sector, estimated at US\$110 million.

3.2 In September 2016, **Matthew** reached tropical storm strength as it reached the Eastern Caribbean island chain, producing floods, landslides and other damage in Barbados, Saint Lucia and St. Vincent & the Grenadines, with the loss of one life reported in St. Vincent and the Grenadines. Matthew then developed to *major hurricane strength* (category 5) over the south-central Caribbean Sea, before turning north and impacting Haiti, the Dominican Republic, Jamaica, Cuba, the Bahamas and parts of the South-eastern USA. Unofficial figures indicate between 400 and 1,000 lives lost in Haiti alone, as well as at least 39 deaths across five South-eastern US States. **Hurricane Matthew** was then listed as the strongest hurricane in the Atlantic-Caribbean Basin since *Hurricane Felix* in 2007 and the deadliest since 2005. The only notable Atlantic cyclone in October was *Hurricane Nicole*, which made a direct hit on Bermuda as a major hurricane on 13 October.

3.3 The Council discussed the CMO Headquarters activities in 2016, noting that several were aimed at laying the groundwork for regional implementation of many global programmes and initiatives, particularly those set in motion by the World Meteorological Organization (WMO) as they relate to the Caribbean region in general and CMO Member States in particular. This included the implementation of the *Global Framework for Climate Services* (GFCS), regional and global Disaster Risk Reduction (DRR) activities, integrating weather observing systems, and improving meteorological services for the safety of aviation operations. Council noted that in 2016, just as in 2015, a considerable amount of time was spent by the CMO Headquarters contributing to the *Strategic Plan for the Caribbean Community 2015-2019*, coordinated by the CARICOM Secretariat, and its link to the "*CMO Operational Programme 2016-2019*".

3.4 The Coordinating Director briefed the Council on some of the scientific, technical and training events in which technical staff of the CIMH and the Services participated. Council noted that the schedule of activities undertaken by the CMO Headquarters had been relatively heavy, particularly in a year that followed a Congress of the WMO, because follow-up and implementation of all Congress programs at regional and international levels had to be set in motion, with several commencing in 2016 or set to commence in 2017.

3.5 Council was high in praise for two Directors of Meteorological Services who retired from service in 2016. Council expressed special thanks to **Mr Jeffery Spooner**, Director of the Meteorological Service of Jamaica, on his retirement in March 2016 after 40 years of dedicated professional service. Council also saluted **Mr Dennis Gonguez**, Chief Meteorologist/Director of the National Meteorological Service of Belize, on his retirement from the end of 2016 after more than 30 years in the fields of weather, climate and disaster management. The Council wished both of them well in the future and welcomed their respective replacements, *Mr Evan Thompson* in Jamaica and *Ms Catherine Cumberbatch* in Belize.

3.6 **The Council:**

Noted the activities and issues concerning the CMO Headquarters in 2016, particularly those dealing with the implementation of major WMO-related activities, and issues concerning the wider Caribbean Community;

Discussed the weather-related impacts on the region in 2016, which featured the passage of Hurricanes Earl and Matthew that impacted some Member States and other countries in the region;

Noted and commended the outstanding contributions to the regional and the international meteorological community by **Mr Jeffery Spooner** of Jamaica and **Mr Dennis Gonguez** of Belize, both of whom retired in 2016.

3(b) **CIMH Principal's Report**

3.7 The Principal of the Caribbean Institute for Meteorology and Hydrology (CIMH) presented his report to the Council on the activities of the CIMH since the last session in 2015. It was indicated that CIMH's role was much more than training. It also had the following roles:

- WMO Regional Training Centre
- Centre for Research and Development
- Climate Data Archiving Centre for CMO Member States
- WMO Regional Instruments Centre
- Centre of Excellence for Training in Satellite Meteorology
- Regional Climate Centre for the Caribbean
- Centre for Climate and Environmental Simulations
- Third node in the three-node WMO-Pan American Centre for Sand and Dust Storm Warnings and Advisory System
- Provision of consultancy services to Governments.

3.8 The Principal indicated that it was widely believed that the Institute was good for the Caribbean and that Member States were better off with rather than without the Institute. At a time that Governments in the regions were talking about value proposition for their investments, he highlighted the CIMH's increasing importance to the region as the positive return on the investment for the Governments.

3.9 The Council was informed of discussions about new ways of attracting investments, in which one such possibility was through the Caribbean Development Bank (CDB) Strategic Framework (2015-2019). Two areas were identified in which Meteorological Services, CIMH and others could attract investment through the promotion of environmental sustainability, noting that within environmental sustainability, there was a climate component and a disaster risk component which Meteorological Service may be able to leverage to provide evidence-based decision making across several sectors.

3.10 The Principal brought the Council up-to-date on the Institute's growing international activities, including South-South partnerships with the South Pacific, joint scientific research activities with European institutions such as the Max Planck Institute, its role in the implementation of the Global Framework for Climate Services (GFCS) (see Agenda item 6), among others. In its regional activities, the Council discussed the Institute's efforts with respect to disaster risk reduction in partnership with CDEMA, including *impact-based forecasts* guidance for Haiti, guidance to relevant entities on drought situations across the region, as well as capacity building programmes with sectors such as tourism, agriculture and water resources. Council was informed that the impact based forecasts provided by CIMH, to disaster officials in Haiti on the passage of Hurricane Matthew, triggered evacuation activities in the south of the island which saved many lives

3.11 The Principal informed the Council of upgrades to the infrastructure at the CIMH funded under the BRCCC programme, including building repairs, improved classroom and the upgrade of laboratory, equipment and IT facilities. The Principal referred to the level of funding received from Member States, which showed some increase compared to previous years (see Agenda item 7), noting that payment of subventions was important, in addition to staff and training commitments, for maintaining and upgrading the Institute's infrastructure and computational platforms.

3.12 **The Council:**

Noted the Principal's Report and commended the Principal for the excellent role that the CIMH continued to play in contributing towards the Region's development.

3(c) CIMH Board of Governors' Report

3.13 The Chairman of the Board of Governors presented to the Council the following decisions which were made at the 53rd meeting of the Board:

1. With reference to Matters arising from the Summary of Conclusions Report of the Fifty-second BOG Meeting: The Board **agreed** that effective 7th November 2016, the acceptance letters for training courses at the Institute shall stipulate that 'students shall not be accepted unless they had health insurance applicable to Barbados.'

2. With reference to Document 4.1 – BWU/CIMH Matters: The Board **noted** the report and **agreed** with the counter proposals drafted by the Principal.
3. With reference to Document 5.1 – Estimates of Expenditure for the Financial Year 2017: The Board **approved** the Estimates of Expenditure of BBD 7,231,192.00 or USD 3,626,930.20, to be presented to the Council.

3.14 **The Council:**

Noted the decisions emanating from the BOG-53.

4. STATUS OF ACTIONS FROM THE PREVIOUS SESSION

4.1 Following every session of the Council, the CMO Headquarters produces a single document containing an **Action Sheet** that would allow the Council to follow-up on the actions taken on the decisions of its previous session, and to discuss any further actions if required. A summary of the decisions of CMC55 (Belize, 2015) was prepared, giving the status of actions taken to implement these decisions of Council, and to indicate areas where action as proposed had not materialized.

4.2 The Council was reminded of the discussions at CMC55, at which the CMO Headquarters proposed to produce a draft revision of the formula used to determine the level of contributions by Member States to the budgets of the institutions of the CMO. This was proposed because of economic and other changes in the region over several years. Council delayed this action because there had been an expression of interest by a regional State in joining the CMO, which would have an impact on the details and timing of the Contribution Formula.

4.3 Council sought clarity on the length of time the CMO will wait on a decision of Suriname before the contribution formula would be presented. The contribution formula was based on economic level of the country as assessed by CARICOM, which was modified by a meteorological component that is weighted by the level of services offered the Meteorological Service of the country. The **Coordinating Director** indicated that the Organization was willing wait for the next year before presenting the formula to Council. However, the **Representative of St. Vincent and the Grenadines** suggested that the CMO should present two versions of the contribution formula to CMC57, one with Suriname included and the second, without Suriname.

4.3 In addition, under agenda item 7(a) *CMO 2016 Budget (HQ, CRN & Radar)*, Council requested that invoices for contributions by Member States to be distributed only in United States dollars.

5. RELATIONS WITH OTHER BODIES

(a) Relations between *CMO* and the *Meteorological Service of France*

5.1 Council recalled that, at its 55th session (Belize 2015), it endorsed the establishment of formal relations between the *Caribbean Meteorological Organization* and the *Meteorological Service of France* (Météo-France), through an agreed formal Working Arrangement. The decision to establish formal relations was in recognition of the fact that CMO and Météo-France had been collaborating for many years on specific activities of common interest.

5.2 Council was pleased that *Mr Jean-Marc Lacave*, Chairman and Director General of Météo-France and *Mr Tyrone Sutherland*, Coordinating Director of CMO, both elected members of the Executive Council of the World Meteorological Organization, took advantage of their participation in the 68th session of the WMO Executive Council to undertake the signing ceremony in Geneva on 21 June 2016. Council noted with pleasure that the signing ceremony had been attended by the President of WMO, *Mr David Grimes* of Canada, Secretary-General of WMO, *Prof. Petteri Taalas*, President of the WMO Regional Association IV (North America, Central America and the Caribbean), *Mr Juan Carlos Fallas*, along with the heads or senior officials of the National Meteorological Services of the USA, Curaçao and the Cayman Islands, as well as several senior officials of the CMO, Météo-France and WMO. A copy of the signed Working Arrangements between the *Caribbean Meteorological Organization* and the *Meteorological Service of France* (Météo-France) is provided in **ANNEX III** of this Report.

(b) *The Caribbean Community Administrative Tribunal (CCAT)*

5.3 Council was informed by the CMO Headquarters that, for some years, institutions of the Caribbean Community, led by the Community Secretariat, had been examining areas of common interest and activities among the Community Institutions themselves. One such area under consideration resulted in a study of how the dispute settlement process was implemented in practice among Community institutions. This led to a proposal developed by the Caribbean Court of Justice (CCJ) and the CARICOM Secretariat for the establishment of a *Caribbean Community Administrative Tribunal* (CCAT). Council held a wide-ranging discussion on the proposed CCAT and the pros and cons of CMO's possible involvement to it.

5.4 Council took into account that most Community institutions were subject to privileges and immunities set out in host country agreements. The *Headquarters* of the Caribbean Meteorological Organization, located in Port of Spain, was subject to such an agreement with the Government of Trinidad and Tobago that contained well-defined privileges and Immunities. The Headquarters had a small non-unionized staff. Council recognized that there was a significant difference between this situation and that of the Caribbean Institute for Meteorology and Hydrology which, as an organ of CMO, is a unionized institution without a concluded Host Country Agreement in Barbados. Council noted that both the CMO Headquarters and the CIMH were in favour of participating in the CCAT once all legal aspects were made clear, noting that the proposed financial implications for the Organs of CMO were quite reasonable.

5.5 **The Council:**

Decided that all pending legal issues surrounding the draft proposals for the establishment of the *Caribbean Community Administrative Tribunal* (CCAT) be completed by the CCJ and the Caribbean Community Secretariat before Council would make a final decision on the matter;

Also Decided to reconsider the proposed membership after the CMO Headquarters had a clearly documented in-house dispute resolution mechanism in place.

- **Proposed** that the CMO Headquarters and the CIMH consult with the CCJ and CCS on all relevant issues and consult with the Council's Chair to help with a decision.

6. SPECIAL CMO AND WMO ISSUES

6.1 The Coordinating Director briefed the Council on the following special CMO and WMO-related issues in connection with the following topics:

- (a) Outcome/Highlights of the 2016 Executive Council (EC) of the World Meteorological Organization
- (b) WMO Integrated Global Observing System – Pre-Operational Phase
- (c) Implications of the new Geostationary Satellites for CMO Member States
- (d) The Global Framework for Climate Services (GFCS)
- (e) Important issues for the 16th session of WMO Commission for Basic Systems
- (f) Aeronautical Meteorological Services – Priority Activities
 - (i) Progress in the Implementation of Quality Management Systems (QMS)
 - (ii) Status of Aeronautical Meteorological Forecaster Qualifications
- (g) Disaster Risk Reduction and Regional Severe Weather Forecasts and Warning Systems
 - Tropical Cyclone Programme
 - Regional Coordination and Severe Weather Forecast Demonstration Projects
- (h) The 2017 session of the WMO Regional Association and the Members input into the 2017-2020 Strategic and Operational Plan

(a) Outcome/Highlights of the 2016 Executive Council (EC) of the World Meteorological Organization

6.2 The 68th session of the WMO Executive Council was held at the Headquarters of the World Meteorological Organization in Geneva from 15 to 24 June 2016. The Coordinating Director of the CMO was a member of the WMO Executive Council, having been first elected in 1999 and then serving as the Second Vice-President of the WMO for the maximum two terms between 2003 and 2011. The Coordinating Director was accompanied to this session by a team of advisers and experts, comprising *Dr. David Farrell*, Principal of the CIMH, *Mr Glendell De Souza*, Science & Technology Officer at the CMO Headquarters and *Mr John Tibbetts*, Director General of the Cayman Islands National Weather Service (BCT).

6.3 This 2016 session of the Executive Council was its first full session since the 17th WMO Congress of 2015. It began the implementation process for the programmes set out by Congress, particularly the seven priorities for the period 2016-2019, which are:

- (i) Further enhancement of WMO's **Disaster Risk Reduction** (DRR) programmes and activities to improve the accuracy and effectiveness of impact-based forecasts and multi-hazard early warnings of high-impact hazards;
- (ii) Implementation of the **Global Framework for Climate Services** GFCS, particularly for countries that lack adequate climate services;
- (iii) Strengthen the global observing systems through full and mandatory implementation of the **WMO Integrated Global Observing System** (WIGOS) and the **WMO Information System** (WIS);
- (iv) Improve the ability of National Meteorological Services to provide sustainable high quality **Aviation Meteorological Services**;

- (v) Improve operational meteorological and hydrological monitoring, prediction and services in **Polar and high mountain regions** (“Third Pole”);
- (vi) **Capacity Development** for developing and least developed countries aimed at the delivery of improved weather, water and climate predictions;
- (vii) Improving the **Governance of WMO** based on a strategic review of WMO structures, operating arrangements and budgeting practices.

6.4 The WMO Executive Council made several decisions that affect CMO Member States on the seven priorities above and other related matters, with greater details provided on some of these in the sections below. The Executive Council also held a dialogue with senior representatives of private weather enterprises devoted to cooperation between the public and private sectors. In the dialogue, the need to maintain the role of the National Meteorological and Hydrometeorological Services (NMHS) in Member States as the single authoritative source of warnings and an official source of weather, climate and hydrological information services was made clear, whilst the public sector was encouraged to collaborate with and harness the innovation and technology of the rapidly growing private weather-services sector.

6.5 At this 68th session of the Executive Council, the composition of the Executive Management structure of the Organization was completed with the appointments of *Dr. Elena Manaenkova* of the Russian Federation as the new Deputy Secretary-General and *Dr. Wenjian Zhang* of China as the new Assistant Secretary-General. Dr. Manaenkova had been the WMO Assistant Secretary-General since 2010, while Dr. Zhang was previously the Director of WMO’s *Observing and Information Systems Department* and of the *WMO Space Programme*.

6.6 The Council was informed of the decision of the 17th WMO Congress in 2015 to organize in 2017 or 2018, an *International Conference on Socioeconomic Benefits of Meteorological and Hydrological Services*, a decade after the “International Conference on Secure and Sustainable living: Social and Economic Benefits of Weather, Climate and Water Services” was held in Madrid, Spain in 2007. It was recommended that CMO Member States take note of this development and make efforts to participate as appropriate.

(b) WMO Integrated Global Observing System – Pre-Operational Phase (2016-2019)

6.7 Council would recall the substantial discussions on the *WMO Integrated Global Observing System* (WIGOS), which is an all-encompassing approach to the improvement and evolution of WMO’s global observing systems, and which is needed in all countries to consolidate progress in meteorological research, numerical modelling, and computer and communication technologies. Closely tied to WIGOS is the implementation of the new *WMO Information System* (WIS). WIGOS, together with WIS, would be the basis for the provision of accurate, reliable and timely weather, climate, water and related environmental observations and products by all Members and WMO Programmes, which would lead to improved service delivery. Both WIGOS and WIS were very essential to all technical and scientific activities of Meteorological Services in the Caribbean and worldwide.

6.8 Considering that the key initial building blocks of the WIGOS Framework were all in place by the end of 2015, the WMO Congress decided that WIGOS would move into a *Pre-operational Phase* from 2016 to 2019. This meant that the global level preparatory work had moved toward implementation activities at the regional and national levels. The goal therefore was to have WMO Member States and their partners benefit from a fully operational system from 2020.

6.9 The Inter-Commission Coordination Group on WIGOS (ICG/WIGOS) had developed a detailed plan for the WIGOS Pre-operational Phase. The plan was approved by the 68th Session of the Executive Council. Training on various WIGOS tools had already been provided to Member States to work for the full implementation of WIGOS. An example, for which CMO Members received training, was the tool called “OSCAR/Surface” that was to be used by the Member States to review/update/insert the metadata of their observing systems into the global database. It could also be used as a tool to support their own national activities.

(c) Implications of the new Geostationary Satellites for CMO Member States

6.10 Council recalled that, at its 55th session in 2015, there was discussion on the pending launch of the new Geostationary Operational Environmental Satellite - R Series (**GOES-R**). GOES-R was the next generation of geosynchronous environmental satellites that would provide atmospheric and surface measurements of the Earth’s Western Hemisphere for weather forecasting, severe storm tracking, space weather monitoring and meteorological research. The launch from Cape Canaveral in Florida was initially set for 4 November 2016, but had to be rescheduled along with all other November launches, due to the passage close to the Cape of *Hurricane Matthew*. The new launch date was then set for 19 November 2016.

6.11 Council was informed that the GOES-R series of satellites marked a massive technological advance in geostationary observations. National Meteorological Services would have unprecedented new capabilities that allow for a wide range of forecast improvements. Compared to the outgoing GOES system, the advanced instruments and data processing would provide:

- Three times more spectral information
- Four times greater spatial resolution
- Five times faster coverage
- Real-time mapping of total lightning activity
- Increased thunderstorm and tornado warning lead time
- Improved hurricane track and intensity forecasts.

6.12 Due to the data volume, faster coverage and a change in broadcast frequency, all Meteorological Services which had an existing direct readout satellite system would need to replace the complete system. Four pathways were explored to receive satellite data and/or imagery, namely:

1. Direct readout from the GOES ReBroadcast (GRB);
2. Various commercial data services via the Internet;
3. Imagery via GEONETCast-Americas - the western hemisphere component of a near real-time, global network of satellite-based data dissemination systems;
4. Satellite data and or imagery via National Oceanographic and Atmospheric Administration’s (NOAA) Product Distribution and Access website.

6.13 Council was informed that a Meteorological Service have a choice of systems to access satellite data and/or imagery based on the cost of the system, latency and resolution of the data. Personnel from the CMO Headquarters and the CIMH were part of WMO technical teams specifying the regional system needs and data sets to be provided by the satellite, and have been advising CMO Member States on their procurement and training needs.

(d) The Global Framework for Climate Services (GFCS)

6.14 The Council recalled the discussions on the implementation of the **Global Framework for Climate Services** (GFCS), which is a UN-led initiative spearheaded by WMO, to guide the development and application of science-based climate information and services in support of decision-making. The governing structure for the GFCS is an *Intergovernmental Board on Climate Services* (IBCS), which is accountable to the WMO Congress. The Management Committee of the IBCS is determined by the various WMO Regional Associations. Membership for North America, Central America and the Caribbean (WMO Region IV) is through the British Caribbean Territories (BCT), Canada, Costa Rica and the USA. *Dr. David Farrell* was the BCT/CMO representative on the Management Committee with *Mr Adrian Trotman* as the alternate.

6.15 The priority areas for the GFCS were (i) Agriculture and food security (ii) Disaster risk reduction, (iii) Energy (iv) Health and (v) Water. The GFCS was, at the moment, being implemented through eight global projects, many with an emphasis on developing countries and Small Island Developing States. One such national project in the Caribbean was "*Climate Services to Reduce Vulnerability in Haiti*". Several of the GFCS Projects involved or would involve the CIMH. For example, the "*Programme for Implementing the Global Framework for Climate Services (GFCS) at Regional and National Scales*" was funded by a grant from Canada to implement GFCS in the Pacific, the Caribbean, South Asia and the Arctic.

6.16 A very important contribution to the implementation of the GFCS was the global network of WMO *Regional Climate Centres* (RCC). In this regard, Council would recall that since 2013, the CIMH had been functioning as a *WMO Regional Climate Centre "in demonstration phase"* for the Caribbean (see paragraph 6.20). At its 55th session, the Council discussed the fact that a very important aspect with regard to the GFCS implementation was a WMO policy resolution on climate data. Council was provided with the full WMO resolution on this matter, in which all CMO Member States are required to comply.

(e) Important issues for the 16th session of WMO Commission for Basic Systems (CBS 16)

6.17 The Council was informed about the WMO **Commission for Basic Systems** (CBS) which is the WMO Commission with a leading role in the development, implementation and operation of integrated technical systems and infrastructure in support of all WMO Programmes and priority areas. CBS oversees the global development, implementation and operation of integrated systems for observing, data processing, data communication and data management. CBS guides the work of the World Weather Watch, Public Weather Services and WMO Space Programmes. The sixteenth session of the Commission was scheduled to take place in Guangzhou, China from 23-29 November 2016. CBS-16 would make decisions on strategies for future development of these programmes and on its working structure and it would make recommendations for amendments to WMO technical regulations.

6.18 Council was further informed that the *Global Data-processing and Forecasting Systems* (GDPFS) had been set up to prepare and make meteorological analyses and forecast products available to Member States in the most cost-effective way. The design, function, organizational structure and operations of the GDPFS was done in accordance with Members' needs and their ability to contribute to and benefit from the system. CBS, which oversees the GDPFS, would take decisions on the development of the seamless nature of the GDPFS, including recommendations for the Manual and Guide on the GDPFS. CBS, through the GDPFS, strongly supported the implementation of the *Global Framework for Climate Services* (GFCS). An integral component of the GDPFS, in this regard, was the network of WMO-designated **Regional Climate Centres** (RCCs).

6.19 The WMO RCCs were *Centres of Excellence* that create regional products including long-range climate forecasts that support regional and national activities and thereby strengthen capacity of WMO Members in a given region to deliver the best climate services to national users. RCCs were designated and controlled by the WMO *Commission on Climatology* (CCI) in conjunction with CBS and in close collaboration with the WMO Regional Associations. An important function of CBS sessions was therefore the completion of the process of WMO designation of RCC, after the consideration of CCI.

6.20 The Caribbean Meteorological Council recalled that since 2013, the CIMH had been functioning as a *WMO Regional Climate Centre "in demonstration phase"* for the Caribbean. The CIMH and the CMO Headquarters were satisfied that the Caribbean RCC in Barbados was ready for full operational designation. A formal application to WMO was made by the CMO Headquarters through the President of the WMO Regional Association IV, for this designation. After a series of reviews by CCI Expert Teams, the matter was scheduled to be brought to CBS-16 for a decision on the operational status and formal recognition of CIMH as an RCC for the Caribbean. As part of the process, CIMH had to demonstrate its capabilities to the full CBS-16 session. The CMO Headquarters, the CIMH and the entire region expected formal recognition to emanate from CBS-16.

(f) Aeronautical Meteorological Services – Priority Activities

6.21 The Caribbean Meteorological Council recalled that, for several years, it had examined the vital issue of Meteorological Services for the aviation sector. Aeronautical meteorology had always been vital for the efficiency, safety and environmental sustainability of civil aviation, and a major or even prime focus for many National Meteorological and Hydrometeorological Services around the world, including the Caribbean. A fundamental factor in the provision of meteorological services to the aeronautical sector was the implementation of a **Quality Management System (QMS)** for all types of services to civil aviation, imposed by the *International Civil Aviation Organization* (ICAO), in collaboration with the *World Meteorological Organization* (WMO). Closely tied to a QMS for aeronautical meteorological services was the requirement for **Staff Competency Standards and Training**.

6.22 The National Meteorological Services in most CMO Member States had been making some progress towards implementation of a QMS for aeronautical meteorology, but the overall pace of progress was still somewhat difficult to fully ascertain. During 2016, a number of Meteorological Services reported back to WMO on their compliance with staff competency standards and training for their Aeronautical Meteorological Observers (AMO) and Aeronautical Meteorological Forecasters (AMF). Those that had not yet done so were urged to inform WMO as soon as possible on their status of their implementation of the competency and qualification requirements, noting that the entry into force of the WMO standard on required qualifications for the Forecasters (AMF) was 1 December 2016.

6.23 The **Representative of Grenada** provided a testimonial of the usefulness of having quality management systems in place. The **Representative of Saint Lucia** indicated that funding had been provided for the implementation of QMS within its National Meteorological Service and a report and other documents were created. However, they had not attained sufficient proficiency to be ISO certified and the Representative was seeking the assistance of CMO to provide the impetus to reach certification before the deadline of 2018. The Council was informed that there was a process in which a Meteorological Service having implemented its QMS must inform WMO. The documents which must be sent to WMO are provided in **Annex IV**.

6.24 The CMO Headquarters agreed to act on the recommendation of the **Representative of Trinidad and Tobago**, based on the documents before the Council, that the CMO should prepare a document which made a case to have Meteorological Service equipped with satellite receiving equipment and that their QMS be ISO certified. This document should be delivered to the Ministers with responsibility for meteorology.

6.25 The **Representative of Montserrat** informed the Council that it was the function of the regulator to ensure compliance to the stated QMS. This compliance was a part of the safety oversight audit which must be completed by the regulator on the service provider.

(g) Disaster Risk Reduction and Regional Severe Weather Forecasts and Warning Systems

6.26 Council recalled that, at its 55th session in Belize, it had reviewed various aspects of disaster risk reduction, noting in particular that the reduction of disaster risks from hydrometeorological hazards, such as strong winds and severe storms, tropical cyclones, flash floods, storm surges, droughts, wild fires and landslides, will always be the primary priority areas for any National Meteorological and Hydrometeorological Service (NMHS). Council was therefore pleased to know that the aims of the *Sendai Framework for Disaster Risk Reduction 2015-2030*, which was adopted at the Third UN World Conference in Sendai, Japan in March 2015, were very much in keeping with regional programmes and activities in disaster risk reduction, not only within the meteorological community, but also with disaster management agencies and related stakeholders.

6.27 Council was aware that activities within the WMO *Tropical Cyclone Programme* (TCP) were among the most important to the Caribbean and other tropical basins. This was recognized by the Sendai Framework, in which people-centred early warning systems of tropical cyclones and related activities were essential to further reduce the disaster risk associated with the tropical cyclones. The most critical regional activity under the TCP is the WMO *Hurricane Committee*, serving the *North Atlantic and Caribbean Basin*. The Hurricane Committee has at its core, *the US National Hurricane Center*, which was one of WMO's primary *Regional Specialized Meteorological Centres* (RSMCs) for tropical cyclones. Most Meteorological Services in CMO Member States were represented on the Hurricane Committee which, along with the relevant regional and national disaster management community, worked continuously towards the reduction of disaster risks by tropical cyclones, particularly in terms of loss of lives.

6.28 It was recognized that there would always be areas that could be improved in any warning system. This was particularly true when one considered that many episodes of severe weather and thus potential natural disasters were not always the result of a tropical cyclone. In November 2015, Council therefore endorsed a proposal being pursued by CMO and partners, to implement a WMO **Severe Weather Forecasting Demonstration Project** (SWFDP) in parts of the Caribbean, with an aim, among others, to foster greater collaboration among National Meteorological Services and Disaster Management Agencies.

6.29 Following the Caribbean Meteorological Council's endorsement in 2015, the CMO Coordinating Director discussed the concept with the WMO Region IV Management Group in January 2016, followed by wide-ranging discussions with the RA IV Hurricane Committee in April, which provided detailed guidance and expert opinions to guide the Management Group in its future decisions on the SWFDP proposal. In June 2016, the Management Group met in Geneva on the margins of the 68th session of the WMO Executive Council. The Management Group agreed that the SWFDP should be pursued with WMO, with the focus on the Eastern Caribbean islands and Haiti, in the first instance.

6.30 In August 2016, Mr Juan Carlos Fallas of Costa Rica, President of WMO Regional Association IV, asked the Secretary-General to implement the SWFDP. Subsequent to the Secretary-General's endorsement, the WMO Secretariat worked to organize the first meeting of the Expert Group in Martinique in December 2016.

(h) The 2017 session of the WMO Regional Association and the Members input into the 2017-2020 Strategic and Operational Plan

6.31 The WMO Regional Association IV (North America, Central America and the Caribbean) was scheduled to meet for its 17th Session on 27-31 March 2017 in San José, Costa Rica. Sessions of the Region Associations were held every four years. The Association's task was to set about the implementation of the regional components of the global programmes set in motion by the WMO Congress.

6.32 In preparation for the session in 2017, the Region had been asked to consider the following, which were under consideration as the WMO Secretariat and the RA IV *Task Team* on Strategic Operational Planning (SOP TT) begin work on the Regional Operating Plan.

A. Confirm/comment on the **five priority areas** agreed to during and outlined in RA IV-16:

- Global Framework for Climate Services (GFCS);
- Aviation meteorological services;
- Capacity Building for the developing and least developed countries;
- Implementation of the *WMO Integrated Global Observing System (WIGOS)* and the *WMO Information System (WIS)*;
- Disaster Risk Reduction (DRR);
- Maritime Meteorology (included by decision of a RA IV MG meeting).

B. Confirm/comment on the **three highest priorities** for the Region:

- Implementation of the WIS/WIGOS and necessary improvement of the GTS as part of WIS;
- Implementation of the GFCS, including but not limited to enhancement and operation of the RA IV RCC network and RCOFs;
- Implementation of aeronautical meteorological services enhancements in coordination with the WMO Commission on Aeronautical Meteorology (CAeM) and upgrading of service delivery capability in other application areas, including marine meteorological services.

6.33 **The Council:**

- (i) **Noted** the key issues emanating from the 2016 session of the Executive Council (EC) of the **World Meteorological Organization**;
- (ii) **Re-emphasized** the mandatory nature of WIGOS and WIS implementation and to **urged** CMO Member States to ensure that their NMHSs actively participate in the Pre-Operational Phase of WIGOS in the 2016-2019 period;
- (iii) **Urged** Member States to take **urgent action** to implement its choice of system to access the data and/or imagery from the new GOES-R weather satellite;
- (iv) **Expressed** its continued strong support for the *Global Framework for Climate Services* and to urge Member States to actively participate in GFCS projects and activities as appropriate;

- (v) **Also noted** the important issues for the 16th session of WMO *Commission for Basic Systems*(CBS-16) and **urged** as many CMO Member States as possible to attend;
- (vi) **Further noted** the expected formal designation of the CIMH as a WMO Regional Climate Centre (RCC) for the Caribbean, and the need for it to **provide** the CIMH with all the necessary support required to undertake this mandate;
- (vii) **Further urged** Member States to review and complete any outstanding matters in their implementation of the ICAO-mandated *Quality Management System* (QMS) for meteorological services to aviation, including matters to do with staff competency and qualification standards;
- (viii) **Strongly supported** the implementation of a WMO *Severe Weather Forecasting Demonstration Project* for parts of the Caribbean region;
- (ix) **Also Urged** NMHSs of Member States to contribute to the preparation of and to participate in the 2017 meeting of the WMO Regional Association IV for North America, Central America and the Caribbean.

7. FINANCIAL REPORTS

7(a) Status of Refundable Balances

7.1 The Council was presented with the current status of the CMO Member Refundable Balances held by the CMO Headquarters Unit. These refunds were the result of the annual contribution to the WMO, which were paid by the CMO Headquarters on behalf of the British Government for its British Caribbean Territories (BCT). A percentage of this amount was refunded to the CMO by the UK on receipt of the Audited Statement of Accounts from the CMO Headquarters. The balance as of 21 October 2016 in TTD was as follows:–

<u>BRITISH CARIBBEAN TERRITORIES (BCT)</u>			<u>CMO MEMBERS OF WMO</u>		
	<u>TTD</u>	<u>USD</u>		<u>TTD</u>	<u>USD</u>
Anguilla	70,585	10,439	Antigua & Barbuda	7,571	1,120
BVI	59,551	8,807	Barbados	12,476	1,845
Cayman Islands	314,160	46,463	Belize	11,108	1,643
Montserrat	21,373	3,161	Dominica	15,120	2,236
Turks & Caicos Islands	144,256	21,335	Guyana	6,869	1,016
			Jamaica	162,98	124,104
			Saint Lucia	4,964	734
			Trinidad and Tobago	<u>132,512</u>	<u>19,598</u>
	<u>609,925</u>	<u>90,205</u>		353,601	52,296
TOTAL		TTD 963,526			USD 142,501

7.2 By Members' consent, these funds are held by the CMO Headquarters Unit to assist Members in attending important Met/Hydro Meetings, and also to purchase spares. They have been used very effectively in pursuit of these objectives, including during the year 2016. Council was informed that a small amount, which had been shown in previous years as assigned to St. Kitts and Nevis from the period when that State was a part of the BCT, had been applied to the contribution of St. Kitts and Nevis to the Organization and removed from the Refundable Balances.

7.3 The amounts shown in paragraph 7.1 were first calculated for accounting and auditing purposes. However, as the BCT contribution to WMO was included in the individual CMO Member State's contribution to the CMO Headquarters, there was only a disbursement in cases where countries made contributions on a regular basis, so that the actual amount available for drawdown by those States was linked to their level of arrears to the Organization. In keeping with a decision made during the 47th session of the Council (2007), each session of the Council is provided with the actual amount of refundable balance that was available for use by each Member State, as shown in the table below:

<u>BRITISH CARIBBEAN TERRITORIES</u>	USD * BALANCE	USD AVAILABLE FOR USE
Anguilla	10,439	10,439
BVI	8,807	8,807
Cayman Islands	46,463	46,463
Montserrat	3,161	3,161
Turks and Caicos Islands	21,335	21,335
	90,205	90,205
<u>CMO MEMBERS OF WMO</u>		
Antigua & Barbuda	1,120	-
Barbados	1,845	1,845
Belize	1,643	-
Dominica	2,236	-
Guyana	1,016	1,016
Jamaica	24,104	5,000
Saint Lucia	734	734
Trinidad and Tobago	19,598	19,598
	52,296	28,193
TOTAL	142,501	118,398

* USD equivalent calculated at rate of exchange at October 21, 2016

7.4 **The Council:**

Noted the status of the Refundable Balances Account, as presented.

Requested the CMO Headquarters to inform the next session of the Council of the details of the refund by the British Government and the mechanism for redistribution to Member States.

7(b) CMO HQ Auditor's Report

7.5 The 2015 audited accounts of the CMO Headquarters Unit were presented to Council by the Finance and Administrative Officer. The accounts for fiscal 2015 were audited by the Auditor General's Department during May 2016.

7.6 Council was very pleased to note the unqualified opinion of the Auditor General on the Financial Statements of the CMO Headquarters.

7.7 The Council:

Noted, Reviewed and **Accepted** the audited Statement of Accounts for 2015.

7(c) Statement of Contributions and Arrears (CMO HQ & CIMH)

7.8 The *Caribbean Meteorological Council* (CMC), as the Governing Body of the Caribbean Meteorological Organization (CMO), had been making annual appeals to Member States for the rectification of the state of arrears of contributions to both main arms of the CMO, namely the *Headquarters Unit* and the *Caribbean Institute for Meteorology and Hydrology* (CIMH). Delays in remittances, and non-payment by some Member States, negatively impact the implementation of programmes and activities.

7.9 The pleas of previous sessions of the Council for Member States to make regular contributions had not gone unheeded by all. Over the last few years, some ten Member States had routinely made their full annual contributions to the CMO Headquarters whilst an increasing number of Member States had been making an effort to liquidate their arrears. This illustrated that there had been a slow but steady improvement in the remittance of contributions to the CMO Headquarters. In 2015, ten Member States paid their annual contribution in full and this accounted for 75% of the total contribution due for 2015, whilst two Member States made small payments towards their arrears. By October 2016, only three Member States had failed to make any contribution whatsoever towards the 2016 budget of the CMO Headquarters.

7.10 The Auditor General of Trinidad and Tobago has continued to make reference to the state of arrears in the Report on the Financial Statements of the CMO Headquarters Unit (as seen in Agenda Item 7(b)). In 2014, by virtue of the persistent non-payment by some Member States and the absence of any formal plans to liquidate the arrears, contributions in arrears for eight or more years were reclassified as non-current assets, in accordance with International Financial Reporting Standards (IFRS). In 2015, all contributions in arrears in excess of one year were classified as non-current assets, whilst only contributions in arrears for the current year were classified as current assets.

7.11 In the case of the CIMH, Council was informed that during 2016, CIMH received approximately 47 percent of the approved budget and approximately four percent of the outstanding arrears brought forward at the 1st January 2016.

7.12 The **Principal Representative of Barbados** indicated that despite the existing fiscal situation, Barbados was committed to eliminating its arrears to the Organization in a short time period.

7.13 The Council:

Reiterated an earlier call for Member States to make every effort to pay their full contribution for the current year, while setting up an internal mechanism to pay off arrears.

7(d) Policy on Radar and Rawinsonde Funds

7.14 The Council was presented with a non-routine financial document on proposed arrangements for the utility of certain funds held by the CMO Headquarters. These funds were in connection with the **Caribbean Rawinsonde Network** (CRN) and the **CMO Weather Radar Network**, which were established in some CMO Member States and which form part of large regional and global networks. These rawinsonde stations...or upper-air stations...monitor the characteristics of the upper atmosphere and thus, collectively, allow for small-scale and large-scale analyses of the upper atmosphere. The CMO Member States that operate upper-air stations within this network are Belize, the Cayman Islands, Jamaica, Barbados and Trinidad and Tobago. On the other hand, the CMO Weather Radar Network was currently made up of six radars located in Belize, the Cayman Islands, Jamaica, Barbados, Trinidad & Tobago and Guyana.

7.15 Council was reminded that it had always recognized that although these meteorological facilities, rawinsonde and radar, are operated by the above specific CMO Member States, the benefits accrue to all Member States since the essential data provided by these systems are used, **directly and indirectly**, by all regional Meteorological and Hydrometeorological Services, regardless of size, in their daily provision of weather services and warnings. As a result of this philosophy, the Council designed the Contribution Formula for Member States of the Organization to include a measure of contribution towards the operation of the *Caribbean Rawinsonde Network* and the *CMO Weather Radar Network*. These contributions are embedded into the *CMO Headquarters budget* (see Agenda item 8(a)) and have been periodically disbursed by the CMO Headquarters to those States that operate the facilities **to assist in their operational upkeep**.

7.16 Over the years, both the CMO Headquarters and the CIMH had been challenged by declining levels of regional contributions to support their approved budgets, to the extent that the contributions to the CMO Headquarters had not reached an "acceptable" level that would allow regular disbursement of funds held for the Networks. Consequently, irregular disbursements had been made to only a few Member States. In the absence of regular disbursements over a significant period, the funds actually held for each of the current recipient Member States (Belize, Cayman Islands, Jamaica, Barbados and Trinidad & Tobago for CRN and Belize, Jamaica and Trinidad & Tobago for Radar) had accumulated to an amount that would thus make a meaningful contribution to its **original purpose of assisting in the operational upkeep of the systems**. Council was informed that the CMO Headquarters would therefore resume some level of disbursement to Member States as far as the available resources would permit.

7.17 The CMO Headquarters requested those Member States concerned to establish formal internal procedure to make these funds available for use by the local Meteorological Service for the purpose intended, so that these funds would not simply be deposited into "general revenue" and "lost" to the local Service.

7.18 **Council:**

Supported the proposal of the CMO Headquarters and **Urged** Member States concerned to set up internal procedures that would enable funds disbursed for the Networks to be used for the intended purpose;

Reaffirmed that contributions by other Member States to the operational upkeep of the networks were for the common good;

Encouraged all Member States to increase their efforts to make regular and full payments to the budget of the CMO Headquarters, thereby allowing for more meaningful disbursements of allocated Network funds.

8. CMO BUDGETS (Headquarters Unit, CRN and Radar, CIMH)

8(a) CMO HQ Budget Estimates for 2017

8.1 The Council recalled that over the previous seven years, 2010 – 2016, it had made budgetary provisions for the implementation of some of its earlier decisions that had been held in abeyance because of the prevailing economic situation in the Caribbean. The aim of the Council was to ensure that the CMO Headquarters remained in a position to guide the region's involvement in the increasing number of international weather and climate activities that impact Member States.

8.2 The prevailing economic situation in the Caribbean has been the single most influential factor, followed by persistent shortfalls in the annual contributions received from Member States. Over the previous four years 2013 – 2016, the shortfall averaged between 20% and 25% of the approved annual budget, but the very late receipt of many contributions had been the major restricting factor, as shown in Agenda Item 7(c).

8.3 Council was informed that, in the fourth quarter of 2015, Trinidad and Tobago, the home of the CMO Headquarters Unit, experienced its first significant decline for many years in the value of the local currency. This had a negative impact on the operating expenses of the Headquarters Unit since its two major elements of costs were tied to foreign currencies. Because of the link to the Caribbean Community system, base salaries were denominated in East Caribbean dollars (XCD), while foreign travel was closely linked to the United States dollar (USD).

8.4 The 2017 budget proposal for the CMO Headquarters Unit provided for continued declines in the exchange rates for both the East Caribbean dollar (XCD) and the United States dollar (USD), based on trends observed during 2016, as well as regional and international banking projections. With improvements to the level and timing of contributions to the Organization from Member States during 2016, the Headquarters Unit hoped that the position of *International Affairs Officer* could be filled in the latter half of 2017 or early in 2018 to ensure that it was in a better position to deal with the many major regional and global priority activities that the Organization must be involved in for the benefit of the region.

8.5 The total estimates presented to Council for 2017, upon which **the contributions from Member States were based**, was **TTD x,xxx,xxx.xx**, or the equivalent of **USD xxx,xxx.xx**. This TTD figure represented an increase of 4.7% in comparison to the 2016 figure of **TTD x,xxx,xxx.xx**, but a decrease of 0.9% in comparison to the USD equivalent of **USD xxx,xxx.xx** because of the 8.6% depreciation of the TTD against the USD. Council took note of the position of the Delegate of Trinidad and Tobago, which indicated that it had a mandate from its Ministry not to support a budget increase.

8.6 Council discussed the fact that the current employment contract for the Coordinating Director of the CMO Headquarters would come to an end in April 2018 with issues pertaining to recruitment of a successor addressed in Agenda Item 9. Therefore, in 2018, the Organization would be obliged to meet certain one-time costs associated with repatriation and other end-of-contract obligations to the incumbent. Although the total costs could not be quantified at the time and no provision had been made in the budget for 2017, it was recommended that consideration be given to spreading these costs over two years (2017 and 2018) so as to minimize the impact on Member States in 2018. Council considered an alternative option of reassigning any unused operating funds towards end-of-contract issues for the Coordinating Director.

8.7 **Council therefore:**

Approved the budget of **TTD x,xxx,xxx.xx, equivalent to USD xxx,xxx.xx**, as shown in paragraph 8.5 above, and as detailed in **ANNEX V**, with Member contributions as indicated in **ANNEX VI**; having noted the statement from Trinidad and Tobago that it could not approve any budgetary increase;

Agreed with the proposal to reassign any unused operating funds towards end-of-contract issues for the Coordinating Director;

Also Approved exceptions to the decision taken at CMC55 with respect to the payment of contributions in United States dollars to allow for Trinidad and Tobago's contribution to the CMO Headquarters Unit to be payable in Trinidad and Tobago dollars and for Barbados' contribution to the CIMH to be payable in Barbados dollars;

Urged Members to give priority to meeting annual contributions, through quarterly, bi-annual or more frequent part-payments if necessary, and to make every effort to pay off arrears to the Organization;

Reminded Members that when forwarding their contributions to CMO Headquarters by bank transfers, to deposit funds into the account noted on the invoice;

Also Urged Members to inform the CMO Headquarters of their transfer of funds, including the date, amount and currency, in order to address difficulties in properly identifying the origin of funds within the banking system;

Further Agreed that the CMO Headquarters would undertake a draft revision of the CMO Contribution Formula in 2017 by producing one version with the existing Member States of CMO and another version that would take into account, a possible increase in membership of the CMO, as described under Agenda Item 4.

8(b) CIMH Budget Estimates for 2017

8.8 The Chairman of the Board of Governors informed the Council that the CIMH presented the Estimates of Expenditure for the financial year 2017 to the Board of Governors for endorsement. The total amount requested was BBD **x,xxx,xxx.xx** or USD **x,xxx,xxx.xx**. This represented an increase of 1.07% over the estimates approved for FY2016. Considering the importance of the work that the CIMH had been doing on behalf of Member States, the Board decided to recommend to Council that the requested budget estimates be approved.

8.9 Council noted that, notwithstanding the proposed increase of 1.07%, Trinidad and Tobago had indicated that it could not approve any budgetary increase.

8.10 **Council** held further deliberations on the proposal from the Board and:

Approved the Estimates of Expenditure for 2017 of **BBD x,xxx,xxx.xx** or **USD x,xxx,xxx.xx** for the CIMH, as presented by the Board of Governors. Member States' contributions based on that figure are indicated in **ANNEX VI**.

9. SUCCESSOR TO THE CMO COORDINATING DIRECTOR

9.1 A document on this topic was presented to the 56th session of the Caribbean Meteorological Council to initiate its deliberation on the succession process for the post of the Coordinating Director of the Caribbean Meteorological Organization (CMO). Council recalled that, at its 54th session in Kingston, Jamaica (November 2014), after it had renewed his contract to 30 April 2018, the incumbent Coordinating Director informed the Council of his intention to demit office in 2018 and that he would propose the process for selecting a successor during the period of that new contract. The document presented was therefore in keeping with that commitment.

9.2 The Coordinating Director presented proposals intended to ensure the widest and most comprehensive approach possible towards a very efficient selection process. The document included issues of job description, process, advertisement, nomination committee establishment and timing, as well as suggestions with respect to involvement in WMO matters. The Council decided that it would hold its discussions on this matter in-camera, noting that the intention of this decision was to maintain a protocol of allowing for full and open discussion. Council made particular mention of the excellent contributions of Mr Tyrone Sutherland as Coordinating Director, his interest in and passion for the CMO and his care for the people of the region. It was recognized that the succession plan proposed so long in advance was a demonstration of this and that he should be commended. Council decided that, in light of the generous and thoughtful prior notice and sound advice that the incumbent had given, the process of the selection and appointment of a successor should begin in short order with the clear objective of having successor identified and selected at the 57th Session of CMC in November 2017.

9.3 In its discussions, the Council recognized that the previous and current Coordinating Directors of CMO both functioned, at the request of the Government of the United Kingdom, as Permanent Representative of the *British Caribbean Territories* (BCT) with WMO. In those capacities, they had both been long-serving elected members of the WMO Executive Council, during which time they had both also been elected for terms as Vice-Presidents of WMO. Therefore, Council agreed with the recommendation that every attempt be made to retain this seat on the WMO Executive Council, recognizing the importance to all CMO Member States and the region as a whole. It decided that a period of overlap of six (6) months between the selected candidate (Coordinating Director Designate) and the outgoing Coordinating Director should be aimed at, with that period to include the WMO Executive Council in 2018 and, if feasible, the 58th session of the Caribbean Meteorological Council itself.

9.4 Taking the above into account, it was decided that the Council Chairman would seek the advice of the CARICOM Secretariat on the proper procedures and the level of involvement of the incumbent. **Council decided** that the process for selecting a successor to the Coordinating Director would be carried out in accordance with the steps, guidelines and timescales contained in **ANNEX VII**.

10 ANNUAL MEETING OF THE DIRECTORS OF METEOROLOGICAL SERVICES

10.1 The Caribbean Meteorological Council considered the Report of the Annual Meeting of Directors of Meteorological Services, held on 9 November 2016, presented by Mr Glendell De Souza, Science and Technology Officer of the CMO Headquarters. The Report provided the Council with the following summary of the deliberations and recommendations of the Directors on a wide range of technical and scientific topics, which would have an impact on future costs, policy decisions, training opportunities and service delivery. Some of the following were also addressed separately in more detail by the Council under other agenda items.

1. *Training*

The Meeting was informed that the Cave Hill Campus of the University of the West Indies had mandated that all faculties would have to transition from a 4-credit course system to that of a 3-credit system. This implied that there would be a loss of one lecture hour per week per meteorological course, which would have the effect of increasing the workload on both lecturers and students.

2. *Satellite Matters - Post GOES-R Launch*

Meteorological Services of CMO Members States, which at the time had direct-readout satellite systems, would need to have their systems replaced in order to access satellite data and imagery after the launch and testing period for the satellite from the GOES-R series which could be stationed at 75°W longitude. Various options were articulated to the Meeting with varying costs which could be used a Meteorological Service to procure satellite data or imagery, based on its needs.

3. *WIS and WIGOS in RA IV*

The Meeting was reminded that Permanent Representatives with the WMO must nominate WIS and WIGOS focal points and ensure that the focal points complete the review and update each of their country's metadata on the GISC portal and OSCAR/Surface facility; otherwise the observations, forecast and other information would be undiscoverable as WIS and WIGOS continued their evolution.

4. *The Impacts of Weather During 2016*

The Meeting was reminded of the damage and loss of lives during severe hydro-meteorological events in the region, including during the passage of tropical storms and hurricanes. *Hurricane Earl* slammed into Belize in August. There were no reported deaths, but enormous damage occurred with the greatest impact to the agricultural sector. While in its early development stage, *Tropical Storm Matthew* cause the death of one person in St. Vincent and the Grenadines and a severe weather event which caused flash flooding and landslides in St. Vincent and the Grenadines on 9th November caused the death of two children.

10.2 **The Council:**

- i. **Noted** and **amended** as necessary the Report of the 2016 Meeting of the Directors of Meteorological Services;
- ii. **Urged** Members to properly update or implement an Early Warning System to prevent the loss of lives and mitigate the damage to property.

11 **CMO WEATHER RADAR NETWORK**

11.1 Council recalled that the CMO Weather Radar Network comprised of six S-band Doppler radars, namely, the US-made radar in Jamaica, installed in 1999; and five German-made radars in Belize, Barbados, the Cayman Islands, Guyana and Trinidad and Tobago. This network, along with other pre-existing radars in other Caribbean islands, provided the Caribbean with a modern sophisticated tool that complements other surface, upper-air and satellite-based weather observing platforms as part of the regional early weather warning system.

11.2 The radars in the CMO Member States have a significant impact on weather surveillance, forecasts and warnings in the Caribbean. The reliance on the system had been growing within and outside of the region and, under the auspices of the *World Meteorological Organization (WMO)*, plans had been in place to integrate, in stages, the data from these radars with all other radars in the entire Caribbean basin as part of a larger weather surveillance system. For a CMO-wide or the larger Caribbean-wide radar network to properly function, all radar-operating States need to work steadily to ensure reliability of their individual radar operations.

(a). Status of CMO Radar Network Operations

Operational Status

11.3 Council was informed that in terms of radar availability 2016 was generally a better year than 2015. The radars operated quite steadily throughout the year, with some short periods of downtime, primarily for software issues or issues with other support systems. Although its radar was functional, Barbados also had a short period of unavailability of radar data when the Meteorological Office moved to a new location at the Grantley Adams International Airport, resulting in a reconfiguration of data transmission from the radar site to the Met. Office. Similarly, Guyana also had an interruption of external communications in the latter part of the year that prevented the transmission of radar data. The radars were all available for the main weather features of the year, such as *Hurricane Earl* in Belize and *Tropical Storm/Hurricane Matthew* over the Windward Islands and later Jamaica.

11.4 Over the past two years, Council had been briefed about a project underway in Jamaica that would include the replacement of the existing radar, which had been installed in 1999, with a new radar. This was likely to commence in 2017. The CMO provided some preliminary technical assistance to guide the Jamaica Meteorological Service in its early decision-making. The Council was briefed by the **Representative of Jamaica** on the current status of that project, and the need to source other funding mechanisms if the existing radar was to be used in the future further to east of the present radar location.

Website Access and Usability

11.5 All six Meteorological Services operated Websites that provided access to their radar imagery, as follows:

Belize:	http://www.hydromet.gov.bz/
Cayman Islands:	http://www.weather.gov.ky/
Jamaica:	http://www.metservice.gov.jm/
Barbados:	http://www.barbadosweather.org/
Trinidad:	http://www.metoffice.gov.tt/
Guyana:	http://www.hydromet.gov.gy/

In addition, the CMO Headquarters website provided a link to all these sites through <http://www.cmo.org.tt/links.html>.

11.6 The Council noted that the web pages of the States that operate radars carry their own radar imagery. However, the Council referred to the fact that radar information from all radars in CMO Member States are for the use of all States and not just for the States that operate them. It pointed out that the radars, in almost all cases, cover several neighbouring States and that the entire Eastern Caribbean island chain, for example, was covered by several radars. Council had thus requested the Meteorological Services in those States that are covered by a neighbouring radar to provide links on their own Websites to the imagery from the radar or radars that cover their States. A check by the CMO Headquarters indicated that only the Meteorological Service in Grenada provided a link to the Eastern Caribbean radar composite loop from the Barbados Meteorological Service Website.

(b). Operations of the Regional Radar Composite and other Regional and International Obligations

11.7 Over the last two years, the CMO Headquarters made considerable efforts, in collaboration with the radar sites and WMO's *Global Telecommunications System (GTS) Internet File Service (GIFS)* server in Washington, DC., to ensure that data from all the radar sites have been in the correct format and transmitted in a timely manner for ingestion into regional radar composites. There have been two regional radar composites in operation. The first was the composite system generated at the French Meteorological Service (Météo-France) centre in Martinique, which was developed through an agreement between Météo-France and the CMO. The Météo-France composite was supposed to include radars from Belize, the Cayman Islands, Jamaica, Guadeloupe, Martinique, Barbados, Trinidad, Guyana and French Guiana. However, the CMO Headquarters was informed that Météo-France had considerable difficulties in the last year in retaining technical support for its composite.

11.8 The second composite was developed separately by the Barbados Meteorological Service. The Barbados-generated composite has become the more widely used composite regionally, including by the US National Hurricane Center in Miami, as well as airlines operating in the region. Radar composites had become a regional priority under the **WMO Integrated Global Observing System (WIGOS)**.

11.9 The CMO Headquarters had been asked by the WMO Region IV management and by the WMO WIGOS Project Office in Geneva about the sustainability of the Barbados-generated composite, since WIGOS entered its Pre-operational phase in 2016. As discussed during CMC55, the Barbados composite was not yet the subject of any formal arrangement or long-term commitment by Barbados, which was necessary for it to be part of WIGOS. The CMO Headquarters had indicated that this excellent effort by the Barbados Meteorological Service should have firm committed national support and become an official service provided by Barbados. The **Advisor to the Representative of Barbados** indicated that there was one person committed who had been working with Mr Sabu Best.

11.10 Council noted that additional weather radars would be installed by other regional States over the next few years that would increase coverage over some parts of the region and provide coverage in areas not currently covered by radars. The Bahamas Meteorological Service had developed a new radar project that would cover the entire Archipelago, as well as the Turks and Caicos Islands. Initial discussions between the Bahamas and CMO Headquarters suggested that once these radars materialized, consideration would be given to integrating them into the regional composite.

(c) Operational Radar Working Group

11.11 The 55th session of the Council (2015) discussed the idea that the CMO Member States operating radars could benefit from a working consultative process that would enable radar technicians and related IT personnel to share experiences and technical information in order to minimize individual radar down-time that would keep network operations at an optimum. Such a mechanism would also assist management in planning preventative and other maintenance issues, and would enable management to be in a better position to meet their current and future regional and international obligations with regards to the provision of radar data.

11.12 The CMO Headquarters had proposed to the 55th session of the Council (2015) that it would establish a **CMO Operational Radar Working Group** to carry out these tasks. Terms of Reference were provided. Council approved the proposal to establish the *Operational Radar Working Group*. It had been planned to establish the Working Group in 2016, but for practical reasons, the aim was to organize the first meeting in 2017.

11.13 The Council:

- (i) **Noted** the status of the weather radars in the CMO Member States, including Jamaica's plan for radar replacement;
- (ii) **Reiterated** its call for the Meteorological Service operating radars to fully publicize their Websites; for all Services to provide a link on their Websites to relevant radars and composite loops, and to work towards the greater use of live radar data by regional television stations;
- (iii) **Urged** Barbados to make a formal long-term commitment to the regional radar composite that it developed and to ensure its availability for contribution to the regional components of the *WMO Integrated Global Observing System (WIGOS)*.

12. OTHER PROJECTS AND PROPOSALS

(a) Finland Initiative - COPS - Complementary Project to the SIDS - Caribbean Project and SHOCS I and II

12.1 Council recalled that between the years 2001 and 2004, the Government of Finland funded the SIDS-Caribbean Project titled "*Preparedness to Climate Variability and Global Change in Small Islands States, Caribbean Region*". This was followed by a *needs assessment and feasibility study project* entitled "***Strengthening Hydrometeorological Operations and Services in the Caribbean (SHOCS)***". The Project was implemented by the Finnish Meteorological Institute (FMI) under the direction of the *Association of Caribbean States (ACS)*, in collaboration with WMO and CMO. The CMO served as a member of the Project Board, along with the ACS, WMO, the Caribbean Disaster Emergency Management Agency (CDEMA) and FMI.

12.2 The feasibility phase of SHOCS, called SHOCS-I, was implemented between 2010 and 2012 with a budget of 0.5 million Euros. A Phase II, called SHOCS-II, commenced in 2013 with a budget of one Million Euros. The CMO Member States that participated in SHOCS-II are Antigua & Barbuda, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts & Nevis, Saint Lucia and St. Vincent & the Grenadines. The other States that participated are Cuba, the Dominican Republic, Haiti and Suriname. Regrettably, Barbados and Trinidad & Tobago, which participated in the early phases of SHOCS-I, were no longer eligible for assistance in SHOCS-II due to their development ranking by the *Organisation for Economic Co-operation and Development* (OECD), which was used by the Government of Finland. The beneficiaries of the Project have been the National Meteorological and Hydrological Services (NMHS) and Disaster Management Agencies of the above States, along with the CIMH as a regional institution.

12.3 Council discussed the details of SHOCS-II, which came to its close at the end of 2015. The Key outcomes of this project can be summarized as follows:

- Increased Capacity in the Caribbean on the development of methods for Multi-hazard Early Warning Systems and Disaster Risk Reduction:
 - The network of SmartMet weather forecast workstations and production system was established, by installing the system in 8 new countries in the region;
 - SmartAlert tool for issuing and disseminating weather warnings was piloted in three countries.
- Increased capacity in developing Quality Management Systems (QMS).
- Increased capacity in communicating the weather to large audiences and TV weather presentation:
 - Installation of TV weather presentation software in INSMET Cuba;
 - A TV weather presentation workshop was held for participants from 16 countries.
- Increased amount and quality of the observation data:
 - Spares for non-working and old weather observation sensors were provided to 11 countries.

12.4 The final meeting of the SHOCS-II Steering Committee, combined with a workshop with representatives of participating countries, took place in Barbados on 18 November 2015. It drew conclusions from the results of the SHOCS-II phase of the Project and discussed the identified priorities for capacity building during a continuing phase, which was expected to begin late in 2016 or early 2017. This continuing phase was being called the **Complementary Project to the SIDS - Caribbean Project and SHOCS I and II (COPS)**.

12.5 In this regard, Council was informed that there would be approximately 130,000 Euros available for COPS. These funds allocated by Finland were actually residual funds from the SIDS Caribbean Project, held in trust by WMO. With these limited funds, COPS would continue directly from the activities of SHOCS II, among others, to ensure the sustainability of the systems installed in the region. It was agreed that consideration would be given to some radar training during COPS. It happened that Belize had organized a training event for radar technicians in April 2016, with training experts from its German radar supplier. Belize offered to make training slots available to technicians from the other radar sites in the CMO Radar Network. Therefore, the CMO Headquarters organized for COPS to provide funds to enable two radar technicians from Trinidad and Tobago to participate in that Belize training, despite the fact that Trinidad and Tobago was technically no longer a recipient of assistance from Finland.

(b) Other CMO Project Proposals/Involvement

(i) Regional component of the WMO Integrated Global Observing System (WIGOS)

12.6 Council noted that, under *Agenda Item 6*, it was provided with the latest stage for implementation of the Region's component of the *WMO Integrated Global Observing System* (WIGOS). WIGOS is an all-encompassing approach to the improvement and evolution of WMO's global observing systems. The implementation of WIGOS is very closely related to the **WMO Information System** (WIS), both of which are essential to all technical and scientific activities of Meteorological Services in the Caribbean and worldwide. Council noted the fact that the CMO Headquarters plays a major international and regional role in the implementation of WIGOS and WIS. The CMO Coordinating Director was one of two WMO Executive Council's Focal Points on the *Inter-Commission Coordination Group on WIGOS* (ICG-WIGOS), which guides the global WIGOS activities, while *Mr Glendell De Souza* of the Caribbean Meteorological Organization Headquarters was the Regional Task Team leader for WIGOS and WIS. In this regard, regional activities had increased from 2016 onward as WIGOS entered its **Pre-operational Phase (2016–2019)**.

(ii) Severe Weather Demonstration Project

12.7 Under *Agenda Item 6*, Council was also informed of WMO plans within the region to introduce a *Severe Weather Forecasting Demonstration Project* (SWFDP) for a portion of the region. The regional conceptual phase of SWFDP was developed and coordinated primarily by the CMO Headquarters. The Project was expected to be developed by the WMO Secretariat in close partnership with the WMO Regional Association IV, and would involve the CMO Headquarters, the CIMH and a number of CMO Member States.

12.8 The Council:

Noted the updated information and provided necessary guidance on:

- (i) The Finland-funded Project Complementary Project to the SIDS-Caribbean Project and SHOCS I and II (COPS);
- (ii) Other projects involving the CMO Headquarters.

13. ANY OTHER BUSINESS

Report of the Human Resource Committee

13.1 Council recalled that an ad-hoc Human Resource Committee was created by CMC54 (Jamaica, 2014). The Committee comprised Mr Denzil Jones (Montserrat, Chairman), Ms Vidiah Ramkhelawan (Trinidad and Tobago) and Mrs Corsel Robertson (St. Vincent and the Grenadines), with a mandate to look at the administrative procedures and processes at both CMO Headquarters and CIMH, particularly in relation to the recruitment, employment and retention of key post holders, such as the Coordinating Director of CMO and the Principal of the CIMH.

13.2 The Chairman presented the report of the ad-hoc Committee, which indicated that decisions taken in the past were unclear and unresolved with respect to the Principal's terms of employment and as such, clarity was sought. Council held a discussion on the matter, in which it was proposed that, to bring closure to any unresolved issues, the Principal should indicate his expectations to Council via the CIMH Board of Governors, bearing in mind that any final decision to be taken in this matter must be in line with the approved budget for the CIMH.

14. DATE AND VENUE OF CMC57 (2017)

14.1 Council invited Member States to indicate their willingness to host the next session, CMC57, in 2017. Council also encouraged Member States to also give consideration to CMC58 in 2018. The Representative of Antigua and Barbuda informed the Council that he had been authorized to offer his country as the host for CMC57 in 2017.

14.2 The Council:

Thanked the Government of Grenada for hosting this 56ⁿ session and related meetings and for the warm hospitality extended and the excellent arrangements put in place for the conduct of the business of CMC55;

Also thanked the Government of Antigua and Barbuda for its offer his country as the host for CMC57 in 2017.

Expressed its thanks to the Chair for her excellent conduct of the sessions.

Close of Meeting

14.3 There being no other business, the Meeting ended with an exchange of courtesies.

AGENDA

1. OPENING OF SESSION AND ELECTION OF CHAIRMAN
2. ADOPTION OF AGENDA AND PROCEDURAL MATTERS
3. CMO EXECUTIVE REPORTS
 - (a) Coordinating Director's Report
 - (b) CIMH Principal's Report
 - (c) CIMH Board of Governors' Report
4. STATUS OF ACTIONS FROM PREVIOUS SESSION
5. RELATIONS WITH OTHER BODIES
 - (i) Working Arrangements between CMO and the French Meteorological Service
 - (ii) The Caribbean Community Administrative Tribunal (CCAT)
6. SPECIAL CMO AND WMO ISSUES
 - (i) Outcome/Highlights of the 2016 Executive Council (EC) of the World Meteorological Organization
 - (j) WMO Integrated Global Observing System – Pre-Operational Phase
 - (k) Implications of the new Geostationary Satellites for CMO Member States
 - (l) The Global Framework for Climate Services (GFCS)
 - (m) Important issues for the 16th session of WMO Commission for Basic Systems
 - (n) Aeronautical Meteorological Services – Priority Activities
 - (iii) Progress in the Implementation of Quality Management Systems (QMS)
 - (iv) Status of Aeronautical Meteorological Forecaster Qualifications
 - (o) Disaster Risk Reduction and Regional Severe Weather Forecasts and Warning Systems
 - Tropical Cyclone Programme
 - Regional Coordination and Severe Weather Forecast Demonstration Projects
 - (p) The 2017 session of the WMO Regional Association and the Members input into the 2017-2020 Strategic and Operational Plan
7. FINANCIAL REPORTS
 - (a) Status of Refundable Balances
 - (b) CMO HQ - Auditor's Report
 - (c) Statement of Contributions and Arrears (CMO HQ & CIMH)
 - (d) Policy on Radar and Rawinsonde Funds

8. CMO BUDGETS (Headquarters Unit, CRN and Radar, CIMH)
 - (a) CMOHQ Budget Estimates for 2017
 - (b) CIMH Budget Estimates for 2017
 9. SUCCESSOR TO THE CMO COORDINATING DIRECTOR
 10. ANNUAL MEETING OF THE DIRECTORS OF METEOROLOGICAL SERVICES
 11. CMO WEATHER RADAR NETWORK
 - (a) Status and operations of CMO Radar Network Operations
 - (b) Operations of the Regional Radar Mosaic and other International obligations
 12. OTHER PROJECT UPDATES AND PROPOSALS
 - (a) Finland Initiative - Follow-up activities to the Project "Strengthening Hydrometeorological Operations and Services in Central America and the Caribbean (SHOCS II)"
 - (b) Other CMO Projects/Proposals
 13. OTHER MATTERS
 14. DATE AND VENUE OF CMC57 (2017)
-

ANNUAL MEETING OF THE CARIBBEAN METEOROLOGICAL COUNCIL
ST. GEORGE'S, GRENADA
10TH - 11TH NOVEMBER 2016

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WORKING ARRANGEMENTS

between

the
**CARIBBEAN
METEOROLOGICAL
ORGANIZATION**

and
METEO-FRANCE



PREAMBLE

This document details a set of Working Arrangements between the Caribbean Meteorological Organization (CMO) and Météo-France, which have been agreed to by the two institutions.

Météo-France is a French Public Administrative institution with headquarters located at 73 avenue de Paris, 94165 Saint-Mandé, France. It was created by Decree No. 93-861 of 18 June 1993, amended by Decree No 96-662 of 24 July 1996, defining the missions of Météo-France.

The Caribbean Meteorological Organization (CMO) is a "Specialized Agency" within the Caribbean Community (CARICOM). It originated out of the old British Caribbean Meteorological Service, which was established in 1951. This Service became the *Caribbean Meteorological Service* in 1962, following the dissolution of the Federation of the West Indies. In 1973, in keeping with the Treaty of Chaguaramas, the Governments of the English-speaking Caribbean established the CMO to undertake the **coordination of the joint scientific activities** of the respective National Meteorological Services of its Member States, the **establishment of joint technical facilities and systems**, the creation of **joint training facilities**, and the promotion of a reliable **severe weather warning system** for the protection of life and property in the region.

Météo-France and CMO have collaborated closely for many years on regional activities in the Caribbean, although primarily on an ad-hoc basis for specific activities of common interest. Coordination of these activities have been carried out between the Météo-France inter-regional headquarters in Martinique and the CMO Headquarters in Trinidad and Tobago or the *Caribbean Institute for Meteorology and Hydrology* (CIMH), an arm of CMO, located in Barbados. These have included the improvement of hydro-meteorological observation systems, including radar systems, and use of operational weather monitoring and forecasting tools developed by Météo-France.

The Governing bodies of both agencies recognize that existing and future activities in weather, water and climate require a better framed coordination and collaboration between CMO and Météo-France. They have decided to significantly strengthen and formalize regional collaboration and coordination in the many areas of common interest, for the mutual benefit of CMO Member States and the French West Indies and French Guiana. To this effect, Météo-France and the Caribbean Meteorological Organization have agreed to implement the following formal Working Arrangements, which become effective on the date of signature of both parties.



THE CARIBBEAN METEOROLOGICAL ORGANIZATION (CMO)
AND
THE METEOROLOGICAL SERVICE OF FRANCE (METEO-FRANCE)

HAVE AGREED UPON THE FOLLOWING WORKING ARRANGEMENTS:

- (1) CMO and Météo-France agree to act in close cooperation and to consult with each other regularly with regard to matters of common interest within the Caribbean area and the Guianas area of South America in the field of meteorology and climate.
- (2) Such cooperation shall be set up particularly for the purpose of effective coordination of activities and procedures relating to meteorological programmes of CMO and Météo-France within the areas of interest. This is with a view to ensuring optimum benefits for meteorological operations and research, and thus maximizing the application of these programmes in areas such as weather forecasts, early warnings, natural disaster reduction, climate, agriculture, water resources management, air, land and sea transportation, tourism, and environmental protection.
- (3) CMO and Météo-France will consult each other and collaborate closely in the implementation of regional aspects of programmes of the World Meteorological Organization (WMO) in such areas where a common interest has been demonstrated.
- (4) Specifically, CMO and Météo-France, through their various operational organs, such as the CMO Headquarters in Trinidad and Tobago, the Caribbean Institute for Meteorology and Hydrology (CIMH) in Barbados, and the Inter-regional Directorate of Météo-France (for the Antilles and French Guiana) in Martinique, will collaborate closely on matters leading to improving the effectiveness of regional weather forecast and warning coordination, regional weather radar operations or other observing networks, and climate-related applications.
- (5) Météo-France and CMO agree to keep each other informed concerning all new programmes of work and projected activities in which there may be mutual interest.
- (6) Météo-France and CMO agree to invite the participation of each Organization, as observers, in the sessions and meetings of the other Organization which relate to items of common interest.
- (7) Météo-France and CMO will keep, as appropriate, their respective governing bodies informed of cooperative activities undertaken pursuant to this working relationship.

The above points set out the general framework of the Working Arrangements between CMO and Météo-France, the details of cooperation in specific fields and cases being left to further agreement.

These Working Arrangements shall enter into force upon the last date of signature of the parties and may be amended or terminated by mutual agreement of the governing bodies of the Organizations.



SIGNATORIES

For the **CARIBBEAN METEOROLOGICAL ORGANIZATION (CMO)** For **METEO-FRANCE**



Tyrone W. SUTHERLAND
Coordinating Director

21 June 2016

(Date)



Jean-Marc LACAVE
Président, Directeur Général

21-06-2016

(Date)



In photos above: Signing by Tyrone Sutherland (CMO) and Jean-Marc Lacave (France), witnessed by the Secretary-General of WMO, Prof. Petteri Taalas



Aeronautical Meteorological Services – Priority Activities

Quality Management System (QMS) material

The Sixty-fifth meeting of the WMO Executive Council (Geneva, 15-23 May 2013) provided information on an agreement in principle between the Secretariats of the WMO and the International Civil Aviation Organization (ICAO) concerning compliance by Member States with Quality Management System (QMS) practices.

The agreement stated that the Member States not complying with the Recommended Practice of obtaining certification in accordance with the **ISO 9001 Standard** should, as a minimum, provide evidence for having achieved the following milestones:

- a) Evidence of a contractual arrangement between the Meteorological Authority and Service Provider with clearly established responsibilities;
 - b) Availability of quality policy, quality manual and complete set of work instructions/process descriptions at all workplaces, and routine use of these documents by staff;
 - c) Documented evidence of user consultation and feedback (publications, questionnaires, records of user meetings, actions stemming from these);
 - d) Evidence of corrective and preventive action processes; and
 - e) An internal audit plan, audit reports and documented follow-up decided by a Management Review meeting.
-

FINANCIAL INFORMATION REMOVED

FINANCIAL INFORMATION REMOVED

RECRUITMENT OF THE COORDINATING DIRECTOR OF THE CMO

The Recruitment Process and Timing

The CMO Headquarters will implement the recruitment procedure for the final decision on recruitment by the 57th session of the Caribbean Meteorological Council in accordance with the following:

Publication and advertisement:

1. The advertisement for the post of Coordinating Director of the CMO will be undertaken with the aim to reach as many potential qualified candidates as possible globally. Circulation of the vacancy notice will be undertaken:
 - to Member States (Permanent Secretary level) to invite possible nominations;
 - to Directors of National Meteorological Services of CMO Member States and CIMH;
 - to Regional Academic Institutions (e.g., Principals of each UWI campus);
 - to the CARICOM Secretariat for inclusion on its website;
 - to international scientific agencies and institutions and through scientific websites (e.g., US - AMS, NOAA, UK - Earthworks, Royal Met Society; EUMETSAT, Canada - CMOS).
2. Applications would be open to male and female candidates who should be nationals of a CMO Member State, whether resident in the Caribbean or not.

Nomination/Interview Committee:

A broad Nomination/Interview Committee shall comprise:

- (i) Regional Human Resource Expert (in consultation with the CARICOM Secretariat);
- (ii) An international expert (e.g. from WMO or ICAO);
- (iii) A member of the CMC Human Resource Committee;
- (iv) A retired Director of a National Meteorological Service (who has been in retirement for not less than 5 years);
- (v) The incumbent Co-ordinating Director (Advisor to the Committee).

A short list of backup members shall be made in case of unavailability or other issues.

Timing of Events:

1. Publication of the vacancy notice should take place as soon as possible in 2017 using the qualifications, job description /duties and responsibilities and other requirements listed below;
 2. The Nomination Committee should meet as soon as possible after the closing date on the vacancy notice (in September or October) to review the applications, undertake interviews, and prepare a short list of preferred candidates for submission to the 57th session of the Caribbean Meteorological Council in November 2017;
 3. The selection of the successful candidate will be made by the 57th session of the Caribbean Meteorological Council. The selection shall take place during an in-camera session of the Council.
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CARIBBEAN METEOROLOGICAL ORGANIZATION HEADQUARTERS

JOB DESCRIPTION

COORDINATING DIRECTOR

FUNCTIONS OF THE POST (DUTIES AND RESPONSIBILITIES)

The Coordinating Director of the CMO is responsible to the Caribbean Meteorological Council, the Governing body of the CMO. The functions of the Coordinating Director shall include the following:

1. Promote and undertake the decisions of the Caribbean Meteorological Council;
2. Advise and assist CMO Member States in the development of their National Meteorological Services, particularly those with smaller Services;
3. Direct the coordination of joint scientific and technical activities among the National Meteorological Services of Member States;
4. Promote continuous improvements for a reliable severe weather warning system to safeguard the region;
5. Advise Member States in dealing with issues of an international nature affecting weather, water and climate;
6. Maintain close involvement and relationship with the World Meteorological Organization (WMO), the International Civil Aviation Organization (ICAO) and other related specialized agencies, for the benefit of CMO Member States;
7. Promote and facilitate the technical and scientific involvement of the organs of the CMO in the work of WMO, as appropriate;
8. Represent those Member States that so desire at sessions of the Congress and constituent bodies of the World Meteorological Organization, as determined by Council;
9. Represent or promote representation of the CMO at meetings of the International Civil Aviation Organization (ICAO), especially on Regional Air Navigation issues;
10. Organize and be responsible for sessions of the Caribbean Meteorological Council and related meetings, as appropriate;
11. Initiate and implement, as appropriate, projects and other programmes of a regional nature in the field of meteorology and allied sciences;
12. Formulate and/or coordinate, as appropriate, applications and requests by Member States for technical assistance on regional projects from regional and international agencies;
13. Collect and manage funds for the operation of regional programmes in meteorology and allied sciences, as determined by Council;

14. Maintain close involvement of the Organization in the related affairs of the Caribbean Community, in collaboration with the Caribbean Community Secretariat and other Community institutions;
15. Be responsible for the operations and management of the CMO Headquarters; provide guidance and assistance, if required, to other organs of the CMO;
16. Promote the regional and international image and visibility of the organs of CMO, as appropriate;
17. Attend to such other matters relating to the fields of meteorology and allied sciences, as may be determined by the Council.

QUALIFICATIONS

(Applications from suitably qualified male or female candidates are treated equally)

Education

Qualifications: A minimum of an honours degree in meteorology from a recognized university, or an honours degree in a related atmospheric science with a minor in meteorology. Relevant advanced degree(s) would be an advantage.

Experience

At least five (5) years of experience at the management or senior level of an operational meteorological service or a related academic or scientific institution. Significant experience at the international levels would be an advantage. Reasonable knowledge of the regional and international programmes and activities of WMO and the International Civil Aviation Organization (ICAO) and relevant regional and international organizations is required.

Other requirements

Maturity of judgement, initiative and originality of ideas. The ability to express ideas clearly in oral and written reports, documents and correspondence. Significant representation skills at the technical, governmental, intergovernmental and diplomatic levels with the ability to function independently and on own initiative.

TERMS AND CONDITIONS

....to be completed in conjunction with the CARICOM Secretariat.

COMMENCEMENT OF DUTY

....to be decided by Council.
