FINAL



REPORT

OF THE

FIFTY-SECOND MEETING

OF THE

CARIBBEAN

METEOROLOGICAL

COUNCIL

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**VENUE AND DATE:**

Bay Gardens Hotel

Rodney Bay

**SAINT LUCIA**

15-16 NOVEMBER 2012

**CHAIRPERSON:**

**Hon. Philip J Pierre,** Deputy Prime Minister and Minister for Infrastructure, Port Services and Transport **of SAINT LUCIA**

1. OPENING OF THE SESSION AND ELECTION OF CHAIRPERSON

1.1 At the kind invitation of the of the Government of Saint Lucia, the Fifty-Second Session of the Caribbean Meteorological Council was held at the Bay Gardens Hotel in Rodney Bay on 15‑16 November 2012. The Caribbean Meteorological Council is the Governing and policy-making body of the Caribbean Meteorological Organization (CMO).

* 1. *Mr Thomas Auguste,* Director of Meteorology in Saint Lucia,commenced the Opening Session of the Meeting by extending words of welcome, after a prayer was offered by the *Honourable Evan Gumbs*, **Minister of** Infrastructure, Communications, Utilities & Housing **of Anguilla**. Welcome remarks were made by *Mrs Allison Jean*, Permanent Secretary in the Ministry for Infrastructure, Port Services and Transport **of Saint Lucia.** Mrs Jean spoke about the support needed from Member States for the Organs of the CMO to meet the challenges of the 21st century. She referred to the solid expertise that exists within the *Caribbean Institute for Meteorology and Hydrology* (CIMH) to assist in dealing with the challenges posed by climate and climate change. She called on Governments to recognize the CIMH as a leading regional educational and technical institution which must be safeguarded and positioned to provide adequate support to regional Meteorological Services and Governments in meeting their requirements. Mrs Jean also noted the improvements made within the Meteorological Services and lamented the fact that the meteorological fraternity tended to remain silent on its major achievements, especially those taking place in the region.
  2. ***Mr Rob Masters*, Director of the** *Development and Regional Activities Department* **of the World Meteorological Organization (WMO), addressed the Council on behalf of the WMO Secretary-General. He drew to the attention of the Council, the significant impact weather and climate events have had in the recent past - *Hurricane Thomas* in Saint Lucia in 2010 and *Hurricane Sandy* more recently in late 2012. He stressed that those in high office and people in all walks of life ignore weather and climate at their peril. He cited the climate extremes over the last year and the estimated 60 billion US dollars economic damage caused by *Sandy* to the US economy alone. He commended those present for their participation in the 52nd session of the Caribbean Meteorological Council as it demonstrated their commitment to reducing the risks of weather and climate extremes on the peoples and economies of their respective countries.**
  3. *Mr Tyrone Sutherland*, Coordinating Director of the CMO, delivered remarks that focussed on regional issues in meteorology and the important role that the Organs of the CMO play in guiding the development of the National Meteorological and Hydrometeorological Services of Member States. He pointed to the importance of meteorological data from the regional to the global data set, for understanding and predicting the weather globally, in the understanding of climate and its variations and ultimately, to global studies of climate change.

1.5 He pointed out that advances made in the science of meteorology were driven primarily by global technological changes and that it was very difficult for the small developing states in the Caribbean to keep up with the rapid changes without the guidance and assistance of CMO. These, he indicated, were carried out through the operational Organs of the CMO, namely the CMO Headquarters in Port of Spain and the CIMH in Barbados. Both of these had assisted the Member States in developing their scientific and technical capabilities in weather prediction and which would continue to be the main links to the global programmes and initiatives that would impact on the ways that the Services function and the type of services that they will have to provide to their nations in the future.

1.6 The feature address was delivered by *Hon. Philip J. Pierre,* Deputy Prime Minister and Minister for Infrastructure, Port Services and Transport **of Saint Luci**a**.** The Minister spoke about the importance of the information emanating from the Meteorological Service with regards to severe weather, especially during tropical storms and warnings. He spoke about the damaging impacts on the island of Saint Lucia by severe weather and the effective mitigating role of the Meteorological Service

1.7 Minister Pierre noted the new and emerging focus on the provision of climate services that include drought monitoring and forecasting, and praised the Saint Lucia Meteorological Service and the CIMH for the early warnings of the regional drought in 2009/2010. The Minister referred to the effects of climate change on the region and world in general, and called on the meteorological community to translate that knowledge into practical ways that improve the lives of people and to forge alliances in the process with relevant economic sectors.

1.8 He informed the Council that the Saint Lucia Government had awarded a contract to a company to prepare an ISO-certifiable Quality Management System for the Meteorological Service, as mandated by the *International Civil Aviation Organization* (ICAO). The Minister made particular mention of the fact that the CARICOM Secretariat was not present at this Council session, and expressed concern that the very pivotal role played by the CMO in the development of so many aspects of life in the Caribbean would not receive the appropriate attention. He implored the meteorologists of the region to be advocates for their profession and the services they provide.

1.9 The Meeting elected the *Hon. Philip J. Pierre* as the Chair of the Caribbean Meteorological Council for its 52nd session and the 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 noted and discussed these activities and issues in 2012, particularly a direct follow-up to the 2011 Congress of the World Meteorological Organization and its 2011 and 2012 Executive Council sessions, as they related to the Caribbean region in general and CMO Member States in particular. The most pressing issue noted was the assistance to Member States to implement a *Quality Management System* (QMS) for aeronautical meteorological services by 15 November 2012, as mandated by the *International Civil Aviation Organization* (ICAO). The Council discussed the Headquarters’ preparation for regional involvement in the new and very important international initiative called the *Global Framework for Climate Services* (GFCS), while several of the other activities that engaged the CMO Headquarters since the Council’s last session had been geared towards regional projects in their completion stages in 2012 and consideration of proposals for new or follow-up projects or activities in 2013. In addition to these, staff members of the CMO Headquarters spent considerable time in the Cayman Islands as part of its contract for the implementation of the Cayman Islands Radar Project, which was expected to end in early 2013.

3.2. The Coordinating Director provided the Council with a review of the 2012 hurricane season and the impact of the tropical storms and hurricanes on the lives and economies of the region. In this regard, he noted the excellent warnings issued by the affected Meteorological Services. At the same time, he demonstrated to the Council the vital importance of meteorological data from the Caribbean region to the global community and the negative impacts on weather and climate forecasts if regional data sets were not fully available internationally and of the highest quality.

3.3 The Council recalled that in August 2009, Britain suspended the constitution of the Turks and Caicos Islands and imposed direct rule on the island group. The Caribbean Community (CARICOM) expressed regret and restricted its contact with the interim administration until a return to a normal constitutional situation. Since then, the CMO had only been able to maintain technical contact but had been unable to carry out activities or advise on programmes that required contact at the very highest level. On October 15, 2012, a new Constitution was announced, paving the way for the return to a locally elected Government after a General Election on 9 November 2012. The Council and the CMO Headquarters were hopeful that this would lead to a return to the normal contact between the Organization and this CMO Member State and a resumption of advice and assistance to the State.

3.4 The Council expressed concern that the low level or very late receipt of contributions to the Organization from Member States continued to plague the operations of the Organs of the CMO. It noted that the effect of this was wrapped up with the continued unresolved status of the building occupied by the CMO Headquarters in Port of Spain. The Council recalled its expressed concern that the CMO Headquarters had to undertake the payment of the rent during this protracted activity, resulting in an enormous budgetary burden that threatened to bring the entire operations of the Headquarters to a halt. However, the Council deferred detailed discussions on this matter to *Agenda Item 7(a)* on the CMO Headquarters Budget Estimates.

3.5 The Coordinating Director briefed the Council on some of the scientific, technical and training events in which technical staff participated in, particularly those sponsored by the WMO and its partners that have a special relevance to the region. Council thanked *Mr Emmanuel Moolchan,* who retired in 2012 as Director of the Meteorological Services of *Trinidad and Tobago*, for his 43 years of dedicated professional service, and congratulated *Mrs Sylvia McGill*, former Director of the Meteorological Services of Jamaica, on being conferred with a **national honour** for distinguished service to the field of Meteorology, during her country’s 50th Anniversary of Independence. The Council had special praises for *Mr Steve Pollonais*, a former Director the Meteorological Services of Trinidad and Tobago, who passed away in Trinidad in August 2012, and expressed sympathy at the death of *Mrs Sylvia Berridge*, wife of the late *Egbert Berridge*, former Coordinating Director of the CMO, who died peacefully in her sleep at age 81.

3.6 **The Council** therefore:

1. **Noted** the activities and issues concerning the CMO Headquarters in 2012, particularly those dealing with the implementation of major WMO and ICAO-related activities;
2. **Noted** the impact of the active 2012 hurricane season and commended the National Meteorological Services of those Member States affected in the timeliness and effectiveness of warnings issued;
3. **Also Noted** the importance of meteorological data from the Caribbean region to the global community and the need for Member States to ensure full data availability and quality;
4. **Took Further Note** of the impact of falling contributions by Member States to the Organization on the operations of the Headquarters, on the implementation of the planned programmes and activities and on the further deferral of important professional staff recruitments.

**3(b) CIMH Principal’s Report**

3.6 The Principal informed the Council that the highly uncertain financing of the Institute represented the single biggest risk to sustaining the operations of the Institute and ensuring its ability to effectively support the sustainable development agenda of its Member States through technical advisory services and the provision of training programmes.

3.7 He indicated that contributions received from the start of the year up to 30 September 2012 were 41% of the approved budget for 2012, which was less than for the corresponding period in fiscal 2011. On that date, approximately 7 of the 16 CMO Member States had made a contribution to CIMH. This was consistent with the continuing worrying decline in subventions in recent years which have been exacerbated by the impacts of the global recession on revenue generating sectors across the Caribbean. The Principal was of the view that it was unacceptable for the burden of operating the CIMH during the first three quarters of the year to fall on the shoulders of 7 of 16 Member States when all Member States (paying and non-paying) receive benefits from the activities of the CIMH, such as through direct training, project implementation and research results.

3.8 Council was informed of the projects that CIMH had undertaken during the past years. The projects include:

* JICA CADM Phase 2 was completed in 2012; the Institute completed installation of flood early warning observation networks in several watersheds in Saint Lucia, Belize, Dominica, Grenada and Guyana;
* The Italian-funded and CIMH-implemented project “*Enhancing Resilience to Reduce Vulnerability in the Caribbean*” (ERC), through which the CIMH acquired 16 automatic weather systems (AWSs) to support the early warning systems in the 10 participating states. To-date, almost all of these systems had been installed in the participating states by CIMH staff. Mechanisms were in place to capture the data from these systems to make them available to the online DEWETRA platform developed under the project;
* CIMH had been asked by the Inter-American Development Bank (IDB) to lead Component 2 of the *Special Programme for Climate Resilience* (SPCR) being implemented in the Caribbean. Under this component of the programme, a substantial amount of funding was being provided to upgrade the hydro-meteorological observation networks in participating States;
* The Secretariat of the Organization of Eastern Caribbean States (OECS) had made available to the CIMH, approximately USD 240,000 from the USAID-funded project “*Reducing the Risk to Human and Natural Assets Resulting from Climate Change*” (RRACC) project to support upgrading early warning and climate monitoring networks in the 6 independent Member States of the OECS.

3.9 The highlight of the training programme during 2012 was the graduation in 2012 of the first batch of students from Meteorological Services who entered the *Aeronautical Continuing Professional Development On-line Course* during September 2011. The course received very favourable comments from the graduating students. The course also received favourable comments from the Chief of the Education and Training (ETR) Office in WMO, who monitored the course. The course was expected to enhance the competency of forecasters at the Meteorological Services in Member States and was therefore an essential element of the Quality Management System being implemented by Meteorological Services.

3.10 **The Council:**

(i) **Noted** the report of the Principal;

(ii) **Discussed** the negative impact of declining contributions on the Institute;

(iii) **Agreed** that it was unacceptable for the main burden of operating the CIMH to be carried by half or less of the 16 beneficiary Member States.

**3(c) CIMH Board of Governors’ Report**

3.11 The Chairman of the CIMH Board of Governors (BoG) presented the Council with the decisions of the Board, which met on 12 and 13 November. The Council was reminded of the challenges in operating the Institute, given the low levels of contributions received from Member States and the potential negative impacts on the Institute’s programmes.

3.12 The Council was informed that the Board agreed not to fill the new approved posts as well as those of the Agrometeorologist and Assistant Meteorologist positions for fiscal 2013. The Board agreed on the selection of an Administrative Officer for the Regional Climate Centre and the recruitment of a Geographical Information Systems Specialist. These decisions reduced the estimates of expenditure for fiscal 2013 by approximately BBD 300,000.

3.13 **The Council:**

**Noted** the decisions emanating from the Board of Governors.

**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 CMC51 (Dominica, 2011) 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 In this regard, the Council was reminded of its decision that the post of *International Affairs Officer* at the CMO Headquarters should be filled in the second half of 2011. However, it again accepted the decision of the Coordinating Director to continue to delay the recruitment process in 2012 because the level of contributions from Member States in 2011 and 2012 were well short of what was expected, making it impossible for the Headquarters to carry out the recruitment within the timeframe envisaged. The Council noted the intention of the CMO Headquarters to initiate the recruitment process in 2013 if the contribution levels permit.

**5. SPECIAL CMO AND WMO ISSUES**

5.1 The Coordinating Director briefed the Council on the following special CMO and WMO‑related issues in connection with the following:

1. Outcome/Highlights of the 64th Executive Council (EC) of the World Meteorological Organization (2012) - Five Priorities for 2012-2015
2. Extraordinary Session of the World Meteorological Congress 2012

- Implementation of the *Global Framework for Climate Services (GFCS)*

1. Aeronautical Meteorological Services – Current and Future Activities
   * + 1. Achieving a certifiable Quality Management System (QMS) – the November 2012 deadline;
       2. Undertaking Competency Assessments;
       3. QMS Auditing – developing a system among CMO Member States.
2. WMO/UNCCD 2013 High-level Meeting on National Drought Policy (HMNDP) - Towards More Drought Resilient Societies

**5(a) Outcome/Highlights of the 64th Executive Council of the World Meteorological Organization (2012)**

5.2 The Coordinating Director of CMO, as a member of the WMO Executive Council, having been first elected in 1999 and then served as the Second Vice-President of the WMO for the maximum two terms between 2003 and 2011, attended the 64th session of the Executive Council in Geneva, Switzerland from 25 June to 3 July 2012. The Coordinating Director was accompanied to this session by a team of advisers and experts, comprising *Dr David Farrell*, Principal of the CIMH, *Mr Keithley Meade,* Director of the Antigua and Barbuda Meteorological Service and *Mr John Tibbetts,* Chief Meteorologist of the Cayman Islands National Weather Service. This team was a partial change to the regular team of advisors, in order to widen the involvement and experience of senior officials in the region to the high-level WMO activities.

* 1. This 2012 session of the WMO Executive Council was its first full session since the WMO Congress of 2011. It set in motion the implementation process for the programmes set out by Congress, particularly the five priorities for the period 2012-2015, which are:

1. The establishment and Implementation of the ***Global Framework on Climate Services*** (GFCS). The Executive Council began preparing for the first ever Extraordinary Session of WMO Congress in October 2012 to launch the GFCS. Further discussions on GFCS is given in paragraphs 5.4 to 5.7;
2. Implementation of the new ***WMO Integrated Global Observing System*** (WIGOS) and the new ***WMO Information System*** (WIS), both of which are essential to all technical and scientific activities of Meteorological Services worldwide. Plans for regional implementation of WIGOS, which would involve the CMO, are addressed under Agenda Item 10;
3. ***Capacity Development*** for developing and least developed countries aimed at the delivery of improved weather, water and climate predictions required by governments and communities. The Executive Council set up a Working Group on Capacity Development to lead this task. EC approved the Capacity Development Strategy prepared by the Working Group. *Mr Rob Masters, Director of the Regional of the WMO* elaborated on this topic to the CMC52;
4. Strengthening and further development of ***new Services to Civil Aviation*** by the meteorological community to ensure highest levels of safety and security in light of increasing volume of air traffic and the impact of severe weather events. Further discussion is given in paragraphs 5.8 to 5.12 below;
5. Further enhancement of WMO’s ***Disaster Risk Reduction*** (DRR) programmes and activities, for the effective mitigation against natural hazards, including tropical storms and hurricanes, droughts, etc.

5(b) Extraordinary Session of the World Meteorological Congress 2012

- Implementation of the *Global Framework for Climate Services (GFCS)*

5.4 An historic Extraordinary Session of the World Meteorological Congress took place in Geneva, Switzerland from 29-31 October 2012. The CMO Member States present at the Session were Barbados, represented by Ms S. Griffith-Jack of the Barbados Mission in Geneva, and the British Caribbean Territories, represented by the CMO Delegation of T. Sutherland, D. Farrell and F. Sambula. The sole purpose of this Session was to launch the ***Global Framework on Climate Services*** (GFCS) (see paragraph 5.3 above). The Extraordinary Session approved the **governance structure** by establishing an ***Intergovernmental Board on Climate Service*s** to ensure coordination at the regional and global levels and to engage the entire UN system and other stakeholders to deliver needs-based climate services all over the world. *The Board will operate under the authority of the World Meteorological Congress*.

5.5 A major contribution to the implementation of the GFCS would come from a global network of ***Regional Climate Centres*** (RCCs) established by WMO. The RCCs will have an important role in tailoring global climate products to regional needs on a sustainable operational mode and also in supporting national requirements of NMHSs where needed, through mutual arrangements. Regional and National Climate Outlook Forums, in which several RCCs are involved, would strengthen national capacities and would be an important channel for dialogue between providers and users of climate information. In late 2012, WMO was considering a CMO request for recognition of the CIMH as a *WMO Regional Climate Centre (RCC)* for the English-speaking Caribbean. As an RCC, the CIMH would have a very important role in supporting CMO Member States in their implementation of the GFCS.

5.6 The WMO Congress also approved the ***Implementation Plan*** of the GFCS. Eight fast track projects described in the implementation plan will serve to showcase the benefits of climate services for the improvement of livelihoods. The implementation structure includes five components across which activities will be coordinated and integrated. The Congress also passed a third resolution dealing with ***budgetary issues***, stating the immediate importance for voluntary contributions by Member States to secure quick wins for the Framework. A strong desire was expressed for the sustainability of resources. A full briefing on the GFCS and the outcomes of the Extraordinary Congress could be found available on the WMO Website.

5.7 **Council:**

1. **Expressed** its strong support for the *Global Framework for Climate Services;* and,
2. **Urged** Member States to actively participate in GFCS activities as appropriate.

**5(c) Aeronautical Meteorological Services – Current and Future Activities**

5.8 The last few sessions of the Caribbean Meteorological Council dealt with the major issue that the *International Civil Aviation Organization* (ICAO) has placed high priority on the imposition of a **Quality Management System (QMS)** for all types of services to civil aviation (see paragraph 5.3(iv) above). As the QMS was a mandated decision of the *International Civil Aviation Organization* (ICAO), WMO and the ICAO have been collaborating to ensure that *National Meteorological and Hydrological Services* (NMHS)all over the world were equipped to meet the requirements. Specifically, ICAO has mandated that from ***15 November 2012***, every designated Meteorological Authority around the world must have implemented a Quality Management System. This must comprise procedures, processes and resources necessary to provide for the quality management of the meteorological information to be supplied to the users.

5.9 The CMO Headquarters had been assisting the NMHSs of Member States, either through various project activities or through direct advice, in preparing for the QMS deadline. After some training activities that were conducted, most of the NMHSs had made significant progress towards QMS readiness. The process of properly documenting procedures for certification was close to completion in some NMHSs, while others still appeared to have significant progress to be achieved. The Council urged that every Member State must act quickly to have its documentation checked by an appropriate agency or consultancy, whether national, regional or international, before getting a certifying agency to carry out the formal certification of the NMHS. Council recognized that, while NMHSs could get assistance in identifying appropriate agencies to undertake this task, it was a national responsibility to seek the actual certification. Council discussed the state of readiness of the NMHSs of most CMO Member States for certification and urged urgency in completing this process as soon as possible. The ICAO representative cautioned the Council about possible ramifications for failure to complete the certification process.

5.10 Council once again stressed that, closely linked to the implementation of a Quality Management System (QMS), was the issue of *Competency Standards for Aeronautical Meteorological Personnel*. The deadline for the implementation of Competency Standards was December 2013. The CIMH had been guiding the NMHSs in this regard.

5.11 Council discussed the fact that attaining certification for the NMHS was not the end of the QMS process and that certification had to be retained. Council therefore discussed the development of a sustainable system of regional QMS auditors to ensure that each NMHS remains ready for formal external auditing at any time in the years to come. This idea was supported in principle by both ICAO and WMO. The CMO indicated that further consultations on this type of system will be undertaken with the NMHSs of Member States, ICAO and WMO.

5.12 In this regard, **Council:**

1. **Urged** the relevant government ministries, aviation authorities and meteorological services in all Member States to urgently complete the QMS process, recognizing the dangers to the national aviation sector if States did not comply;
2. **Also urged** urgency in the implementation of the associated Competency Standards for Aeronautical meteorological personnel;
3. **Agreed** that the development of a system of regional QMS auditors for the NMHSs be studied by the CMO Headquarters in collaboration with relevant parties.

5(d) WMO/UNCCD 2013 High-level Meeting on National Drought Policy

5.13 The Caribbean Meteorological Council held a discussion on the current concerns with climate change, projected increases in the frequency, intensity, and duration of droughts and resulting impacts on many sectors, in particular food, water, and energy. It noted that there was cause for concern regarding the lack of drought preparedness and appropriate drought management policies for virtually all nations. The sectors of the international community that were concerned with drought issues considered that the time was ripe for nations to move forward with the development of a pro-active, risk-based national drought policy.

5.14 Council considered the question “*Why the Need for National Drought Policy?”* and was provided with the following five goals on which a National Drought Policy could be centred:

1. Proactive mitigation and planning measures, risk management, public outreach and resource stewardship as key elements of effective national drought policy;
2. Greater collaboration to enhance the national/regional/global observation network and information delivery system to improve public understanding of and preparedness for drought;
3. Incorporation of comprehensive governmental and private insurance and financial strategies into drought preparedness plans;
4. Recognition of a safety net of emergency relief based on sound stewardship of natural resources and self-help at diverse governance levels;
5. Coordination of drought programs and response in an effective, efficient and customer-oriented manner.

5.15 In this regard, the Council noted that, in order to address the issue of a national drought policy, the WMO and the Secretariat of the *United Nations Convention to Combat Desertification* (UNCCD), in collaboration with a number of UN Agencies, International and Regional Organizations and key national agencies, would organize a *High Level Meeting on National Drought Policy (HMNDP)* from 11 to 15 March 2013 in Geneva, Switzerland. The theme of the meeting would be *“Towards More Drought Resilient Societies.”*

5.16 Council therefore:

Proposed that all relevant ministries and agencies in CMO Member States be encouraged to actively participate in the HMNDP.

5.17 The Council was briefed, as a matter of general interest, on the list of citizens of CMO Member States who have served or currently serve as staff members in the WMO Secretariat in Geneva, Switzerland. It noted that the region benefits significantly when its citizens were able to serve the international community, particularly in the scientific fields, within WMO and other similar UN agencies. ANNEX III shows the list in 2012.

1. **FINANCIAL REPORTS**

**6(a) Status of Refundable Balances**

6.1 The Council was presented with the current status of the CMO Member Refundable Balances from reimbursements from the United Kingdom held by the CMO Headquarters Unit. The balance as of 29 October 2012 in TTD was as follows:

**BCT** **CMO MEMBERS OF WMO**

Anguilla 53,584.85 Antigua & Barbuda 4,901.83

Br. Virgin Is. 36,349.97 Barbados 16,470.44

Cayman Is. 118,889.81 Belize 2,432.07

Montserrat 0.00 Dominica 9,018.25

Turks& Caicos Isl. 67,462.31 Guyana 0.00

Jamaica 95,497.90

Saint Lucia 878.21

Trinidad & Tobago 109,173.67

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**$276,286.94** **$238,372.37**

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St. Kitts & Nevis (funds held from BCT days $83.74)

6.2 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. The Coordinating Director noted that these funds have been used very effectively in pursuit of these objectives.

6.3 Council was reminded of a decision of the 47th Session of the Council (2007), which stated that each Session of the Council must be provided with the actual amount of Refundable Balance that each Member State was entitled to, which was as follows:

**BCT** **CMO MEMBERS OF WMO**

Anguilla 53,584.85 Antigua & Barbuda 4,901.83

Br. Virgin Is. 36,349.97 Barbados 16,470.44

Cayman Is. 118,889.81 Belize 2,432.07

Montserrat 0.00 Dominica 893.00

Turks & Caicos Is. 67,462.31 Guyana 0.00

Jamaica 500.00

Saint Lucia 878.21

Trinidad & Tobago 109,173.67

St. Kitts & Nevis 83.74

6.4 The Council:

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

6(b) CMO HQ Auditor’s Report

6.5 The 2011 audited accounts of the CMO Headquarters Unit were presented to Council by the Coordinating Director. The accounts for fiscal 2011 were audited by the Auditor General’s Department during June and July 2012.

6.6 The Council was informed by the *Principal Delegate* ofTrinidad and Tobago that there were some concerns with the Auditor General’s reference to the absence of a lease agreement for the Headquarters, since monies were being paid for the rental of the premises. The Coordinating Director reminded the Council of the discussion on the matter discussed under Agenda Item 3 (paragraph 3.4).

6.7 **The Council:**

**Noted, Reviewed** **and Accepted** the audited Statement of Accounts for 2011.

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

6.8. The Council carried out very extensive discussions on the situation of arrears to both Organs of the Organization under various Agenda items. The Council recalled that for many years, both operational arms of the CMO, namely the CMO Headquarters Unit and the CIMH, had been forced to operate under very difficult circumstances because of the large arrears of contributions by Member States. The Caribbean Meteorological Council (CMC), as the Governing Body of the CMO, had constantly urged Member States to rectify the situation by making regular payments to the current budget estimates and by establishing a plan to pay off arrears.

6.9 The Council noted that the situation with the large arrears to the organs of the Organization had not changed in the last few years. It again urged that Member States in arrears to establish plans that would enable them to pay their current contributions while paying off the arrears in smaller portions over time. The Council was again of the view that the Coordinating Director of the CMO, the Principal of the CIMH and the Chairman of the CIMH Board of Governors should make special visits to those countries with significant arrears and that these visits be used to demonstrate the valuable contribution that the Organization makes to the individual countries and to the region as a whole. The *Principal Delegate* of the *Cayman Islands* also recalled that in earlier days, even though the financial situation may not have been as difficult, the former Coordinating Director visited each Member State at least once per year, which provided visibility for CMO and assisted in limiting the number of Member States that defaulted in making their contributions. In addition, however, the Council felt that the Directors of Meteorological Services and the CEOs of the Airport Authorities should play a pivotal role in addressing the arrears with the relevant national entities.

6.10 The Council was presented with many other suggestions on how to address the problems of the non-receipt of contributions from some Member States. The suggestions ranged from punitive actions against defaulting Member States, to seeking more projects to increase the non-contributory revenue stream, to the use of unspent funds within a Ministry vote at the end of the fiscal year, to reduce their arrears in contributions. Notwithstanding these ideas, the Council also encouraged that new innovative ideas be explored to address the arrears issue.

6.11 **The Council:**

(a) **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;

(b) **Agreed** to a *multi-pronged* approach of lobbying by the Directors of the Meteorological Services to be followed by joint country visits by the Coordinating Director and Principal, on the advice of the Meteorological Service Director.

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

7(a) CMO HQ Budget Estimates for 2013

7.1 The Council examined the CMO Headquarters’ Budget Estimates for 2013. The Council recalled that over the previous three budget presentations (2010, 2011 and 2012), it made budgetary provisions for 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 increasing the number of international weather and climate activities that impact on the Member States.

7.2 At its 51st session (2011), Council was presented with budget estimates for 2012 that included some elements but still could not include all matters held in abeyance. However, Council noted that during the course of 2012, the level of contributions from Member States continued to be well short of the approved budget target. The economic indicators used by the CMO Headquarters from Member States suggest that 2013 could still be difficult in the region. As a result, the CMO Headquarters presented to the Council, budget proposals for 2013 that kept its priority on first meeting the essential staff commitments and basic programmes, as was done in the 2012 budget estimates, and then attempt to cover the critical new programmes where possible.

7.3 The 2013 budget estimate therefore again included provisions for the ***International Affairs Officer*** post. It was decided to continue to hold in abeyance the filling of the other Professional post – the Project Development Officer.

7.4 The Council also recognized that, as a temporary measure and as had been done in 2011 and 2012, there was a need to include in the budget estimates, a budget line for the rent of the premises occupied by the CMO Headquarters in Port of Spain. Inclusion in the budgetary estimates would allow the Headquarters to expend funds for this purpose. However, this amount would not be included in the contributions to the Organization by Member States so that, in effect, the Council was asked to approve a budget estimate with a ***deficit***.

7.5 In this regard, the Council was informed by the *Principal Delegate of* Trinidad and Tobago that since approval to utilize the premises for commercial/business operations was dated from August 2012 and not from the date of occupation of the premises, the Ministry of the Environment and Water Resources must thus seek Cabinet’s approval to reimburse funds for rent already expended before the approval date of August 2012. The Council was thus encouraged that this approach was likely to clear the way for the resumption by the Government of Trinidad and Tobago of its obligation in terms of rental payment and for the reimbursement of the rent already expended by the CMO Headquarters during this period of uncertainty.

7.6 The Council examined the 2013 Budget Estimates for the CMO Headquarters Unit, the Caribbean Rawinsonde Network and the Radar Network.

7.7 Council:

(i) **Approved** the deficit budget estimates of expenditure of **TTD 4,483,187**, as detailed in **ANNEX IV,** with Member contributions based on the figure of **TTD 3,967,187,** as indicated in **ANNEX V**;

1. **Reviewed** the regional contribution to the Radar Network and decided that the CMO Headquarters should study the operations of the radars and make a proposal at the next session;
2. **Decided** that provisions for the filling of the *Project Development Officer* post be included in subsequent Budget estimates as soon as practical;
3. **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;
4. **Reminded** Members that when forwarding their contributions to CMO Headquarters by bank transfers, to deposit funds into the same currency account as the sum remitted;
5. **Urged** Members to inform the CMO Headquarters of their transfer of funds, including the date, amount and currency, in order to overcome difficulties in properly identifying the origin of funds within the banking system.

7(b) CIMH Budget Estimates for 2013

7.8 The Chairman of the Board of Governors informed the Council that CIMH presented the Estimates of Expenditure for the financial year 2013 to the Board of Governors for endorsement. The original total amount requested was BBD 6,910,931. After considerable discussions on the prevailing financial situation in the region, prioritization was given to immediate needs. The Board therefore decided to remove two posts from the original estimates for 2013. The Board of Governors considered all the proposals made by the CIMH and made adjustments to the Estimates accordingly.

7.9 The **Chairman** of the Board presented the Council with Revised Estimates of Expenditure of the CIMH for 2013 of **BBD 6,665,923** for its approval.

7.10 **The Council:**

**Approved** the Estimates of Expenditure for 2013 of **BBD 6,665,923** for the CIMH as presented by the Board of Governors. Member contributions based on that figure are indicated in **ANNEX V.**

**8. ANNUAL MEETING OF THE DIRECTORS OF METEOROLOGICAL SERVICES**

8.1 The Meeting considered the Report of the Annual Meeting of Directors of Meteorological Services, held at the same venue on 14 November 2012, presented by Mr Glendell De Souza, Science and Technology Officer of the CMO Headquarters. The Report provided the Council with a summary of the deliberations and recommendations of the Directors on a wide range of technical and scientific topics.

8.2 The Council was informed on a wide range of issues which would have an impact on future costs, policy decisions, training opportunities and service delivery. The issues which were presented were:

1. The Entry-Level Meteorological Technician (ELMT) and the Mid-Level Meteorological Technician (MLTM) courses would be merged in March 2013. The primary reason for the merger was to reintroduce Basic Mathematics and Physics into the ELMT course, to bring it in line with WMO recommendations for Basic Instructional Package for Meteorological Technicians (BIP-MT). This meant that the EMLT course would be extended by three weeks to twenty weeks.
2. The CPD course, which was initiated by CIMH at the specific request of its Board of Governors, was designed to address the need to have Aeronautical Meteorological Forecasters assessed and for them to access continuing professional development, as required by the ISO 9001:2008 *Quality Management System*.
3. Implementation of a QMS will become a requirement on 15 November 2012 and certification of the QMS would most likely become a requirement in November 2016.
4. Migration to the Table Driven Code Forms (TDCF), which was due to be completed in November 2010, would have to be completed by Meteorological Services of CMO Member States before the deadline for migration to TDCF by the National Weather Service of the United States, which was October 2013. In addition, the deadline for the migration of the aviation code forms of METAR, SPECI, TAF and SIGMET from the traditional alphanumeric forms to either eXtensible Markup Language (XML) or Geography Markup Language (GML) was 2016.
5. The Disaster Risk Reduction Programme (DRR) of the WMO had developed a work plan which included a coordinated DRR and climate adaptation national/regional capacity development projects that would assist the National Meteorological and Hydrological Services (NMHSs) to deliver meteorological, hydrological and climate services within a comprehensive service delivery framework, underpinned by quality management framework principles.
6. The discussion at the level of the WMO Executive Council about a perceived lack of Internal Auditing capabilities needed for conformance with the ISO 9000 series of QM Standards, noting that mutual QMS audits “twinning or mentoring” involving qualified internal auditors from nearby WMO Members would be a cost effective solution. Such a ‘twinning’ or ‘mentoring’ framework was expected to particularly help Small Island Developing States and LDCs to satisfy ISO principles of an independent audit.

8.3 The Council sought confirmation from the Representative of the **International Civil Aviation Organization** (ICAO) about the dates of their requirement for implementation and certification of QMS, as identified in paragraph 5.5 of the Report of the 2012 Meeting of Directors of Meteorological Service. The paragraph was revised and accepted by Council.

8.4 **The Council:**

**Endorsed** the revised Report of the Meeting of Directors of Meteorological Services.

**9. CMO WEATHER RADAR NETWORK/PROJECTS**

**9(a) Status of the CMO Radar Network Operation**

9.1 The Council was informed that the Belize, Barbados and Guyana radars worked quite steadily through 2012, capturing all the episodes of severe weather. However, the websites of both the Jamaica and the Trinidad and Tobago Meteorological Services indicated for a prolonged period “*Radar temporarily down.*”

9.2 It was noted that the regional Hurricane Operational Plan stipulated that “*It is essential that continuous radar observations be taken whenever a tropical cyclone is under surveillance by a particular radar, and that all responsible officials co-operate to ensure that the observations are distributed to hurricane centres and other concerned meteorological offices*.” It was further noted that Article 6.2 of the *Memorandum of Understanding* on the EU-funded radars, signed by the relevant Governments, states that “*The Government will endeavour to ensure that the Radar Station operates in a continuous mode 24 hours-per-day, 365-366 days per year.*”

9.3 The Council also noted that while significant technical issues can and do arise with the radars, it was recommended that the relevant Meteorological Services should put in place policies that would ensure adherence to the agreements as closely as possible.

9.4 The Council recalled that at its 51st Session (Dominica, 2011), it discussed at length the significant electromagnetic interference impacting on the collection of radar data in Barbados. The source of the interference could be a transmitter to the west of the radar that might be encroaching on the radar frequency. It was noted that that the interference blocks out information in the direction of and directly over the southern part of St. Vincent, which was a part of the forecast and warning responsibility of the Barbados Meteorological Service.

9.4 At its 51st Session the Council had recommended that before any technical solution was considered, Barbados should:

1. have the radar interference problem thoroughly investigated by the appropriate local authority in collaboration with the Meteorological Office and the CIMH; and
2. prevent or minimize masking of the radar beam by tall trees.

9.5 It was noted that the Council has previously discussed the agreed creation of a composite of the radars in CMO Member States with other existing radars in the region. Progress in getting the regional composite system working had not been satisfactory. Most of the issues encountered were of a software nature. As the technical issues were resolved, others emerged, either at the transmitting radar site, at the intermediary point in Washington or at the recipient end in Martinique. During the past year, the CMO Headquarters, in conjunction with the Barbados Meteorological Service, had been using the Barbados radar to conduct various tests, but all other sites needed to be committed to making the composite a reality.

9.6 Specific arrangements were also required to make very detailed base reflectivity and Doppler-generated products specifically available to the US National Hurricane Center in Miami, for use in the Regional Hurricane Operational Plan, and to WMO-designated Numerical Weather Prediction (NWP) centres via ftp servers. These arrangements were also expected to form part of the wider regional component of the *WMO Integrated Global Observing System* (WIGOS), the formulation of which the CMO Headquarters was playing an active role, in collaboration with the WMO *Commission for Basic Systems* (CBS), the WMO Secretariat and the US National Weather Service.

9.7 **The Council:**

(a) **Urged** the Meteorological Services operating radars to fully publicize their Websites, including the availability of radar images, and for Services in neighbouring States to also publicize those sites and give access to the radars through their own Websites;

(b) **Noted** the need for policies aimed at ensuring radar operations as continuous as possible and the commitment to wide distribution of data, including specific data to special centres, such as the US National Hurricane Center and the composite centre in Martinique;

(c) **Reiterated** the need for Barbados to have the problem of interference with the radar signal thoroughly investigated by the appropriate local authority in collaboration with the Meteorological Service and the CIMH, with a view to curtailing any illegal transmission if found to be the cause, or to recommend other feasible solutions; and that arrangements be established to prevent or minimize masking of the radar beam by tall trees.

9(b) **Operations of the Central Radar Spare Depot and Maintenance Support Facility at CIMH**

9.8 It was recalled that a ***Central Spares Depot and Maintenance Support Facility*** was established at the CIMH under the EU-funded CMO Radar Project. Each radar site under that Project was provided with two sets of radar spares, while a further set was supplied to the CIMH as central spares for the region.

9.9 From the onset of the radar Project, the Council had decided that the Central Spares Depot/Facility would operate on a supply and replace basis, so that if a radar site required any spares from the CIMH, which would normally be as an emergency, the CIMH would supply the component, and the Member State would pay the CIMH for the part, so that the CIMH could purchase a replacement for the Depot/Facility. The CIMH set up a computerized Central Spares Depot/Facility to manage the system and has prepared the Rules and Procedures of the Facility.

9.10 The Principal informed the Council about the status of the Depot Spares. He indicated that a storage unit was constructed and software created to keep an inventory of the spares. CIMH would provide a list of spares with part numbers and unit costs via the Internet. The radar host countries would be able to order parts via the website, the rules about the ordering of the spares have been drafted and agreement reached.

9.11 **The Council:**

**Noted** the operations of the Central Spares Depot and Maintenance Support Facility established at **CIMH**; undertook further discussions on the pros and cons for the establishment of and mechanisms for operating a radar spares Trust Fund, and provided guidance on the way forward, as appropriate.

**9 (c) Cayman Islands Weather Radar Project**

9.12 The CMO Headquarters was assisting the Government of the **Cayman Islands** with a project to install a new Doppler weather radar in Grand Cayman. The Cayman Islands Doppler Weather Radar Project was nearing completion. The CMO-designed reinforced radar tower had been constructed while, after a few minor technical delays, the installation and testing of the powerful, high-precision METEOR 1600 S-banddual polarized Doppler radar, manufactured by the Selex-Gematronik Company of Germany, was scheduled to take place during December 2012 and January 2013.

9.13 Training of radar technicians from the Cayman Islands was conducted at the manufacturer’s facilities in Germany in April 2012. After a period of on-the-job training in the Cayman Islands, the technicians would take part in the installation and testing with the manufacturer’s engineers.

9.14 Commissioning of the Cayman Islands radar would take place about February 2013 or as soon as possible thereafter. Once implemented, the new Doppler weather radar would form the centrepiece of the Cayman Islands early warning system and would be integrated into the full regional radar network.

**9.15 The Council**

**Noted** the near completion of the Radar Project in the Cayman Islands and the impending completion of complete regional radar coverage.

**10. Other Projects and Proposals**

10.1 The Council, aware of the fact that weather, climate and water are at the heart of the environmental issues affecting the planet, emphasized that the Meteorological and Hydrometeorological Services (NMHSs) in the Caribbean must provide accurate information, analyses and timely forecasts of hazardous weather-related conditions that affect sustainable development. At the same time, the Council discussed the role of the NMHSs in also providing the appropriate data and scientific-basis for studies on the long-term potential impacts of both natural and human-induced climate changes on the environment. In the process, it recognized that the contribution of meteorology and related sciences to these global studies was driven by the constant adaptation to and use of technological changes and opportunities.

10.2 In this regard, the Council was brought up-to-date on many of the projects being undertaken or planned and noted that most had observational and scientific data information components involving the use of new or modern technologies. Specifically, the Council discussed the progress of implementation of the following projects which involved CMO Member States and partner organizations, such as the *World Meteorological Organization* (WMO) and the *Association of Caribbean States* (ACS).

**(a) WMO CARIB-HYCOS Project - Implementation Status**

10.3 The Council recalled that WMO launched the ***World Hydrological Cycle Observation System*** (WHYCOS) in 1993. The aim of WHYCOS was the development of water resources information systems to assist WMO Member countries to improve their water management, mitigate the impact of water-related disasters, such as floods and droughts, and contribute to regional and global studies of the impact of climate change on water resources. A series of HYCOS components around the world were being used to develop WHYCOS. Carib-HYCOS, a component of WHYCOS, had been organized into two components, one addressing the needs of the Caribbean Island Countries (CIC) and the other, the needs of the mainland countries of the Caribbean Basin. The implementation of the Islands Component of Carib-HYCOS started in 2008, with CMO being a member of the Project’s Steering Committee (PSC).

10.4 The specific aims of Carib-HYCOS Project were the reinforcement of national capabilities in water resources management and the promotion of international cooperation (exchange of data, technology and expertise). The Island Component of the Carib-HYCOS project would therefore help develop the technical skills of the National Hydrological Services of the participating States regarding the collection, maintenance, analysis and application of reliable and high-quality water resources data, in order to promote a more sustainable development and management of freshwater resources.

10.5 Eleven Caribbean islands States were participating in the Project, namely ***Antigua and Barbuda*, *Barbados***, Cuba, ***Dominica***, the Dominican Republic, Guadeloupe, Haiti, ***Jamaica***, Martinique, ***Saint Lucia*** and ***Trinidad and Tobago***. The following agencies were involved in Project execution:

Supervising Agency WMO

Executing Agency Institut de Recherche pour le Développement (IRD) of France

10.6 The Project Regional Centre (PRC) was being hosted by IRD in Martinique, and included the Project Management Unit (PMU) and a server for a regional database. The PMU was being assisted by the ***Caribbean Institute for Meteorology and Hydrology*** (CIMH) and the *Instituto de Meteorologia* (INSMET, Institute of Meteorology) of Cuba for the English- and Spanish-speaking countries respectively.

10.7 Since the start of Project implementation in 2008, several actions were implemented to address these needs identified in evaluation of hydrometeorological measurement networks in each participating State during the first phase, including:

* Purchasing and installing material to upgrade existing hydrological networks;
* Providing each National Hydrometeorological Service with a centralized database management system;
* Running training programmes on software installation, instrument installation and maintenance;
* Creating a regional hydrometeorological database, an Internet Website and an FTP server to collect and transfer data remotely.

10.8 The fourth Project Steering Committee meeting was scheduled to take place in Guadeloupe in November 2012. The Committee session would conduct a final evaluation of the Project impacts and this would essentially bring this implementation phase to an end. A major task of the Steering Committee would be to consider whether or not a second phase of the Project was needed. The purpose of a second phase would be to continue the initiatives of the Project and to develop activities to further knowledge and data sharing with various end-users of hydrometeorological data, especially with regard to monitoring the impacts of climate and adaptation climate change.

**(b) Finland Initiative - Strengthening Hydrometeorological Operations and Services in the Caribbean (SHOCS**)

10.9 The Ministry for Foreign Affairs of Finland (MFA) has provided 500,000 Euros to carry out a needs assessment and feasibility study project entitled “Strengthening Hydrometeorological Operations and Services in the Caribbean (SHOCS)”. The Project commenced in 2010 and 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 is a member of the Project Board, along with the ACS, WMO, the Caribbean Emergency Management Agency (CDEMA) and FMI.

10.10 The beneficiaries of the Project have been the Meteorological and Hydrological Services and Disaster Management Agencies of the above States, along with the CIMH as a regional institution. The feasibility phase of SHOCS (Phase I) was due to be completed at the end of 2012. Results of SHOCS Phase I project during the period 2010-2012 can be summarized as follows:

* Increased Capacity in the Caribbean on the development methods for Multi-hazard Early Warning Systems (MHEWS) and Disaster Risk Reduction. National Meteorological and Hydrological Services (NMHSs) and Disaster Management Agencies (DMAs) of the 16 beneficiary SIDS have been supported to participate in a few of the MHEWS/DRR-related regional workshops and meetings in the Caribbean.
* Increased capacity of the NMHSs in developing Quality Management Systems. Two inter-linked training workshops on QMS for Aeronautical Meteorological Services were organized in May and Dec 2011 with participation from the 16 beneficiary and five other Caribbean SIDS Meteorological Services/Offices.
* Capacity assessment on future needs of development of MHEWS and DRR. Feasibility Assessment Missions to visit the 16 beneficiary SIDS were carried out in Dec 2011 – March 2012. Meetings, lasting 1-2 days, included presentations and interaction between invited representatives from the NMHS, DMA and related regional and local organizations. Reports from these meetings and the summary assessment report are under review.

10.11 The results of SHOCS Phase I have been and would be discussed at some meetings, symposia or workshops in November-December 2012, which included the CMO Meeting of Directors of Meteorological Services that preceded the CMC52 session. The meetings at the end of 2012 would be used to seek guidance for the preparation of the next phase of SHOCS.

10.12 Council was informed that the Overall Objective and Purpose of SHOCS II had been formulated as:

**Objective of SHOCS II:** *Caribbean societies are better prepared, able to respond and to manage risks related to severe weather and hydro-meteorological hazards. Societies have also attained stronger resilience on adverse impacts of climate and long term natural hazards.*

**Purpose of SHOCS II:** To*Enhance the role and strengthen the capacity of National Meteorological and Hydrological Institutions and Disaster Management Agencies in ACS Member States in the provision of early warning services and preparedness to mitigate impacts of natural hazards.*

10.13 Within the tentative SHOCS II proposals above, there are items which were viewed as investments by the funding-agency. These are:

1. Upgrade of workstations and server hardware at some SIDS NMSs (including Cuba);

(ii) Enhancement of AWS networks; acquire/upgrade non-corrosive AWS technology;

(iii) Acquisition of on-line lightning detection data for a pilot period (option for 1-3 new lightning detection sensors);

(iv) Acquisition of TV-broadcasting software with an option for shared regional use.

(c) Lightning Detection System

10.14 Council was reminded that for some years, the CMO Headquarters indicated its intention to establish a ground-based *Lightning Detection System* in the region in partnership with the Meteorological Service of France [Météo-France]. The CMO HQ has studied this system in great detail and was of the opinion that such a system was very necessary in the Caribbean. During the 2012 Meeting of Directors of Meteorological Services, which preceded the 52nd session of the Council, a demonstration of a long-range lightning detection system was made.

10.15 Ground-based systems use triangulation from sensors at multiple locations to determine location of the lightning flash. Therefore, for this higher resolution to be achieved, it would be necessary to install some lightning sensors along the island chain to allow for adequate triangulation using the commonly known phenomenon “lightning spherics”.

10.16 The Council was informed that there were three basic options for consideration for an island-chain set of sensors;

(i) The number and location of processing units for the data;

(ii) The mode of transmission among the countries involved; and

(iii) The method of paying for the system.

10.17 A further issue for consideration was to build onto existing lightning systems owned by non-regional entities and then subscribe to the service, as was done by many countries. One such possibility had already been identified under the SHOCS II Project. Under this scenario, a suitable mechanism to subscribe to the system would need to be considered by the Council. The *Delegate for Trinidad and Tobago* indicated that by mid-2013, they should have a Vaisala lightning detection system which would cover an area of fifty kilometres centred on the Piarco International Airport.

**(d)** **Other CMO Project Proposals**

10.18 At several of the previous sessions, the CMO Headquarters brought to the attention of the Council, its proposal to organize or participate in several projects in the near future aimed at reviewing, updating, improving and even widening the observational networks and data collection in the Caribbean, to ensure the constant availability of the highest quality data. Several of the planned activities in connection with proposed projects continue to be slow because of the lack of resources. Attempts would continue to secure funding for project activities. However, the CMO was collaborating with other partner organizations to implement the following activities that would ultimately involve the Meteorological Services of all Member States:

1. **Regional component of the WMO Integrated Global Observing System (WIGOS): -** CMO Headquarters was taking on a major role in planning and implementing this regional component. In 2011, the Executive Council of the WMO established an ***Inter-Commission Coordination Group on WIGOS*** (ICG-WIGOS) for the implementation process. The Coordinating Director of the CMO is the WMO Executive Council’s Focal Point for *North America, Central America and the Caribbean* on that ICG. The Coordinating Director also provided the services of the Science and Technology Officer of the CMO Headquarters to serve as co-chair of the Regional Task Team for WIGOS implementation. The first regional planning meeting for WIGOS implementation would be held in conjunction with the South America region in November 2012 in Costa Rica.

This meeting would also set guidelines for a *Regional Implementation Phase* for WIGOS, from which the activities of the National Meteorological and Hydrometeorological Services (NMHS) of CMO Member States would evolve. In this regard, Council re-emphasised the need for the NMHSs to designate one or two staff members to be their National Focal Point for WIGOS. Closely tied to the WIGOS implementation was the need for the NMHSs to check or restore the operational status of the many Automatic Weather Stations (AWS) that they operate, and to compile the related metadata for all national systems that would be a part of WIGOS.

1. ***Radar Calibration and* Radar Emission Survey: -** Since the new weather radars in the English-speaking Caribbean were fully operational, funding would continue to be sought to undertake specific calibration of the weather radars in CMO Member States against ground-based rainfall networks at different times of the year. Although the safety of weather radars was well documented internationally, efforts would also continue to commission a survey by an independent and reputable institution to test and verify the conformity of the radar emissions to international health and safety standards.

10.19 **The Council:**

**Noted** the updated information on (i) WMO Carib-HYCOS Project, (ii) The Finland-funded Project for the Strengthening Hydrometeorological Operations and Services in the Central America and the Caribbean (SHOCS), (iii) Lightning Detection System and (iv) Other projects planned by or involving the CMO Headquarters.

**11.** **ANY OTHER BUSINESS**

11.1 The Coordinating Director of the CMO informed the Council of a project involving the CIMH that dealt, in a significant part, with meteorological data rescue in several CMO Member States. The project activities included interviews with National Meteorological and Hydrological Services about the data collected, including ownership and use by third parties. The Coordinating Director was of the opinion that the views expressed on the data were, for the most part, in clear violation of major international agreements on the sharing of meteorological and hydrological data and products, particularly:

* **WMO Resolutions 40** of the 12th WMO Congress (1995) - “*WMO policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities”;*
* **WMO Resolution 25** *of the* 13th WMO Congress (1999) - “Exchange of Hydrological Data and Products”.

11.2 These two international agreements identify the types of data that are freely exchanged and the conditions under which charges for data and products can or would apply. In addition, the 43rd session (2003) of the Caribbean Meteorological Council, as the *supreme body of the CMO*, itself made decisions on the use and distribution by the CIMH of such data and products originating in Member States. The Coordinating Director strongly urged that all National Meteorological and Hydrological Services become very familiar with these two Resolutions and the CMC43 decision, and revisit the input into the project mentioned above and other similar ones to avoid any negative implications at the national level.

11.3 In this regard, the **Council decided** that these Resolutions and decision of Council will be re-circulated to Member States and included in the final report of CMC52. These are reproduced in **ANNEX VI** and **ANNEX VII**.

11.4 The Council discussed one of the official organs of the CMO, namely the ***Caribbean Meteorological Foundation*** (CMF), which had only been functional for a brief period in the early days after the establishment of the CMO. Under the Agreement establishing the CMO, “*the purpose of the Foundation is to raise funds for the promotion through the Institute of the study and research of meteorology and allied sciences.*” The Council was of the view that a reactivated and properly functioning CMF could serve as a source of funding for the CIMH, particularly since research activities had clearly become, over the years, a routine part of the functions of the CIMH. The Council urged the CIMH and the CMO Headquarters to explore the possibilities for a “restart” of CMF and report the findings to the next session of the Council in 2013.

11.5 A question was asked about the valid period of the CIMH Principal’s contract with the Council. In the exchange of opinions, there were differing views on whether it was a fixed-term or permanent contract. The Coordinating Director and the Chairman of the CIMH Board of Governors agreed to meet once more with the Principal on this issue, especially if there were any requests or requirements to alter the terms and conditions of his employment.

11.6 A discussion took place on the governance of the CIMH and the legal composition of the Board of Governors (BoG). At the centre of the discussion was whether or not the membership of the BoG was made up of Permanent Secretaries of Member States or otherwise. The Coordinating Director indicated that while the composition of the Board did not make such a stipulation when the CMO was established, there may have been changes made by the Council over the years. The majority view in the Council session was that participation in Board sessions by representatives of Member States other than a Permanent Secretary was valid as long as official notification was given to the Board before a session. Nonetheless, the Principal assured the Council that he would investigate the issue through all decisions of the Board and Council and report back to the next Council session in 2013.

11.7 Noting the comments of the Council Chairman in his opening remarks to the session about the absence of the CARICOM Secretariat (paragraph 1.4), other Member States reiterated their concern and disappointment that the CARICOM Secretariat had not attended three of the last four sessions of the Council. Members were aware that, in the lead up to the 1973 Treaty of Chaguaramas, the Seventh Commonwealth Caribbean *Heads of Government Conference*, held at Chaguaramas in Trinidad and Tobago from 9 to 14 October 1972, decided on future arrangements for the regional Meteorological Service. It agreed that a Caribbean Meteorological Organization be established. The *Heads of Government Conference* also agreed that the CMO should have the status of a “Specialized Agency” with functional autonomy with effect from 1 January 1974 and that its Headquarters Unit should be organizationally integrated into the Caribbean Regional Secretariat, but remain located in Trinidad and Tobago. The Council urged the Chairman to bring this matter to the attention of the Secretary-General of CARICOM.

11.8 Mr Rob Masters of the WMO briefed the Council on the development of the prototype ***WMO Country Profile Data Base*** ([www.wmo.int/cpdb](http://www.wmo.int/cpdb)) and the draft E-guide on the ***Role and Operations of National Meteorological Services*** ([www.wmo.int/pages/prog/dra/eguides](http://www.wmo.int/pages/prog/dra/eguides) User name: 123wmo; Password: wmo123). He noted that the two tools were part of the implementation of the recently approved *WMO Capacity Development Strategy* and aimed at assisting the Directors of NMS to improve their services. To allow these tools to be used operationally sometime in 2013, Mr Masters indicated comments and updated country information would be welcome.

**12. DATE AND VENUE OF CMC53 (2013)**

12.1 The Council was informed by the *Principal Delegate of Barbados* that he would explore the possibility of Barbados hosting the 53rd Session of the Council and related meetings in 2013. He indicated that he would make every effort to confirm the offer early in 2013. The CMO Headquarters indicated that it would liaise with the Government of Barbados in due course. The Council also was very pleased to receive an offer from the Government of Anguilla, made by its *Principal Delegate*, *Honourable Evan Gumbs,* to host the 54th session in 2014.

12.2 **The Council:**

**Thanked** Barbados for exploring the possibility of hosting these meetings in 2013 and Anguilla for its offer for 2014;

**Expressed** its thanks to the Chair for his excellent conduct of the session and to the Government of Saint Lucia for the warm hospitality extended and the excellent arrangements put in place for the conduct of the business of CMC52.

**Close of Meeting**

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

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A G E N D A

1. OPENING OF SESSION AND ELECTION OF CHAIRMAN
2. ADOPTION OF AGENDA AND PROCEDURAL MATTERS
3. CMO EXECUTIVE REPORTS
4. Coordinating Director’s Report
5. CIMH Principal’s Report
6. CIMH Board of Governors’ Report
7. STATUS OF ACTIONS FROM PREVIOUS SESSION
8. SPECIAL CMO AND WMO ISSUES
9. Outcome/Highlights of the 64th Executive Council (EC) of the World Meteorological Organization - Five Priorities for 2012-2015
10. Extraordinary Session of the World Meteorological Congress 2012

- Implementation of the *Global Framework for Climate Services (GFCS)*

1. Aeronautical Meteorological Services – Current and Future Activities

(1) Achieving a certifiable Quality Management System (QMS) – the November 2012 deadline

(2) Undertaking Competency Assessments

* + 1. QMS Auditing – developing a system among CMO Member States

1. WMO/UNCCD 2013 High-level Meeting on National Drought Policy (HMNDP) - Towards More Drought Resilient Societies
2. FINANCIAL REPORTS
3. Status of Refundable Balances
4. CMO HQ - Auditor’s Report
5. Statement of Contributions and Arrears (CMO HQ & CIMH)
6. CMO BUDGETS (Headquarters Unit, CRN and Radar, CIMH
7. CMOHQ Budget Estimates for 2013
8. CIMH Budget Estimates for 2013
9. ANNUAL MEETING OF THE DIRECTORS OF METEOROLOGICAL SERVICES
10. CMO WEATHER RADAR NETWORK/PROJECTS
11. Status of CMO Radar Network Operations
12. Operations of the Central Radar Spares Facility
13. Cayman Islands Radar Project
14. OTHER PROJECT UPDATES AND PROPOSALS
15. CARIB-HYCOS Project – Project termination – future activities
16. Finland Initiative - Strengthening Hydrometeorological Operations and Services in the Central America and the Caribbean (SHOCS)

– Project closure & achievements

– Proposals for SHOCS Phase II

1. Lightning Detection System
2. Other CMO Projects/Proposals
3. OTHER MATTERS
4. DATE AND VENUE OF CMC53 (2013)

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**ANNUAL MEETING OF THE CARIBBEAN METEOROLOGICAL COUNCIL**

**RODNEY BAY, SAINT LUCIA**

**15-16TH NOVEMBER 2012**

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**The Caribbean Meteorological Organization (CMO)**



**The CMO comprises the following sixteen (16) Member States**:

Anguilla, Antigua and Barbuda, Barbados, Belize, British Virgin Islands, Cayman Islands, Dominica, Grenada, Guyana, Jamaica, Montserrat, St. Kitts/Nevis, Saint Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, Turks and Caicos Islands.

CMO Member States that are also Members of the **World Meteorological Organization** (WMO):

Member States: Antigua and Barbuda, Barbados, Belize, Dominica, Guyana, Jamaica, Saint Lucia, Trinidad and Tobago

Member Territory: Anguilla, British Virgin Islands, Cayman Islands, Montserrat and the Turks and Caicos Islands collectively form the British Caribbean Territories (BCT)

Staff members of the WMO Secretariat originating from the Member States of the CMO (2012):

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name** | **Country** | **Years** | **Position** | **P/G level** |
| John Wickham | Barbados | 1965 - 1967 | Administrative Assistant (DSG’s Office) | P |
| Donat Vickers | Jamaica | 1978 - 1991 | Senior Scientific Officer (TCP) | P |
| Geoffrey Rudder | Barbados | 1979 to 1993 | Chief, Training Activities Division | P |
| John Bassier | Guyana | 1982 to 2003 | Chief, Hydrology & Water Resources Division (HWR) | P |
| Janet Forbes (Ms) | Jamaica | 1991 – to present | Senior Secretary (SGO) | G |
| Tyrone Sutherland | Saint Lucia | 1992 to 1999 | Scientific Officer (TCP); Executive Assistant to Secretary General (SGO) | P |
| Rabindranath Maharaj | Trinidad and Tobago | 1999-2004 | Scientific Officer (PWS) | P |
| Natalie Burke (Ms) | Barbados | 2012 – to present | External Relations Officer (CER) | P |
| Sylvie Castonguay (Ms) | Dominica | 2012 – to present | Editor (CER/CPA) | P |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **HEADQUARTERS UNIT ESTIMATES 2013** |  |  |

ANNEX IV and ANNEX V available on request.



**WORLD METEOROLOGICAL ORGANIZATION**

The World Meteorological Organization (WMO) is a specialized agency of the **United Nations**. It is the UN system's authoritative voice on the state and behaviour of the Earth's atmosphere, its interaction with the oceans, the climate it produces and the resulting distribution of water resources.

WMO has a membership of 191 Member States and Territories (on 1 January 2013). It originated from the *International Meteorological Organization* (IMO), which was founded in 1873. Established in 1950, WMO became the specialized agency of the United Nations in 1951 for meteorology (weather and climate), operational hydrology and related geophysical sciences.

As weather, climate and the water cycle know no national boundaries, international cooperation at a global scale is essential for the development of meteorology and operational hydrology as well as to reap the benefits from their application. WMO provides the framework for such international cooperation.

Since its establishment, WMO has played a unique and powerful role in contributing to the safety and welfare of humanity. Under WMO leadership and within the framework of WMO programmes, *National Meteorological and Hydrological Services* contribute substantially to the protection of life and property against natural disasters, to safeguarding the environment and to enhancing the economic and social well-being of all sectors of society in areas such as food security, water resources and transport.

WMO promotes cooperation in the establishment of networks for making meteorological, climatological, hydrological and geophysical observations, as well as the exchange, processing and standardization of related data, and assists technology transfer, training and research. It also fosters collaboration between the National Meteorological and Hydrological Services of its Members and furthers the application of meteorology to public weather services, agriculture, aviation, shipping, the environment, water issues and the mitigation of the impacts of natural disasters.

WMO facilitates the free and unrestricted exchange of data and information, products and services in real- or near-real time on matters relating to safety and security of society, economic welfare and the protection of the environment. It contributes to policy formulation in these areas at national and international levels.

In the specific case of weather-, climate and water-related hazards, which account for nearly 90% of all natural disasters, WMO's programmes provide vital information for the advance warnings that save lives and reduce damage to property and the environment. WMO also contributes to reducing the impacts of human-induced disasters, such as those associated with chemical and nuclear accidents, forest fire and volcanic ash. Studies have shown that, apart from the incalculable benefit to human well-being, every dollar invested in meteorological and hydrological services produces an economic return many times greater, often ten times or more.

WMO plays a leading role in international efforts to monitor and protect the environment through its Programmes. In collaboration with other UN agencies and the National Meteorological and Hydrological Services, WMO supports the implementation of a number of environmental conventions and is instrumental in providing advice and assessments to governments on related matters. These activities contribute towards ensuring the sustainable development and well-being of nations.

# STRUCTURE OF THE ORGANIZATION

The **World Meteorological Congress** is the *supreme body* of the Organization. It brings together the delegates of Members once every four years to determine general policies for the fulfilment of the purposes of the Organization, to approve long-term plans, to authorize maximum expenditure for the following financial period, to adopt Technical Regulations relating to international meteorological and operational hydrological practice, to elect the President and Vice-Presidents of the Organization and members of the Executive Council and to appoint the Secretary-General.

The **Executive Council**, the *executive body* of the Organization, is responsible to Congress for the coordination of the programmes of the Organization and the utilization of its budgetary resources in accordance with the decision of Congress. Composed of 37 directors of National Meteorological or Hydrometeorological Services, it meets at least once a year to implement the programmes approved by Congress and review the activities of the Organization.

The **six regional associations** are each composed of Members whose task it is to coordinate meteorological, hydrological and related activities within their respective Regions (Region I - Africa; Region II - Asia; Region III - South America; Region IV - North America, Central America and the Caribbean; Region V - South-West Pacific; and Region VI - Europe).

The **eight technical commissions**, composed of experts designated by Members, study matters within their specific areas of competence (technical commissions have been established for basic systems, instruments and methods of observation, atmospheric sciences, aeronautical meteorology, agricultural meteorology, oceanography and marine meteorology (jointly with IOC of UNESCO), hydrology and climatology).

The **Secretariat**, based in Geneva, Switzerland, is headed by the Secretary-General.



**WORLD METEOROLOGICAL ORGANIZATION**

**International exchange of data and products**

WMO facilitates the free and unrestricted exchange of data and information, products and services in real- or near-real time on matters relating to safety and security of society, economic welfare and the protection of the environment.

**WMO DATA POLICY AND EXCHANGE**

**WMO Resolutions 40 and 25**

**Summary and Purpose of Document**

The document provides:

* the WMO policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities (Resolution 40) approved at Cg-XII (1995); and
* the WMO policy and practice for the exchange of hydrological data and products (Resolution 25) approved at Cg-XIII (1999)

***Preamble to Resolution 40***:

|  |
| --- |
| The Twelfth World Meteorological Congress (1995) adopted Resolution 40 **"WMO Policy and Practice for the Exchange of Meteorological and Related data and products including Guidelines on Relationships in Commercial Meteorological Activities"** to facilitate worldwide co-operation in the establishment of observing networks and to promote the exchange of meteorological and related information in the interest of all nations. |

When adopting the Resolution, Congress reminded Members of their obligations, under Article 2 of the WMO Convention, to facilitate world-wide co-operation in the establishment of observing networks and to promote the exchange of meteorological and related information in the interest of all nations, and urged Members to implement the practice on the international exchange of meteorological and related data and products.

According to the practice adopted by Congress, all meteorological and related data and products required to fulfil Members’ obligations under WMO Programmes would be encompassed by the combination of **essential** and **additional** data and products exchanged by Members.

In **Annex 1 to Resolution 40** (Cg-XII), Congress urged Members to make known to all Members, through the WMO Secretariat, those additional meteorological and related data and products on which Members placed conditions related to their re-export for commercial purposes outside the receiving country (or group of countries forming a single economic group). Congress believed that, as a result of the implementation of the practice by all Members, the volume of data and products exchanged internationally will increase.

Notifications to "additional" data and products and the conditions some Members have attached to these data are available and via the *Operational Newsletter of the World Weather Watch.*

Note: In WMO terminology, the word “***Member***”, with a capital M, refers to a Member State. The word “member” with a small m, refers to individuals, such as members of a committee.

**DATA POLICY AND EXCHANGE**

**1. WMO Resolution 40 (Cg-XII)**

**WMO policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities**

**THE CONGRESS**,

*Noting*:

(1) Resolution 23 (EC-XLII) — Guidelines on international aspects of provision of basic and special meteorological services,

(2) Resolution 20 (EC-XLVI) — WMO policy on the exchange of meteorological and related data and products,

(3) Resolution 21 (EC-XLVI) — Proposed new practice for the exchange of meteorological and related data and products,

(4) Resolution 22 (EC-XLVI) — WMO guidelines on commercial activities,

(5) The report to Twelfth Congress of the chairman of the Executive Council Working Group on the Commercialization of Meteorological and Hydrological Services, established at the request of Eleventh Congress by the Executive Council in Resolution 2 (EC-XLIII) — Working Group on the Commercialization of Meteorological and Hydrological Services,

*Recalling:*

(1) The general policies of the Organization, as set down in the Third WMO Long-term Plan (1992–2001) adopted by Eleventh Congress, which include, inter alia, that Members should reaffirm their commitment to the free and unrestricted international exchange of basic meteorological data and products, as defined in WMO Programmes (Third WMO Long-term Plan, Part I, Chapter 4, paragraph 127),

(2) The concern expressed by Eleventh Congress that commercial meteorological activities had the potential to undermine the free exchange of meteorological data and products between national Meteorological Services,

*Considering:*

(1) The continuing fundamental importance, for the provision of meteorological services in all countries, of the exchange of meteorological data and products between WMO Members’ national Meteorological or Hydrometeorological Services (NMSs), WMCs, and RSMCs of the WWW Programme,

(2) Other programmes of world importance such as GCOS, GOOS, WCRP, and IGOSS, which are sponsored and implemented in cooperation with other international organizations,

(3) The basic role of WMO Members’ NMSs in furthering applications of meteorology to all human activities,

(4) The call by the world leaders at UNCED (Brazil, 1992) for increasing global commitment to exchange scientific data and analysis and for promoting access to strengthened systematic observations,

(5) The provision in the UN/FCCC committing all Parties to the Convention to promote and cooperate in the full, open, and prompt exchange of information related to the climate system and climate change,

*Recognizing:*

(1) The increasing requirement for the global exchange of all types of environmental data in addition to the established ongoing exchange of meteorological data and products under the auspices of the WWW,

(2) The basic responsibility of Members and their NMSs to provide universal services in support of safety, security and economic benefits for the peoples of their countries,

(3) The dependence of Members and their NMSs on the stable, cooperative international exchange of meteorological and related data and products for discharging their responsibilities,

(4) The continuing requirement for Governments to provide for the meteorological infrastructure of their countries,

(5) The continuing need for, and benefits from, strengthening the capabilities of NMSs, in particular in developing countries, to improve the provision of services,

(6) The dependence of the research and education communities on access to meteorological and related data and products,

(7) The right of Governments to choose the manner by, and the extent to, which they make data and products available domestically or for international exchange,

*Recognizing further:*

(1) The existence of a trend towards the commercialization of many meteorological and hydrological activities,

(2) The requirement by some Members that their NMSs initiate or increase their commercial activities,

(3) The risk arising from commercialization to the established system of free and unrestricted exchange of data and products, which forms the basis for the WWW, and to global cooperation in meteorology,

(4) Both positive and negative impacts on the capacities, expertise and development of NMSs, and particularly those of developing countries, from commercial operations within their territories by the commercial sector including the commercial activities of other NMSs,

Reminds Members of their obligations under Article 2 of the WMO Convention to facilitate worldwide cooperation in the establishment of observing networks and to promote the exchange of meteorological and related information; and of the need to ensure stable ongoing commitment of resources to meet this obligation in the common interest of all nations;

**Adopts the following policy on the international exchange of meteorological and related data and products:**

As a fundamental principle of the World Meteorological Organization (WMO), and in consonance with the expanding requirements for its scientific and technical expertise, WMO commits itself to broadening and enhancing the free and unrestricted**1** international exchange of meteorological and related data and products;

**Adopts the following practice on the international exchange of meteorological and related data and products2:**

(1) Members shall provide on a free and unrestricted basis essential data and products which are necessary for the provision of services in support of the protection of life and property and the well-being of all nations, particularly those basic data and products, as, at a minimum, described in Annex 1 to this resolution, required to describe and forecast accurately weather and climate, and support WMO Programmes;

(2) Members should also provide the additional data and products which are required to sustain WMO Programmes at the global, regional, and national levels and, further, as agreed, to assist other Members in the provision of meteorological services in their countries. While increasing the volume of data and products available to all Members by providing these additional data and products, it is understood that WMO Members may be justified in placing conditions on their re-export for commercial purposes outside of the receiving country or group of countries forming a single economic group, for reasons such as national laws or costs of production;

(3) Members should provide to the research and education communities, for their non-commercial activities, free and unrestricted access to all data and products exchanged under the auspices of WMO with the understanding that their commercial activities are subject to the same conditions identified in Adopts (2) above;

Stresses that all meteorological and related data and products required to fulfil Members’ obligations under WMO Programmes will be encompassed by the combination of essential and additional data and products exchanged by Members;

**Urges Members to:**

(1) Strengthen their commitment to the free and unrestricted exchange of meteorological and related data and products;

(2) Increase the volume of data and products exchanged to meet the needs of WMO Programmes;

(3) Assist other Members, to the extent possible, and as agreed, by providing additional data and products in support of time-sensitive operations regarding severe weather warnings;

(4) Strengthen their commitments to the WMO and ICSU WDCs in their collection and supply of meteorological and related data and products on a free and unrestricted basis;

(5) Implement the practice on the international exchange of meteorological and related data and products, as described in Adopts (1) to (3) above;

(6) Make known to all Members, through the WMO Secretariat, those meteorological and related data and products which have conditions related to their re-export for commercial purposes outside of the receiving country or group of countries forming a single economic group;

(7) Make their best efforts to ensure that the conditions which have been applied by the originator of additional data and products are made known to initial and subsequent recipients;

**Further urges Members to comply with:**

(1) The Guidelines for Relations among National Meteorological or Hydrometeorological Services Regarding Commercial Activities as given in Annex 2 to this resolution;

(2) The Guidelines for Relations between National Meteorological or Hydrometeorological Services and the Commercial Sector as given in Annex 3 to this resolution;

Invites Members to provide explanation of the WMO policy, practice, and guidelines to the commercial sector and other appropriate agencies and organizations;

**Requests the Executive Council to:**

(1) Invite the president of CBS, in collaboration with the other technical commissions as appropriate, to provide advice and assistance on the technical aspects of implementation of the practice;

(2) Invite the president of CHy to continue his work on the issue of commercialization and the international exchange of hydrological data and products;

(3) Keep the implementation of this resolution under review and report to Thirteenth Congress;

**Requests the Secretary-General to:**

(1) Keep Members informed on the impacts of commercialization on WMO Programmes and to facilitate the exchange of relevant information on commercialization among NMSs;

(2) Report on a timely basis to all Members on those meteorological and related data and products on which Members have placed conditions related to their re-export for commercial purposes;

(3) Maintain effective coordination with IOC and other involved international organizations in respect of joint programmes during WMO’s implementation of the practice;

**Decides** to review the implementation of this resolution at Thirteenth Congress (1999).

1 “Free and unrestricted” means non-discriminatory and without charge [Resolution 23 (EC-XLII) — Guidelines on international aspects of provision of basic and special meteorological services]. “Without charge”, in the context of this resolution means at no more than the cost of reproduction and delivery, without charge for the data and products themselves.

2 See Annex IV to this resolution for definitions.

**Annex I** Data and products to be exchanged without charge and with no conditions on use

**Annex II** Guidelines for relations among National Meteorological or Hydrometeorological Services (NMSs) regarding commercial activities

**Annex III** Guidelines for relations between National Meteorological or Hydrometeorological Services (NMSs) and the commercial sector

**Annex IV** Definitions of terms in the practice and guidelines

**Annex I to Resolution 40 (Cg-XII)**

**Data and products to be exchanged without charge and with no conditions on use**

**Purpose**

The purpose of this listing of meteorological and related data and products is to identify a minimum set of data and products which are essential to support WMO Programmes and which Members shall exchange without charge and with no conditions on use. The meteorological and related data and products which are essential to support WMO Programmes include, in general, the data from the RBSNs and as many data as possible that will assist in defining the state of the atmosphere at least on a scale of the order of 200 km in the horizontal and six to 12 hours in time.

**Contents**

(1) Six-hourly surface synoptic data from RBSNs, e.g. data in SYNOP, BUFR or other general purpose WMO Code;

(2) All available in situ observations from the marine environment, e.g. data in SHIP, BUOY, BATHY, TESAC codes, etc.;

(3) All available aircraft reports, e.g. data in AMDAR, AIREP codes, etc.;

(4) All available data from upper air sounding networks, e.g. data in TEMP, PILOT, TEMP SHIP, PILOT SHIP codes etc.;

(5) All reports from the network of stations recommended by the regional associations as necessary to provide a good representation of climate, e.g. data in CLIMAT/CLIMAT TEMP and CLIMAT SHIP/CLIMAT TEMP SHIP codes, etc.;

(6) Products distributed by WMCs and RSMCs to meet their WMO obligations;

(7) Severe weather warnings and advisories for the protection of life and property targeted upon end-users;

(8) Those data and products from operational meteorological satellites that are agreed between WMO and satellite operators. (These should include data and products necessary for operations regarding severe weather warnings and tropical cyclone warnings).

**Annex II to Resolution 40 (Cg-XII)**

**Guidelines for relations among National Meteorological or Hydrometeorological Services (NMSs) regarding commercial activities**

**Purpose**

The purpose of these guidelines is to maintain and strengthen in the public interest the cooperative and supportive relations among NMSs in the face of differing national approaches to the growth of commercial meteorological activities.

**Guidelines**

In order to ensure the maintenance of the international exchange of data and products among WMO Members, and to develop the applications of meteorology, while adapting to the new challenge from the growth of commercial meteorological activities:

1. NMSs should provide the first point of receipt within a country for WWW data and products, in order to have complete and timely access to all the information necessary for the production of weather forecasts and warnings and other meteorological/climatological services necessary for the protection of life and property and other public interest responsibilities entrusted to the NMSs and without prejudice to the national laws of their territory of location;

2. NMSs should make their best efforts to ensure that the conditions which have been applied by the originator of *additional data and products*[**3**](http://www.wmo.int/pages/about/AnnexIItoRes40_en.html#three) are made known to initial and subsequent recipients;

3. In the case where conditions accompanying the exchange of additional data and products are not honoured, the originating NMS may take appropriate actions including denial of access of these additional data and products to the receiving Member;

4. NMSs may export NWP regional model products employing additional data and products for commercial purposes outside the country of the Member running the model, unless objected to by an affected Member. Every effort should be made to coordinate the provision of such services prior to implementation to avoid possible harm to other Members;

5. NMSs may distribute and export products from global NWP models without regard to conditions which were attached to the original data used in the models;

6. Services or products whose construction would suffer significant degradation by removal of the additional data or products and from which the additional data and/or products can be retrieved easily, or their use can be identified unambiguously, should carry the same conditions on their re-export for commercial purposes as those additional data or products;

7. An NMS receiving a request from a local client for service that it cannot fulfill may seek assistance from another NMS with the capacity to provide it. Where appropriate to enhance the free and unrestricted exchange of data and products among WMO Members, the service should as far as possible be made available through the offices of the NMS of the country within which the client is located;

8. Similarly, unless other arrangements have been agreed to, an NMS receiving a request to provide service in another country should refer the request back to the NMS in that country, i.e. to the local NMS. In the event that the local NMS is unable to provide the service for lack of facilities or other legitimate reasons, the external NMS may seek to establish a collaborative arrangement with the local NMS to provide the service;

9. Where the service originated by one NMS is likely to affect other Members (e.g. in the provision of regional broadcasts of meteorological information or the wide distribution of seasonal or climate forecasts), the NMS originating the service should seek, well in advance, and take into account the response of the NMSs of the affected Members, to the extent possible;

10. NMSs should, to the extent possible, refrain from using basic WWW data and products received from other countries in ways which jeopardize the performance of the public interest responsibilities of the originating NMSs within their own countries. If an NMS finds that, in the undertaking of its public interest responsibilities it is affected adversely by a public or private organization in another country, it may warn the NMS in the country from which the organization is deriving the data and products. The latter NMS should consider measures to mitigate these adverse effects and take those actions appropriate under its national laws;

11. NMSs with experience in commercial activities should make their expertise available, on request, to other NMSs, especially NMSs of developing countries, through the WMO Secretariat and bilaterally, and provide relevant documentation, seminars and training programmes to developing countries, on request, on the same financial basis as other WMO education and training courses are provided.

In implementing these guidelines, NMSs should take into account and, as far as possible, respect the different legal, administrative, and funding frameworks which govern the practices of NMSs in other countries or group of countries forming a single economic group. NMSs should, in particular, note that other NMSs will be bound by their own national laws and regulations regarding any trade restrictive practices. Furthermore, where a group of countries form a single economic group, the internal laws and regulations appropriate to that group shall, for all internal group activities, take precedence over any conflicting guidelines.

3 “Additional data and products” means data and products additional to those with no conditions on their use.

**Annex III to Resolution 40 (Cg-XII)**

**Guidelines for relations between national meteorological or hydrometeorological services (NMSs) and the commercial sector**

**Purpose**

The purpose of these guidelines is to further improve the relationship between NMSs and the commercial sector. The development of the exchange of meteorological and related information depends greatly upon sound, fair, transparent, and stable relations between these two sectors.

**Guidelines**

These guidelines apply to the commercial sector engaged in meteorological activities, which includes government organizations engaged in commercial meteorological activities.

In order to enhance the relationship between the two sectors:

1. In the common interest, the commercial sector is urged to respect the international data exchange principles of the WWW and other WMO Programmes;

2. The commercial sector is urged to recognize and acknowledge the essential contribution of NMSs and of WMO to the activities of the commercial sector. NMSs and the commercial sector are urged to recognize the interdependence and mutual benefit possible from cooperative interaction;

3. In the case where the NMS of a country, particularly of a developing country, were to consider itself affected by the commercial sector’s commercial use of data originated in its own country, all parties involved shall undertake negotiations to achieve appropriate and satisfactory agreements;

4. Unless authorized to do so by the relevant Member, commercial sector providers of meteorological services should not publicly issue warnings and forecasts relevant to the safety of life and property in the country or maritime area where they operate. Warnings and forecasts relevant to the safety of life and property publicly issued by the commercial sector should be consistent with those originated by NMSs or by other official originators in the course of the performance of their public service responsibilities;

5. In providing services, the commercial sector should be encouraged to employ meteorological terminology consistent with established national and international practice;

6. Commercial sector providers of meteorological services should respect the sovereignty and rules and regulations of the countries in which they deliver services;

7. NMSs are encouraged to discuss with their countries’ meteorological community and professional societies the issues associated with the international activities of the commercial sector;

8. NMSs are encouraged to collaborate with their countries’ commercial sector and their professional societies to maximize the use of meteorological information within their country.

**Annex IV to Resolution 40 (Cg-XII)**

**Definitions of terms in the practice and guidelines**

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| **Term** | **Definition** |
| Practice | Specifications for the classification of, and the conditions attached to, the use of data and products exchanged among WMO Members. |
| Re-export | Redistribute, physically or electronically, outside the receiving country or group of countries forming a single economic group, directly or through a third party. |
| For commercial purposes | For recompense beyond the incremental cost of reproduction and delivery. |
| Commercial sector | Governmental or non-governmental organizations or individuals operating for commercial purposes. |
| Meteorological and related data and products | Geophysical (meteorological, oceanographic, etc.) observational data and products developed from these data acquired and/or produced by Members to support WMO Programme requirements.  NOTES:  1. Meteorological and related data and products are considered to include climatological data and products.  2. Hydrological data and products, at this stage, are not included in the application of the practice.  3. Aeronautical information generated specifically to serve the needs of aviation and controlled under the Convention on International Civil Aviation (Chicago, 1944) is not included in the application of the practice. |
| Free and unrestricted | Non-discriminatory and without charge (Resolution 23 (EC-XLII)) — Guidelines on international aspects of provision of basic and special meteorological services. “Without charge”, in the context of this resolution means at no more than the cost of reproduction and delivery, without charge for the data and products themselves. |
| Research and education communities | Researchers, teachers and students in academic and research institutions, in other research institutions within governmental and non-governmental organizations, and these institutions themselves, as provided for in national laws and regulations. |

**2. WMO Resolution 25 (Cg-XIII)**

**Exchange of hydrological data and products**

**THE CONGRESS,**

*Noting:*

(1) Resolution 40 (Cg-XII) — WMO policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities,

(2) The inclusion of dedicated observations of the climate system, including hydrological phenomena, as one of the four main thrusts of The Climate Agenda, which was endorsed by Twelfth Congress,

(3) That Technical Regulation [D.1.1] 8.3.1(k), states that, in general, the routine functions of national Hydrological Services (NHSs) should include, inter alia, “making the data accessible to users, when, where and in the form they require” and that the Technical Regulations also contain a consolidated list of data and product requirements to support all WMO Programmes,

(4) That the nineteenth Special Session of the United Nations General Assembly agreed, in its overall review and appraisal of the implementation of Agenda 21, that there is an urgent need to “... foster regional and international cooperation for information dissemination and exchange through cooperative approaches among United Nations institutions, …” (A/RES/S-19/2, paragraph 34(f)),

(5) That the fifty-first session of the United Nations General Assembly adopted, by resolution 51/229, the Convention on the Law of the Non-navigational Uses of International Watercourses, Article 9 of which provides for “regular exchange of data and information”,

(6) That the Intergovernmental Council of the International Hydrological Programme of the United Nations Educational, Scientific and Cultural Organization (UNESCO) adopted at its twelfth session Resolution XII-4 which dealt with the exchange of hydrological data and information needed for research at the regional and international levels,

*Considering:*

(1) The significance attached by the International Conference on Water and the Environment (ICWE) (Dublin, 1992) to extending the knowledge base on water and enhancing the capacity of water sector specialists to implement all aspects of integrated water resources management,

(2) The call of world leaders at the United Nations Conference on Environment and Development (UNCED) (Rio de Janeiro, 1992) for a significant strengthening of, and capacity building in, water resources assessment, for increasing global commitment to exchange scientific data and analyses and for promoting access to strengthened systematic observations,

(3) That the United Nations Commission on Sustainable Development (CSD) in its Decision 6/1 “Strategic Approaches to Freshwater Management” has strongly encouraged States to promote the exchange and dissemination of water-related data and information, and has recognized “the need for periodic assessments … for a global picture of the state of freshwater resources and potential problems”,

(4) The call by the nineteenth Special Session of the United Nations General Assembly “for the highest priority to be given to the serious freshwater problems facing many regions, especially in the developing world” and the “urgent need … to strengthen the capability of Governments and international institutions to collect and manage information … and environmental data, in order to facilitate the integrated assessment and management of water resources”,

(5) The requirements for full, open and prompt exchange of hydrological data and products in support of various international conventions, such as the Convention on Biological Diversity, the United Nations Framework Convention on Climate Change, and the Convention to Combat Desertification,

(6) The requirement for the global exchange of hydrological information in support of scientific investigations of world importance such as those on global change and the global hydrological cycle, and as a contribution to relevant programmes and projects of WMO, other United Nations agencies, the International Council for Science (ICSU) and other organizations of equivalent status,

(7) The opportunities for more efficient management of water resources and the need for cooperation in mitigating water-related hazards in transboundary river basins and their water bodies which depend on the international exchange of hydrological data and information,

(8) The increasing recognition through scientific and technical endeavours, such as the Global Energy and Water Cycle Experiment (GEWEX), of the importance of hydrological data and products in improving the understanding of meteorological processes and subsequently the accuracy of meteorological products,

*Recognizing:*

(1) The responsibility of Members and their NHSs to provide for the security and well-being of the people of their countries, through mitigation of water-related hazards and sustainable management of water resources,

(2) The potential benefits of enhanced exchange of hydrological data and information within shared river basins and aquifers, based on agreements between the Members concerned,

(3) The continuing need for strengthening the capabilities of NHSs, particularly in developing countries,

(4) The right of Governments to choose the manner by which, and the extent to which, they make hydrological data and products available domestically and internationally,

(5) The right of Governments also to choose the extent to which they make available internationally data which are vital to national defense and security. Nevertheless, Members shall cooperate in good faith with other Members with a view to providing as much data as possible under the circumstances,

(6) The requirement by some Members that their NHSs earn revenue from users, and/or adopt commercial practices in managing their businesses,

(7) The long-established provision of some hydrological products and services on a commercial basis and in a competitive environment, and the impacts, both positive and negative, associated with such arrangements,

**Adopts** a stand of committing to broadening and enhancing, whenever possible, the free and unrestricted1 international exchange2 of hydrological data and products, in consonance with the requirements for WMO’s scientific and technical programmes;

**Further adopts** the following practice on the international exchange of hydrological information:

(1) Members shall provide on a free and unrestricted basis those hydrological data and products which are necessary for the provision of services in support of the protection of life and property and for the well-being of all peoples;

(2) Members should also provide additional hydrological data and products, where available, which are required to sustain programmes and projects of WMO, other United Nations agencies, ICSU and other organizations of equivalent status, related to operational hydrology and water resources research at the global, regional and national levels and, furthermore, to assist other Members in the provision of hydrological services in their countries;

(3) Members should provide to the research and education communities, for their non-commercial activities, free and unrestricted access to all hydrological data and products exchanged under the auspices of WMO;

(4) Respecting (2) and (3) above, Members may place conditions on the re-export3, for commercial purposes, of these hydrological data and products, outside the receiving country or group of countries forming a single economic group;

(5) Members should make known to all Members, through the WMO Secretariat, those hydrological data and products which have such conditions as in (4) above;

(6) Members should make their best efforts to ensure that the conditions placed by the originator on the additional hydrological data and products are made known to initial and subsequent recipients;

(7) Members shall ensure that the exchange of hydrological data and products under this resolution is consistent with the application of Resolution 40 (Cg-XII) — WMO policy and practice for the exchange of meteorological and related data and products including guidelines on relationships in commercial meteorological activities;

**Urges Members**, in respect of the operational and scientific use of hydrological data and products, to:

(1) Make their best efforts to implement the practice on the international exchange of hydrological data and products, as described in Further adopts (1) to (7);

(2) Assist other Members, to the extent possible, and as agreed upon, in developing their capacity to implement the practice described in Further adopts (1) to (7);

**Requests the Executive Council to**:

(1) Invite the Commission for Hydrology to provide advice and assistance on technical aspects of the implementation of the practice on the international exchange of hydrological data and products;

(2) Keep the implementation of this resolution under review and report to Fourteenth Congress;

**Decides** to review the implementation of this resolution at Fourteenth Congress.

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1 “Free and unrestricted” means non-discriminatory and without charge. “Without charge”, in the context of this resolution means at no more than the cost of reproduction and delivery, without charge for the data and products themselves.

2 “Exchange”, in the context of this resolution, means the movement of data and products between countries or, as is more likely the case in the field of hydrology, the movement of data and products from one country to another.

3 “Re-export”, in the context of this resolution, means to redistribute, physically or electronically, outside the receiving country, group of countries forming a single economic group, or regional and global data centres, directly or through a third party.

Extract from the Report of the

**Forty-Third Meeting of the Caribbean Meteorological Council (CMC)**

Radisson Fort George Hotel

Belize City, Belize

18-19 December 2003

**4(c) Provision of Meteorological and Hydrological Data and Products by CIMH**

**THE COUNCIL:**

**Noted** the contents of the WMO Resolution 40 of the Twelfth Congress;

**Agreed** that the CIMH could provide climate data and products for (i) research and educational purposes, (ii) non-commercial use by clients, (iii) commercial use by clients, in exactly the same way undertaken by Member countries and consistent with the WMO Resolution 40;

**Also agreed** that the CIMH can supply meteorological and climate data directly to other Meteorological Services, climate services, research and educational institutions or other clients, without seeking permission of each of the Member countries whose data are utilized, provided that it respects the conditions set out by Members regarding the provision of such data;

**Further agreed** that the CIMH can place conditions on the redistribution by third parties of data and products it provides to them, in exactly the same way that Member countries can do under Resolution 40.

**Decided** the CIMH shall include acknowledgements of the CMO Member countries as the originating source of the data used for the products generated and delivered to third parties.

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