World Meteorological Organization
Organisation météorologique mondiale

Secrétariat
7 bis, avenue de la Paix – Case postale 2300 – CH 1211 Genève 2 – Suisse
Tél.: +41 (0) 22 730 81 11 – Fax: +41 (0) 22 730 81 81
wmo@wmo.int – www.wmo.int

Weather • Climate • Water
Temps • Climat • Eau

Our ref.: 8791-14/OBS/OSD/MAR/ETMC GENEVA, 19 December 2014

Annexes: 2

Subject: Draft resolution for submission to the Seventeenth WMO Congress regarding establishment of a Centre for Marine-Meteorological and Oceanographic Climate Data (CMOC) in Tianjin, China

Dear Sir/Madam,

You will recall that in the framework of the modernization of the Marine Climatological Summaries Scheme (MCSS) established in 1963, JCOMM-4 (Yeosu, Republic of Korea, May 2012) adopted Recommendation 2 (JCOMM-4) (see Annex I) on the Marine Climate Data System (MCDS), which particularly proposed a 2020 Vision and a strategy for the MCDS development, and established a network of Centres for Marine-Meteorological and Oceanographic Climate Data (CMOCs) building on existing facilities as appropriate. This recommendation was later approved by the WMO Executive Council through Resolution 2 (EC-64), as well as by the IOC Executive Council at its 45th session through EC-Decision EC-XLV/Dec. 3.2. The MCDS is foreseen to eventually replace the MCSS.

The Terms of Reference of CMOCs together with their capabilities and corresponding functions are provided in Annex 2 of the Recommendation 2 (JCOMM-4). The mechanism for formal designation and withdrawal of CMOCs by WMO and IOC is detailed in Annex 3 of that Recommendation.

JCOMM-4 also noted that the China State Oceanic Administration (SOA) National Marine Data and Information Service (NMDIS) had submitted a statement of capability and commitment to host a CMOC in Tianjin, China, and decided that China could begin filling the role of CMOC on a trial basis.

To: Permanent Representatives of Members of WMO participating in JCOMM (limited distribution)

cc: Members of JCOMM)
Dr Wendy Watson Wright, Executive Secretary, IOC)
Mr Johan Stander, JCOMM co-president)
Dr Nadia Pinardi, JCOMM co-president)
Dr Thomas Peterson, CCl president) (for information)
Mr Ahmed Abdulla Mohammed, President of WMO)
Regional Association II)
IOC Action Addressees for China)
Members of the JCOMM Management Committee)

Since then, based on JCOMM-4 recommendations, an evaluation process, including evaluation criteria, for CMOC applications was proposed by the JCOMM Expert Team on Marine Climatology (ETMC) and the Data Management Coordination Group (DMCG), and approved by the Twenty-second Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE) (Ensenada, Mexico, 11-15 March 2013), and subsequently by the Eleventh Session of the JCOMM Management Committee (Geneva, Switzerland, 20-23 October 2014).

I am now pleased to report that the application received from the State Oceanic Administration (SOA) National Marine Data and Information Service (NMDIS) in Tianjin, China has been successfully evaluated according to the required process and evaluation criteria. For your information, the NMDIS Statement of Compliance submitted to me by China, together with the evaluation report can be downloaded from the following FTP site:

ftp://ftp.wmo.int/Documents/PublicWeb/amp/mmop/documents/data_mgmt/mcds/cmoc

The purpose of this letter is to take the necessary steps for the formalization of the proposed adoption process which will lead, in the first instance, to the designation of the centre (NMDIS) proposed by China to act as a CMOC.

In accordance with Regulation 77 authorizing the president of a constituent body to approve a proposal on behalf of that body, without a vote by correspondence, the JCOMM co-president, Mr Johan Stander, informed me of his intention to submit, on behalf of JCOMM, to the Seventeenth WMO Congress (Cg-17), the draft resolution included in Annex II, provided that no objection is expressed by JCOMM members within ninety days. Consistent with our process, this proposal for establishing the CMOC in China will also be submitted to the IOC Assembly, in parallel.

I look forward to your agreement with this proposal, and to your continuous and active participation in JCOMM activities.

Yours faithfully,

(E. Manaenkova)
for the Secretary-General

Rec. 2 (JCOMM-4) — MARINE CLIMATE DATA SYSTEM (MCDS)

THE JOINT WMO-IOC TECHNICAL COMMISSION FOR OCEANOGRAPHY AND MARINE METEOROLOGY,

Noting:

(1) The JCOMM Terms of Reference, especially in relation to the development of standards and procedures regarding overall collection, management, exchanges and archival of high-quality marine-meteorological and oceanographic data, information and products, on which climate studies, predictions and services, as well as climate change impact and adaptation strategies, are based;

(2) Resolution 24 (Cg-XVI) – Marine Meteorology and Oceanography Programme;

(3) Resolution 50 (Cg-XVI) – Implementation of the WMO Integrated Global Observing System (WIGOS);

(4) The Final report of the workshop for a new Marine Climate Data System (MCDS) meeting, including the draft MCDS strategy in JCOMM MR#90;

(5) The summary report of the Twenty-first Session of the IOC Committee on International Oceanographic Data and Information Exchange (IODE-XXI);

Noting further:

(1) Chapter 5, Marine Climatological Summaries Scheme, Part I, Services for the high seas, of the WMO No. 558, Manual to Marine-Meteorological Services;

(2) Chapter 3, Marine Climatology, of the WMO No. 471, Guide to Marine-Meteorological Services;

(3) The Project Report, and Legacy Recommendations of the Pilot Project for the Integration of Marine-Meteorological and other Appropriate Oceanographic Observations into the WMO Integrated Global Observing System (WIGOS) (JCOMM/TR-No. 48);

(4) The proposal from China and Germany offering facilities for acting as WMO-IOC Centres for Marine-Meteorological and Oceanographic Climate Data (CMOC), their statements of compliance and commitment, and readiness to operate as such as soon as possible;

Having considered:

(1) The need of Members/Member States for high quality marine meteorological and oceanographic historical data / metadata from the world oceans, to address the requirements of WMO and UNESCO/IOC programmes and co-sponsored programmes including climate monitoring, and the Global Framework for Climate Services (GFCS);

(2) The need to modernize the Marine Climatological Summaries Scheme (MCSS) to take into account the development of new observing systems and corresponding surface marine-meteorological data systems in recent years, new techniques for data management and quality control, and the current needs of end users for better statistical and graphical marine climatological products;

(3) The need to standardize and perform collection, quality control, state of the art bias corrections, the recording of historical surface marine-meteorological data and metadata, and agree on data exchange formats and protocols, in order to achieve delivery and use of coherent data sets;

(4) The similar need for the standardization of processing techniques including Quality Control, documentation, formats, exchange protocols in order to improve the use of subsurface ocean data in conjunction with marine-meteorological data;

(5) The need for modernization of management of surface drifter data, to rationalize the roles and functioning of the former IODE Responsible National Oceanography Centre for Drifting Buoys (RNODC/DB), the JCOMM Specialized Oceanography Centre for Drifting Buoys (SOC,/DB) the Global Drifter Programme (GDP) Data Assembly Centre (DAC), and the JCOMM Ocean Data Acquisition System (ODAS) Metadata Service (ODASMS) management of metadata for the surface drifters;

(6) The need for Members/Member States to exchange and share such data and metadata;

Recognizing:

(1) The cooperation that has been achieved between National Oceanographic Data Centres (NODCs) operating within IOC/IODE and data management activities of JCOMM;

(2) That an integrated Marine Climate Data System (MCDS), including routine and standardized collection of appropriate delayed-mode and historical marine-meteorological and oceanographic data and metadata, managed by a network of data centres facilitates fulfilling these requirements;

(3) The effectiveness of the JCOMM Marine Climatological Summaries Scheme (MCSS) for the collection and quality control of delayed-mode Voluntary Observing Ship (VOS) data through a network of (i) Contributing Members, (ii) Responsible Members, and (iii) two Global Collecting Centres (GCCs) operated by the UK and Germany for the Marine Climate Summaries Scheme (MCSS);

(4) The usefulness of the former IODE RNODC/DB operated by the Integrated Science Data Management (ISDM) of Canada, the GDP DAC operated by the Atlantic Oceanographic and Meteorological Laboratory (AOML) of the National Oceanic and Atmospheric Administration (NOAA) of USA, the ODASMS operated by the NMDIS of the SOA of China, and the JCOMM SOC/DB operated by Météo-France, to collect, manage and make available historical drifting buoy data and metadata to end users;

(5) That the ISDM and the SOC/DB were requested by JCOMM-III to agree on complimentary functions to manage data from drifting buoys and that this activity should be done in cooperation with the GDP/DAC;

(6) That IODE-XXI had requested the JCOMM *ad hoc* Task team on RNODCs and SOCs to draft a Recommendation for JCOMM-IV, including Terms of Reference of centres that integrate RNODCs and SOCs and contribute to the IODE Ocean Data Portal (ODP), as well as background information;

(7) The existence of Data Acquisition/Assembly Centres (DACs) and Global Data Acquisition/Assembly Centres (GDACs) (which include some IODE NODCs operating in this context) specialized for specific ocean observing platform types;

(8) That the International Comprehensive Ocean-Atmosphere Data Set (ICOADS) operated by the US NOAA and the US National Center for Atmospheric Research (NCAR) is widely used and trusted in the marine climate community;

(9) The expertise of Members/Member States with regard to marine meteorology and oceanography data management, as well as the dedicated facilities they operate;

(10) That Members/Member States could provide specialized facilities with substantial benefits to end users when integrated into the MCDS;

Recommends:

(1) Implementation of a modernized scheme for the management of surface marine climatological data in conjunction with ICOADS inside the MCDS;

(2) Implementation of a modernized scheme for the management of surface drifter data within the MCDS, replacing the former RNODC/DB and the SOC/DB;

(3) Establishment of a network of Centres for Marine-Meteorological and Oceanographic Climate Data (CMOCs) building on existing facilities as appropriate with the Terms of Reference in Annex 2, and adopt a mechanism for formal designation and withdrawal of CMOCs by WMO and IOC as detailed in Annex 3;

(4) That the ODASMS, and the SOC/DB be declared obsolete;

(5) That the National Marine Data and Information Service (NMDIS) of the China State Oceanic Administration (SOA) and the Deutscher Wetterdienst (DWD) undertake the functions of an CMOC on a trial basis and report on the results to JCOMM through the Management Committee;

Invites Members / Member States:

(1) To take advantage of the resources offered by the CMOCs once established;

(2) To contribute national resources towards the activities identified in the recommendations;

(3) To consider submitting applications for becoming a CMOC;

Requests:

(1) The Expert Team on Marine Climatology (ETMC), in close cooperation with IODE and other appropriate partners such as the ICSU World Data System, to develop, review and update the MCDS strategy, implementation plan, designation criteria and performance indicators of CMOCs in the next two years for achieving the Vision for a new MCDS, based upon the results of the Workshop for a new Marine Climate Data System (MCDS1, 28 November-2 December 2011, Hamburg, Germany) and Ocean Data Portal technologies development;

(2) The Secretary-General of WMO and the Executive Secretary of UNESCO/IOC to facilitate implementation of this recommendation and provide appropriate technical advisory assistance to Members/Member States concerned as required, in the operations of CMOC.

Annexes: 3

Annex 1 to Recommendation 2 (JCOMM-4)

VISION FOR A MARINE CLIMATE DATA SYSTEM IN 2020

JCOMM will strive to address the WMO and IOC applications requirements for appropriate marine-meteorological and oceanographic climatological data (met-ocean climate data), and particularly address those for long term climate monitoring (Global Climate Observing System – GCOS), seasonal to inter-annual climate forecasts, for the Global Framework for Climate Services (GFCS), and ocean climate requirements of the Global Ocean Observing System (GOOS).

To address those requirements, the Vision for a Marine Climate Data System (MCDS) is to formalize and coordinate the activities of existing systems, and address gaps to produce a dedicated WMO-IOC data system operational by 2020 in the view to have compiled coherent met-ocean climate datasets of known quality, extending beyond the GCOS Essential Climate Variables (ECVs). These will be of known quality collected from multiple sources to be served on a free and unrestricted basis to the end users through a global network of less than ten WMO-IOC Centres for Marine-Meteorological and Oceanographic Climate Data (CMOCs) covering specific JCOMM data domains. Data, metadata and information will be fully interoperable with the WMO Information System (WIS) and the IOC/IODE Ocean Data Portal (ODP), will be compatible with, and contribute to the High Quality Global Data Management System for Climate (HQ-GDMSC) that is being developed by the WMO Commission for Climatology (CCl).

This system is expected to improve timescales for met-ocean climate data availability, facilitate the exchange of historical met-ocean climate data sets between countries, and thereby increase the amount of ocean observations eventually made available to the relevant end user applications. Furthermore, integrated data and metadata will be available containing comprehensive dataset information e.g. historic details on current and past data codes and formats.

The data management structure will be standardized, well defined and documented for existing and new data across JCOMM activities and state of the art marine climate and statistical products will be easily accessible.

The development of the MCDS requires using state of the art integrated and standardized international systems for the improved data and metadata-flow and management of a wide range of met-ocean climate data. This includes integrating collection, rescue, quality control, formatting, archiving, exchange, and access of *in situ* and satellite sources. This system will be based on improved quality management, documenting processes and procedures, using higher level quality control, added value data processing, including bias correction, and comparison of the observations with satellite and meteorological and oceanographic model gridded fields.

It is expected that the relevant data and associated metadata will be of known quality, and extend to products that satisfy the met-ocean climate data requirements for climate monitoring, forecasting, and services.

Annex 2 to Recommendation 2 (JCOMM-4)

TERMS OF REFERENCE FOR WMO-IOC CENTRES FOR MARINE-METEOROLOGICAL AND OCEANOGRAPHIC CLIMATE DATA (CMOCs)

The Vision for a Marine Climate Data System (MCDS) is to formalize and coordinate the activities of existing systems, and address gaps to produce a dedicated WMO-IOC data system operational by 2020 in the view to have compiled coherent met-ocean climate datasets of known quality, extending beyond the Global Climate Observing System (GCOS) Essential Climate Variables (ECVs). These will be of known quality collected from multiple sources to be served on a free and unrestricted basis to the end users through a global network of less than ten WMO-IOC Centres for Marine-Meteorological and Oceanographic Climate Data (CMOCs). Data, metadata and information will be fully interoperable with the WMO Information System (WIS) and the IOC/IODE Ocean Data Portal (ODP), will be compatible with, and contribute to the High Quality Global Data Management System for Climate (HQ-GDMSC) that is being developed by the WMO Commission for Climatology (CCl).

It will cover different and specific JCOMM data domains (e.g. marine meteorology, physical oceanography, historical period(s), geographical coverage, specific procedures applied to the data) and enhance international partnerships within a new JCOMM framework, taking full benefit of the existing network of IODE NODCs, in the best manner of harmonizing with the work of IODE NODCs. The primary objectives are to improve availability, recovery and archival of contemporary and historical data, metadata and products and obtain standardized quality of a high level in a more timely manner. This will ensure the long-term stability of the data management system, permit the sharing of responsibility and expertise, optimize resources and help prevent loss from technological failures. Groups of CMOCs will operate within a given data domain (e.g. global, regional, atmospheric, surface and sub-surface oceanic) and provide complimentary functions. To achieve maximum continuity, reliability and completeness of data, metadata and products, specialized CMOCs will be established that mirror the processes, data and metadata across the CMOC domain.

Governance for defining the functions and adoption of CMOC is proposed by JCOMM and endorsed by the WMO Executive Council and UNESCO/IOC Executive Council or Assembly.

To meet these requirements CMOCs must have the following:

Capabilities:

(a) Each Centre must have, or have access to, the necessary infrastructure, facilities, experience and staff required to fulfil the approved functions;

(b) Each Centre must have, or have access to, interoperability with the WMO Information System (WIS) and/or IOC/IODE ODP;

(c) Each Centre must be able to apply defined international standards applicable for Data and Quality Management;

(d) Mirroring CMOCs must be able to actively and reliably "mirror" (i.e. maintain mutually consistent) data, metadata, and products, as agreed within the CMOC network;

(e) A recognized authority (the JCOMM Data Management Coordination Group – DMCG) must assess each Centre, at least once every five years, to verify it meets the necessary capabilities and performance indicators as agreed by the Commission.

Corresponding functions:

(a) Each Centre must contribute to WMO and IOC Applications for example by rescuing, collecting, processing, archiving, sharing, distributing and mirroring worldwide marine-meteorological and oceanographic data and metadata documented in appropriate WMO and IOC publications;

(b) Each Centre must provide advice to Members/Member States internationally in response to enquiries regarding standards and best practices for example on data rescue, collection, processing, archival, and distribution of marine-meteorological and oceanographic data, metadata, and products;

(c) Each Centre must make datasets, and corresponding metadata, maintained as part of its scope available, and discoverable through the WIS and/or IOC/IODE ODP;

(d) All CMOC must communicate and liaise closely within the network; particularly on the development of quality processes and procedures, meeting on a regular basis;

(e) Each Centre must operate appropriate data processing and quality control procedures, and generate the required products within its scope;

(f) Following the procedures documented in appropriate WMO and IOC publications all Centres within the CMOC network must closely cooperate in the rescue, exchange, processing, and archival of marine-meteorological and oceanographic data, metadata, and products;

(g) Each centre will undertake its core defined functions and replicate data from other centres appropriate to its domain such that the set of data and products offered from the CMOC network is mutually consistent when accessed from any individual centre;

(h) Specialized CMOCs will mirror data, metadata, products and processes at defined time-scales; the method of mirroring will be agreed upon among mirroring centres;

(i) All kinds of data, metadata and processes managed within a CMOC domain will be subject to a stringent version control (e.g. Digital Object Identifier – DOI);

(j) Each Centre should report, on an annual basis, to the JCOMM Management Committee through the DMCG on the services offered to Members/Member States and the activities carried out. JCOMM in turn should keep the Executive Councils of the WMO and the UNESCO/IOC Assembly informed on the status and activities of the CMOC network as a whole, and propose changes, as required.

Data and Software Policy Requirements

A CMOC must make all the data, metadata, and products falling within the scope of the CMOC network freely and openly available to the international research community in a way consistent with WMO Resolution 40 (Cg-XII) and IOC Resolution IOC-XXII-6. Where applicable software should also be made open and freely available.

Annex 3 to Recommendation 2 (JCOMM-4)

FORMAL DESIGNATION AND WITHDRAWAL OF WMO-IOC CENTRES FOR MARINE-METEOROLOGICAL AND OCEANOGRAPHIC CLIMATE DATA (CMOCS)

According to the Terms of Reference of WMO-IOC Centres for Marine-Meteorological and Oceanographic Climate Data (CMOCs) as detailed in Annex 2, the mechanism for formal WMO and UNESCO/IOC appointment of a CMOC implies the following:

(a) Governance for defining the functions and adoption of each Centre is proposed by JCOMM and endorsed by the WMO Executive Council and UNESCO/IOC Assembly or Executive Council;

(b) The host of a candidate CMOC is required to produce a statement of compliance with requirements and commitment, list and demonstrate capabilities of the proposed Centre, state the scope of the data and/or products managed by the Centre, state the formal commitment to host the Centre.

The following approach is recommended by JCOMM:

1. The host of the candidate CMOC will describe the extent to which it will be addressing requirements of scope, capabilities, functions and data and software policy of the proposed CMOC.

2. Once the host of the candidate CMOC has established that it meets the requirements to a sufficient extent, the IOC Action Addressee of the Country, or the Permanent Representative of the Country with WMO, as appropriate, writes to the IOC Executive Secretary or the WMO Secretary General respectively, to formally state the offer to host and operate the CMOC on behalf of the WMO and IOC, and to request that the Centre be added to the list of CMOCs. In doing so, the host of the candidate CMOC also provides a statement of requirements of scope, capabilities, functions and data and software policy as described in the CMOC Terms of Reference detailed in Annex 2. The letter should be copied to the appropriate JCOMM Co-President, and also to the relevant President of the WMO Regional Association or Chair of the IOC Regional Subsidiary Body in the case where the CMOC is only providing data corresponding to a specific geographic region.

3. The IOC or WMO Secretariat will then request the appropriate JCOMM Co-President to take action, in particular to request the Data Management Coordination Group (DMCG) to evaluate and verify compliance with requirements of the proposed Centre.

4. The DMCG evaluates the request and advises in writing (see 5 and 6) whether the CMOC application should be endorsed. The DMCG may wish to delegate this work to individuals and/or groups acting on its behalf (e.g. one of the component teams, depending on the nature of the proposed Centre), but any advice and proposal to JCOMM should still be assessed by and come through the DMCG. DMCG will also conduct reviews of performance and capabilities at the required intervals.

5. If endorsed by the DMCG, and depending on timing, the DMCG makes a recommendation to the JCOMM Management Committee (MAN), and invites them to provide further advice to JCOMM.

6. If not endorsed by the DMCG or MAN, the JCOMM Co-President should advise the candidates about areas where the candidate Centre can be improved to meet requirements. Candidates can reapply at a later date once changes have been made to meet these criteria.

7. If endorsed by MAN, a recommendation is passed to the next JCOMM Session, or depending on timing, directly to the WMO Executive Council and IOC Executive Council or Assembly following JCOMM consultation in writing.

8. If recommended by JCOMM, a Resolution is proposed to the WMO Executive Council and IOC Executive Council or Assembly for including the candidate in the list of CMOCs.

9. If the recommendation is approved by both the WMO Executive Councils and IOC Executive Council or Assembly, the candidate CMOC is listed in the appropriate WMO and IOC Manuals and Guides;

It is expected that this process, from submission of the CMOC proposal to the JCOMM Co-President, to formal approval by both WMO/IOC Executive Councils, may take from 6 months to 2 years.

At times it may be necessary for a Centre to be withdrawn from the CMOC role. The approach proposed by JCOMM is the following:

- The DMCG are to review each Centre for necessary capabilities and performance once every five years. If the review is favourable then the CMOC can continue its role as before. If the review is not favourable then the DMCG must insist improvements to be made and reviewed within one year. If the second review is still not favourable then the CMOC role will be withdrawn from the Centre through a recommendation by JCOMM and subsequent decision by the WMO Executive Council and IOC Assembly.

- If a Centre no longer wishes to carry out the functions of a CMOC the Expert Team on Marine Climatology (ETMC) and DMCG should be advised immediately.

WORLD METEOROLOGICAL ORGANIZATION

8791-14/OBS/OSD/MAR/ETMC, ANNEX II

DRAFT RESOLUTION

Res. xxx (Cg-17) - DESIGNATION OF THE CENTRE FOR MARINE-METEOROLOGICAL AND OCEANOGRAPHIC CLIMATE DATA (CMOC) IN TIANJIN, CHINA

THE CONGRESS,

Noting:

(1) Resolution 2 (EC-64) – Report of the Fourth Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM),

(2) Resolution 16 (Cg-16) - Climate Data Requirements,

(3) Resolution 24 (Cg-16) - Marine Meteorology and Oceanography Programme,

(4) Resolution 48 (Cg-16) - Implementation of the Global Framework for Climate Services,

(5) Recommendation 2 (JCOMM-4) – Marine Climate Data System (MCDS),

Recalling that:

(1) The Terms of Reference of CMOCs together with their capabilities and corresponding functions are provided in Annex 2 of the Recommendation 2 (JCOMM-4),

(2) The mechanism for formal designation and withdrawal of CMOCs by WMO and IOC is detailed in Annex 3 of that Recommendation,

Noting further the proposal from China to run a CMOC at the National Marine Data and Information Service (NMDIS) of the State Oceanic Administration (SOA),

Having considered:

(1) The mechanism for formal designation of CMOCs, and evaluation criteria,

(2) The successful demonstration provided by the NMDIS, China regarding its capability to run a CMOC, including statement of compliance and commitment in terms of CMOC capabilities and corresponding functions, in accordance with the procedures and criteria established by JCOMM, and the IOC of UNESCO International Oceanographic Data and Information Exchange (IODE),

Recognizing:

(1) Members need for high quality marine meteorology and oceanographic climate data from the world oceans to address the requirements of WMO and UNESCO/IOC programmes and co-sponsored programmes, and in particular those of the Global Framework for Climate Services,

(2) That the CMOCs facilitate fulfilling these requirements, and will contribute to improve availability, recovery and archival of contemporary and historical data, metadata and products and obtain standardized quality of a high level in a more timely manner,

(3) The excellent facilities and experience of the NMDIS, China for managing historical marine meteorological and oceanographic climate data and metadata,

Decides to approve the establishment of a CMOC at the NMDIS of SOA in Tianjin, China,

Requests the Secretary-General to continue to promote a global coverage of less than ten CMOCs, particularly keeping in view the needs of developing and least developed countries, through resource mobilization efforts with Members having capacity, relevant partnering agencies in the United Nations system and development agencies,

Requests the co-presidents of JCOMM to promote establishment of CMOCs in other regions, and consult with the Commission for Climatology, regional associations and their relevant working groups or other entities responsible for coordination of climate activities within the Regions, on all matters related to CMOC implementation,

Urges all Members to support CMOC activities, to use their facilities and to provide feedback to JCOMM on effectiveness, and possible improvement.
