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GENERAL SUMMARY OF THE WORK OF THE SESSION

1. OPENING OF THE SESSION *(agenda item 1)*

1.1 At the kind invitation of the Government of Peru, the fourteenth session of Regional Association III (South America) was held in Lima, Peru from 7 to 13 September 2006. The session was opened by Mr Raúl Michelini, acting president of the Association on 7 September 2006 at 10:00 a.m.

1.2 In his remarks, Mr Michelini expressed his appreciation to the Peruvian authorities for hosting the session of the Association. He highlighted the main priorities and activities that the Regional Association had to carry out for the regional implementation of the operational, technical and scientific components of the various Programmes of WMO, and see to the concrete and tangible implementation of the WMO Programmes in the region for the benefit of all communities in the 13 Members. He drew special attention to the need for an integrated and prompt implementation of the RA III RMDCN. He expressed his thanks to the Director of SENAMHI and Permanent Representative of Peru with WMO, General FAP Edison Díaz Villalta, as well as his staff for their support to the session.

1.3 The Director of SENAMHI and Permanent Representative of Peru with WMO, General FAP Edison Díaz Villalta, welcomed all participants to Lima and expressed his satisfaction for being the host to the XIV Session of Regional Association III. He indicated that he was convinced that the decisions and agreements to be made during the Session would increase the capacity of NMHSs in research, management and operating conditions in order to provide added value products to society. He wished all a fruitful and successful session.

1.4 Mr M. Jarraud, Secretary-General of the World Meteorological Organization (WMO), in his address, expressed appreciation to the Government of Peru for hosting the session in Lima. He also conveyed his thanks to the acting president and vice-president of RA III, Mr R. Michelini and Mr R. Viñas, as well as their predecessors, Mr N. Salazar, Mr H. Valiente and G. García, and rapporteurs, chairpersons and members of the region's working groups. He also expressed gratitude to General Díaz and his staff for the excellent arrangements made to ensure the success of the session. He extended a warm welcome to all participants.

1.5 Mr Jarraud noted improvements made in the availability of observational data, which were possible due to coordinated action taken by Members concerned. He mentioned that, in particular, the GCOS Programme had helped to reinitiate activities in Comodoro Rivadavia (Argentina) and at the Galapagos Islands (Ecuador) through the provision of radiosondes and balloons. He however, stressed that notable gaps still remains in terms of data coverage due to deficiencies in the observing and telecommunication networks, high cost of equipment and lack of consumables and spare parts.

1.6 He shared some comments which he hoped would be useful for the implementation of RA III's plans on the following, among others:

(a) Necessary arrangements for the implementation of the Regional Meteorological Data Communication Network;

(b) Evolution of the International Research Centre on the El Niño Phenomenon (CIIFEN) and the required support from Members for its consolidation;

(c) Need for greater involvement in wider environmental concerns;

(d) Education and training needs;

(e) Bridging the gap in the level of meteorological and other relevant services.

1.7 He expressed confidence that the session will address the concerns of its Members with foresight and determination, in WMO's traditional spirit of cooperation, and his personal commitment to support the initiatives of the Association. He wished all delegates an enjoyable stay in Lima and a most successful and productive session.

1.8 His Excellency, Mr R. Chiri Márquez, Secretary-General of the Ministry of Defense, extended a cordial welcome to all participants on behalf of the government of Peru and wished all a successful meeting.

2. ORGANIZATION OF THE SESSION *(agenda item 2)*

2.1 CONSIDERATION OF THE REPORT ON CREDENTIALS *(agenda item 2.1)*

2.1.1 The Association established the Credentials Committee integrated by the principal delegates from Argentina, Brazil and Chile.

2.1.2 There were 53 participants at the session from 11 Members of the Association, 5 observers from 2 Members from outside the Region, 9 observers from 8 international, regional and national organizations. A complete list of participants is given in the Appendix to the present report.

2.2 ADOPTION OF THE AGENDA *(agenda item 2.2)*

The provisional agenda for the session was adopted.

2.3 ESTABLISHMENT OF COMMITTEES *(agenda item 2.3)*

The following committees were established for the duration of the session:

Nominations Committee

2.3.1 A Nominations Committee was established composed of the principal delegates of Ecuador, Paraguay and Uruguay.

Organization of Work

2.3.2 The President informed the Association of discussions concerning the possible use of plenary (i.e. without working committees) throughout the sessions of constituent bodies. He proposed this approach and it was accepted by the Association for use in this session. The various agenda items were then agreed to be assigned as follows:

(a) Plenary chaired by the President: agenda items 1, 2, 3, 13, 15.1, 15.2, 15.3, 16.2, 17, 18, 19, 20, 21;

(b) Plenary Co-chaired by Mr M. Rabiolo (Argentina), agenda items 4, 6, 7.1, 7.3, 7.4. 11, 12, and 15.4;

(c) Plenary Co-chaired by Mr R. Viñas (Vice-President), agenda items 5, 7.2, 8, 9, 10, 14 and. 16.1.

2.3.3 It was further agreed that since the meetings were in plenary, the Association can adopt the draft text for inclusion in the report of the session at any stage if there are no changes proposed to the draft. However, if there are changes, then the text will need to be transformed into a working paper and/or a PINK.

Coordination Committee

2.3.4 A Coordination Committee composed of the president, the vice-president, the co-chairman of the plenary, the representative of the Secretary-General and the secretaries to the plenary was established.

2.4 OTHER ORGANIZATIONAL MATTERS *(agenda item 2.4)*

2.4.1 The Association decided on the working hours for the duration of the session. It was decided that there would be no minutes of the plenary meetings of the session unless otherwise decided for special items.

2.4.2 The Association agreed to waive Regulation 109 for the duration of the session.

2.4.3 The Association designated Mr H. Oliva (Chile) as Rapporteur on agenda item 18 – Review of previous resolutions and recommendations of the Association and of relevant Executive Council resolutions.

3. REPORT BY THE PRESIDENT OF THE ASSOCIATION *(agenda item 3)*

3.1 The Association noted with appreciation the report of the president of RA III which provided an overall review and assessment of the major activities of the Association since its thirteenth session and expressed satisfaction at the effective manner in which the activities of the Association were being undertaken.

3.2 The Association commended its acting president, Mr Raúl Michelini (Uruguay), for his efficiency in conducting the affairs of the Association, thus contributing to the development of meteorology and hydrology in the Region. The Association also commended the vice-president, Mr Ramón Viñas García (Venezuela) for his contribution to the work of the Association, and expressed its appreciation to the chairmen and members of the working groups and rapporteurs, who had actively collaborated in carrying out the activities of the Association in the Region.

3.3 The Association extended its appreciation to Members who hosted various regional events during the intersessional period and encouraged them to continue providing the necessary support to the activities of the Association.

3.4 The Association gave its full support to the priorities and in particular those related to the WMO scientific and technical programmes which focus on specific needs and requirements of the Region and new priority areas such as natural disasters prevention and mitigation, climate change and related environmental issues. It requested the Secretary-General to take into consideration the regional needs related to the future work plan of the Association.

3.5 The Association extended its appreciation to the Members of the Region.

4. WORLD WEATHER WATCH (WWW) PROGRAMME – REGIONAL ASPECTS *(agenda item 4)*

4.1 WWW PLANNING AND IMPLEMENTATION PROGRAMME, INCLUDING THE REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON PLANNING AND IMPLEMENTATION OF THE WWW IN REGION III *(agenda item 4.1)*

Report of the chairman of the working group on WWW

4.1.1 The fourth session of the Working Group on Planning and Implementation of the WWW in Region III was held from 16 to 20 May 2005, in Buenos Aires, under the chairmanship

of Mr Miguel A. Rabiolo (Argentina). The session discussed the achievements, as well as the existing shortcomings in the components of the WWW in the Region, and further developments.

4.1.2 The chairman of the working group stressed the difficulties that were experienced in undertaking the activities and tasks and proposed new alternatives to improve the effectiveness of the working group, with more involvement of the Regional Office and rapporteurs and extensive use of the Internet. In order to increase the efficiency of the work of the Rapporteurs, the Association invited its president, in consultation with the Permanent Representative concerned to consider the replacement of rapporteurs who, for any reason, could not carry out the assigned tasks as required.

4.1.3 The working group emphasised the importance of a concerted effort in the Region for further development of the WWW components through effective horizontal cooperation. Particular items discussed by the working group are considered under the relevant agenda items.

World Weather Watch Implementation

4.1.4 The Association reviewed the general status of implementation of key facilities in RA III. The detailed implementation of the WWW components and support functions were considered under the correspondent agenda items. The Association adopted Resolution 1 (XIV-RA III).

Annual global monitoring of the WWW

4.1.5 The Association considered the results of the monitoring of the operation of the WWW in 2005 from the annual global monitoring (October each year). The Association noted that, during that period, the availability of SYNOP reports from Regional Basic Synoptic Network (RBSN) stations decreased from 64 per cent to 58 per cent, while the availability of TEMP reports increased from 38 per cent to 47 per cent. The availability of CLIMAT and CLIMAT TEMP reports from Regional Basic Climatological Network (RBCN) stations oscillated around 71 and 62 per cent respectively.

4.2 INTEGRATED OBSERVING SYSTEM, INCLUDING THE INSTRUMENTS AND METHODS OF OBSERVATION PROGRAMME (IMOP) *(agenda item 4.2)*

4.2.1 The Association noted the Progress/Activity Report on the Integrated Observing System, including the Instruments and Methods of Observation Programme (IMOP) and decided as follows:

Surface-based sub-system

Regional Basic Synoptic Network (RBSN)

4.2.2 The Association noted that in overall, due to the Members' efforts, the observing system was functioning reasonably well in the Region, although there were deficiencies in some areas. It appreciated the work done by the RA III WG-PIW in identifying and addressing deficiencies in the observing programmes and requested the working group to continue their efforts to coordinate planning and implementation of current and new observing systems in the Region. The Association requested its Members to consider the possibility of exchanging hourly observational data within the Region.

4.2.3 As regards the revision of the RBSN, the Association confirmed the principles endorsed by its previous session to be applied for inclusion of stations, including Automatic Weather Stations, in the RBSN and it requested the WWW Working Group to study the issue and develop an appropriate operational plan. The Association adopted Resolution 2 (XIV-RA III) – Regional Basic Synoptic Network.

Regional Basic Climatological Network (RBCN)

4.2.4 Similarly to the RBSN, the Association confirmed the principles endorsed by its previous session to be applied for inclusion of stations in the RBCN and adopted Resolution 3 (XIV-RA III) – Regional Basic Climatological Network in Region III.

4.2.5 The Association took note of the plan to organize a Regional Training Seminar on CLIMAT and CLIMAT TEMP reporting and requested the Secretary-General to provide the necessary support.

Other networks, including sea stations

Marine observations

4.2.6 The Association noted the deficiencies in the present observing system and recommended that Member countries recruit more VOS (Voluntary Observing Ship) ships especially in the South Pacific and South Atlantic Ocean away from coastal areas. It also invited Members to promote and facilitate any opportunities for the deployment of drifting buoys and/or Argo floats in coordination with the DBCP (Data Buoy Cooperation Panel) and its ISABP (International South Atlantic Buoy Programme) and GDP (Global Drifter Programme) Action Groups, as well as the Argo programme. While noting the active participation of a couple of Members in the ISABP, the Association invited other Members to participate and contribute to the programme by purchasing buoys and/or assisting in deploying instruments. It noted the difficulties in meeting the SOOP (Ship of Opportunity Programme) requirements in the South-East Pacific Oceans and in the South Atlantic Ocean and invited its Members to participate more actively in the Programme by providing ship recruitment, especially on special lines (e.g. AX34, PX17, PX08, PX50, PX81). The Association noted that, as demonstrated at DBCP-XXI, installing an Argos Local User Terminal (LUT) on Easter Island would have a substantial impact on the timely exchange of drifting buoy on the GTS. It therefore invited Chile to plan and implement, in cooperation with the DBCP and Service Argos, a receiving station and its connection to the Argos network of LUTs.

AMDAR programme

4.2.7 The Association urged RA III Members to support the implementation of the WMO AMDAR Programme that was providing significant benefits to various WMO Programmes including the AeMP. It noted that several airlines of the Region were facing serious economic problems making it almost impossible for them to consider joining the AMDAR programme. Noting that a significant amount of AMDAR reports were already available at some centres the Association requested that those reports were transmitted to the RTHs in RA III for distribution to other centres.

Instruments and Methods of Observation Programme (IMOP)

4.2.8 The Association requested the Secretary-General to strengthen the capacities of Members in observing practices and calibration of instruments through training workshops, such as Training Workshops on Upper-Air Observations and Training Workshops on Metrology and Calibrations. The Association also requested that a survey be carried out to ascertain the capacity of Members in the areas of calibration and maintenance.

The forced need to replace certain radiosonde systems

4.2.9 Noting the report on the impact of the forced need to replace certain radiosonde systems on the upper-air network, the Association appreciated that steps were taken towards avoiding a prolonged loss of upper-air data, especially in developing countries. It requested the Secretary-General to continue the survey of actions in upgrading/replacement of radiosonde systems in close cooperation with RA III WG-PIW. The Association also stressed the

importance of support (as provided by GCOS) for consumables. This could lead to an increase of the number of soundings made. The Association felt that the RA III WG-PIW should start exploring the idea of targeted observations to optimize the use of radiosondes.

Report of the Rapporteur on Regional Aspects of Instrument Development, Related Training, and Capacity Building

4.2.10 The Association noted with appreciation the report of Mr Mario J. García (Argentina) the Rapporteur on Regional Aspects of Instrument Development, Related Training and Capacity Building and noted his contribution for the enhancement of capacity building matters in the field of instruments and methods of observation.

4.2.11 The Association agreed that the Regional Instrument Centre (RIC) Buenos Aires, Argentina, was instrumental in satisfying the needs of the Region for regular calibration, standardization, instrument comparisons and evaluation and for training of instrument experts and requested the RIC to continue strengthening their capabilities and regularly inform Members on their services and plans.

4.2.12 A basic principle to guarantee minimum required data quality, their worldwide compatibility and homogeneity is to ensure the traceability of measurements to International System of Units (SI). This can only be achieved through a hierarchy of traceability of network measurements to the world standards though regular calibration of field instruments with working standards kept by the NMHSs and their regular comparison, through an unbroken chain of national, regional and international comparison, with the world standards. In the absence of calibration laboratories in NMHSs, the RIC should provide a missing link to SI standards. Following the evaluation visit to the RIC Buenos Aires by a WMO expert, it was recognized that the hierarchy of the traceability of measurements to the SI in RA III should be improved and that the special training workshop on basic metrology principles and the traceability of measurements to the SI should be organized in the RIC Buenos Aires by WMO for the RA III Members.

4.2.13 In this regard, the Association appreciated that the National Meteorological Service of Argentina had provided training on instrument maintenance and calibration to Members of RA III through the regular RMTC Buenos Aires courses held at the RIC Buenos Aires. The Association adopted Resolution 4 (XIV-RA III).

Report of the Rapporteur on Solar Radiation

4.2.14 The Association noted that Mr G. Torres (Chile), the Rapporteur on Solar Radiation was unable to provide a report to the session. In the absence of the Rapporteur's report, the Secretariat, with the assistance of the Regional Radiation Centre (RRC) Buenos Aires, Argentina, prepared information on relevant activities within the Region.

4.2.15 The Association noted the related activities of its Members and welcomed further improvement of the national radiation networks, although problems remained in the implementation level, mainly due to economic constraints. The Association, therefore, urged Members, where appropriate, to extend and modernize their radiation networks and to establish National Radiation Centres that would be equipped with, at least, one absolute pyrheliometer maintained as the national radiation standard instrument.

4.2.16 The Association agreed that the RRCs were instrumental in satisfying the needs of the Region for regular calibration, standardization and comparisons of radiation instruments and for training of instrument experts and requested the RRCs to continue strengthening their capabilities and regularly inform Members on their services and plans.

4.2.17 Noting that very homogeneous solar radiation data measured all over the world are a precondition for the successful determination of the radiation budget, the Association requested the Secretary-General to organize regular Regional Pyrheliometer Comparisons in the Region in the period from six months to four years following the International Pyrheliometer Comparisons.

4.2.18 The Association noted that several Members of the Region had produced their own Solar Radiation Atlases and decided to explore the possibility of publishing a combined regional Solar Radiation Atlas. In this respect, it requested the Rapporteur on Solar Radiation to study the feasibility of such task and report to the president of the Regional Association for information and coordination with other Members. The Association adopted Resolution 5 (XIV-RA III).

4.3 INFORMATION SYSTEM AND SERVICES, INCLUDING TELECOMMUNICATIONS, DATA MANAGEMENT AND OPERATIONAL INFORMATION SERVICE *(agenda item 4.3)*

Status of Implementation of the GTS in RA III

4.3.1 The overall implementation of the GTS in Region III has progressed slowly in recent years, and some planned circuits were still not implemented. Some circuits were even disconnected and the Internet is being used as an alternative means to provide communication between some RA III centres. On the other hand, the RTHs of the Region have been upgraded. All X.25 circuits have been phased out and upgraded to TCP/IP operation. The details concerning the status of implementation of the RA III RMTN are included in the activity report.

4.3.2 Some centres of the Region are considering the use of CREX, BUFR and GRIB and also the conversion of some type of data into BUFR but only few NMSs are considering a complete Migration to Table Driven Code Forms currently. The session encouraged horizontal cooperation to make BUFR decoder/visualization software available to other countries.

4.3.3 The Association reviewed the implementation of the RA III RMDCN project. It was noted that the initial deployment was facing significant delays considering that the conclusion of the Framework Contact took place in January 2004. Administrative procedures and financial restrictions in some countries have inhibited the conclusion of the National Contracts and the initial deployment of the new network. The Association was informed that Brazil had already concluded a national contract with the service provider and that Argentina and Venezuela were in the final stage, proposing that the initial network connecting the RTHs of the Region should start operation in January 2007.

4.3.4 The Association concluded that the implementation of the RA III RMDCN was a crucial step to the modernization of the regional network to cope with the increasing demand for the exchange of larger volume of data and products in RA III that are required for the provision of effective services. The Association urged all Members to join the RMDCN project as early as possible to benefit from the new technology and economy of scale. The Association expressed full support to the RMDCN project, noting that its implementation by some Members would depend on the availability of financial resources. France indicated its willingness to join the RA III as soon as the initial network became operational.

4.3.5 The Association discussed the development of the WMO Information System (WIS) based on the concept endorsed by Fourteenth Congress. The session agreed that the implementation of WIS should be a regional priority and build upon the most successful components of existing WMO information systems in an evolutionary, smooth and coordinated process. In particular, the WIS should build upon the GTS with respect to the requirements for highly reliable delivery of time-critical data and products. The Association emphasised that the development of the RA III RMDCN project would be the first step taken by the Region towards

a successful WIS implementation. The Association welcomed the suggestion from the US delegation that in the context of WIS both RA III and RA IV should consider an integrated approach.

4.3.6 The Association stressed once again the importance of maintaining the radio frequency allocations and regulatory provisions of the ITU Radio Regulations for meteorological and related environmental activities, through specific radiocommunication services (Meteorological Aids, Meteorological Satellites, Earth Exploration-Satellites – including passive remote sensing – and Radiolocation for weather and wind profiler radars). It was noted that the threat on the full range of radio frequency bands allocated for meteorological and related environmental systems was continuing with the increasing development and expansion of new commercial radiocommunication systems. The Association requested its Members to use the guidance and information developed by CBS and to actively participate in radio frequency activities, especially the preparation of World Radiocommunication Conferences (WRC) issues, conducted by their national telecommunication administrations, by regional radiocommunication organizations (CITEL for the Americas), and by the ITU.

Operational Information Service (OIS)

4.3.7 The Association noted with appreciation that operational information was posted on the WMO server under http://www.wmo.int/web/www/ois/ois-home.htm and was dispatched on a CD-ROM once a year. The Association noted with satisfaction that these arrangements had ensured better data reliability, timeliness of distribution, and greater flexibility for using operational information by Members. The Association emphasized that the overall efficiency of the OIS was dependent on the prompt notification of changes and updated information from NMHSs. It urged NMHSs to ensure that all changes reach the MTN centres Brasilia and Buenos Aires (Vol. C1) and the Secretariat without delay, and thus benefit from the improved OIS for access to the up-to-date information required for their operations.

4.4 DATA-PROCESSING AND FORECASTING SYSTEM *(agenda item 4.4)*

Status of Implementation of the Global Data-processing and Forecasting System (GDPFS)

4.4.1 The designated Regional Specialized Meteorological Centres (RSMC) in RA III continued to maintain and enhance their operational numerical weather prediction (NWP) systems and to contribute to the overall operation of the GDPFS.

4.4.2 The NMCs in RA III effectively used products from advanced GDPFS Centres, which are made available through RTHs or received through satellite based distribution system (ground receivers (VSAT) and user terminals from the International Satellite Communication System (ISCS)). In addition to the dissemination through the GTS, many NMCs have Internet access to selected GDPFS products that are made available by some Centres in RA III and WWW centres in other Regions.

Ensemble Prediction Systems (EPS)

4.4.3 The products from EPS are becoming increasingly important in forecasting although current usefulness is mainly for forecast time-scales from medium-range to long-range predictions. A WMO Regional Training Workshop on use of EPS products took place in Brasilia,
24-26 January 2005. There were 26 participants from RA III countries.

4.4.4 The WMO Standardized Verification System for EPS is being implemented by EPS-producing centres. The experimental exchange of verification data has been established by Japan Meteorological Agency who provided a data server and Web site. RSMC Tokyo was designated as the Lead Centre for the verification of EPS products.

Long-Range Forecasts (LRF)

4.4.5 The Region noted that NWP centres that produce global LRF products and meet the established CBS criteria have been invited to acquire designations at CBS as "Global Producing Centres" (GPC). It was also noted that the identification of Regional Climate Centres (RCCs) would benefit the GPCs in knowing their principal users. The RCCs and NMCs were asked to provide feedback to the GPCs on their respective LRF products.

Severe Weather Forecasting Demonstration Project (SWFDP)

4.4.6 The scope of the Severe Weather Forecasting Demonstration Project (SWFDP) is to evaluate products currently available from NWP centres, or products that could be made available from current systems, with the goal to enhance the effectiveness of the forecasting systems of NMHSs where such products are not presently used in the provision of early warnings of severe weather events. The project is intended to involve global NWP producing centres, regional centres, and national meteorological centres of developing countries as well as disaster management and civil protection authorities. The Association noted the current discussions to create a Virtual Center encompassing Argentina, Brazil, Paraguay and Uruguay to monitor severe weather events and the performance of the regional observation network. This initiative was considered an important step to enhance the cooperation in the Region, thus contributing to narrow the development gap amongst NMHSs in the Region. In this respect the Association noted with appreciation the support offered by Spain on specialized related training.

4.4.7 The Region supported the CBS recommendation to consider a regional subproject in RA III in 2007.

Emergency Response Activities (ERA)

4.4.8 The RSMCs designated for providing specialized products for nuclear emergency response under the WMO Regional and Global Arrangements are well established and functioning, including the support to NMHSs of RA III. RA III Members support these arrangements and as well the present priority for the ERA programme to advance the work on the specialized applications of atmospheric transport modelling for non-nuclear applications, focusing initially on chemical accidents and smoke from large fires (wild-land, oil and chemical fires).

5. WORLD CLIMATE PROGRAMME (WCP) – REGIONAL ASPECTS *(agenda item 5)*

5.1 CLIMATE PROGRAMME COORDINATION AND SUPPORT ACTIVITIES (CPCSA), INCLUDING THE REPORT OF THE CHAIRMAN OF THE WORKING GROUP ON CLIMATE MATTERS *(agenda item 5.1)*

5.1.1 The Association was informed of the overall coordination of the World Climate Programme and noted with satisfaction the decisions made by Fourteenth Congress (Geneva, May 2003) relating to building partnerships within the climatology community to improve effectiveness. The Association urged Members to develop relations with international and regional agencies involved in areas of high priority to WMO and strengthen linkages between climate and their high priority national issues.

5.1.2 The Association took note that the Commission for Climatology (CCl) held its fourteenth session in Beijing, China, from 3-10 November 2005. Participants included 65 Member countries of WMO and four international organizations. It noted that Mr Pierre Bessemoulin (France) and Dr Wang Shourong (China) were unanimously elected, president and vice-president for CCl, respectively. It was informed that decisions of the Commission included a focus on specific, measurable, achievable, realistic and time-bound goals; a

balanced new structure with four Open Area Programme Groups (OPAGs); and a focus on partnerships and collaboration with user groups in the work of the Commission.

5.1.3 The Association welcomed the organization of a Technical Conference, preceding CCl-XIV, on "Climate As A Resource", in Beijing, 1-2 November 2005 and noted that more than 122 participants representing National Meteorological and Hydrological Services, universities, international agencies, private sectors and regional institutions from 71 countries took part in the two day conference. It took note with appreciation that the proceedings of the Conference has been finalized and published.

Status of the third edition of the WMO *Guide to Climatological Practices*

5.1.4 The Association noted that the Expert Team on the *Guide to Climatological Practices* (WMO-No. 100), held two meetings in Toulouse, France and Geneva Switzerland, from 19–23 September 2005 and 22-26 May 2006, respectively. These meetings further developed the materials for the Third Edition of the *Guide* following the work plan developed in Toulouse. The next step toward finalizing this activity will include further revisions and new content development followed by peer review of the contents to ensure scientific and technical standards for the documents, regional applicability, etc. The expert team in its meeting in Geneva, 2006, revised the work plan based on the expert assessment of the remaining work, and established a new timeframe for delivery. Given the availability of sufficient resources, the project could be delivered to WMO for approval and publishing in late 2007. The Association requested the Secretary-General to facilitate, as a matter of priority, finalization and distribution of the Third Edition of the *Guide*, with the least possible delay.

WMO RA III Working Group on Climate Matters (WGCM)

5.1.5 The Association noted with appreciation the report of Mr Jorge Carasco, Chile, the chairperson of the RA III Working Group on Climate Matters (WGCM), Montevideo, Uruguay, 15-17 May, 2006 and noted that the recommendations of the WGCM covered issues such as support for the Commission for Climatology, data, applications, RCCs, training, RCOFs, and capacity building would be dealt with under relevant parts of the RA III agenda. Members noted the considerable progress that had been made in the Region's climate activities.

5.1.6 The Association agreed that in the light of the issues identified above, it was necessary to re-establish the RA III Working Group on Climate Matters. Accordingly, Resolution 6 (XIV-RA III) was adopted.

Follow up to Establishment of Regional Climate Centres (RCCs)

5.1.7 The Association recalled that XIII-RA III (Quito, 19-26 September 2001) had supported to proceed with the establishment of Regional Climate Centres (RCCs) in locations serving a sub-region throughout which there could be common needs for services. The Association recalled that based on the requirements for the establishment of an RCC, the Working Group on Climate Matters, in its last meeting, Montevideo, Uruguay, 15-17 May, 2006 considered the development of RCCs and recommended that the president of the Region circulate a Survey to assess the interests and capabilities of the RA III Members with respect to RCCs. In addition, the Association noted with appreciation the offer by CIIFEN to serve the Region as an RCC and agreed to support such activity, noting the successful efforts to date by CIIFEN to coordinate training efforts, to host Regional Climate Outlook Forums and other relevant events, and the benefits of unified approaches in terms of software and outputs. Following the Santa Cruz agreement, November 2005, the Region expressed considerable support for CIIFEN, making it increasingly viable to serve as an RCC and to continue to support decision makers and planners in this effort to mitigate the effects of extreme weather and climate-related events. The Association noted the various structures of RCCs that other WMO regions are establishing. However, it expressed the need for the region to explore the possibility of

establishing a network of RCCs with distributed functions as this seems to best fit the needs of the Region.

Interaction between GCOS and WCP

5.1.8 The Association welcomed WMO's participation in the thirteenth session of the GCOS Steering Committee, St. Petersburg, Russian Federation, 5-8 October 2005 and encouraged ongoing cooperation between GCOS and the World Climate Programme aimed at solidifying support and improved interaction for the maintenance of the observing systems needed for climate observations.

United Nations Framework Convention on Climate Change (UNFCCC)

5.1.9 The Association noted that WMO participated in the first meeting of the Parties to the Kyoto Protocol (COP/MOP1) and the eleventh session of the Conference of the Parties to the Climate Change Convention COP-11 in Montreal, Canada, 28 November-9 December 2005. It took note that WMO had organized a side event at the Conference entitled: *'Enhancing climate knowledge to improve adaptation to climate variability and change'* which emphasized studies on socio-economic scenarios for assessments of climate variability and change impacts, vulnerability and adaptation in the context of sustainable development. Furthermore, the Association noted that during the SBSTA-24, Bonn, 18-26 May 2006, WMO organized another side event on '*Climate change research achievements and challenges: priority goals for WCRP'.* It also took note that WMO held an informal meeting (Bonn, 20 May 2006) for participants from NMHSs in the SBSTA-24 to provide a basis for discussion of climate activities in a brainstorming manner. It welcomed those developments and requested further interaction of WMO Permanent Representatives in their capacities as national delegates to COP and SBSTA for closer participation in the work of the Convention and IPCC especially in the dissemination of the results of the Fourth Assessment Report (4AR).

United Nations Convention to Combat Desertification (UNCCD)

5.1.10 The Association noted the WMO activities on desertification and urged Members to participate actively in the implementation of the United Nations Convention to Combat Desertification (UNCCD). It urged Members to benefit from the support by the Global Mechanism of the Convention for projects in that area.

Convention on Biological Diversity

5.1.11 The Association expressed its appreciation to the Secretary-General for the report on the different sessions of the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) of the Convention on Biological Diversity (CBD), which were held between 2001 and 2005. The Association was pleased to note that WMO was a member of the Ad hoc Technical Expert Group on Biological Diversity and Climate Change established by the CBD. The Association noted that increasing attention is now being paid by the CBD to several important weather- and climate-related issues related to biological diversity. In this regard it encouraged the Members and the WMO Secretariat to take pro-active action in building capacity of NMHSs for effective contribution in relevant activities of CBD.

World Climate Impact Assessment and Response Strategies Programme (WCIRP)

5.1.12 The Association noted that WMO was represented in the 23rd session of the UNEP Governing Council (Nairobi, Kenya, 21-25 February 2005) and recognized the importance of close cooperation between WMO and UNEP within WCIRP. As a follow-up to WCIRP activities the Association requested the Secretary-General to promote interaction and cooperation with UNEP on regional and national actions on adaptation to climate change, study on climate change impacts, and encourage applications of climate as a resource for renewable energies.

World Climate Conference–3

5.1.13 The Association noted that EC-LVII had requested the Secretary-General to establish a Provisional Organizing Committee for the World Climate Conference-3. The Association noted that the Provisional Organizing Committee held two meetings and will submit its report to EC-LVIII for further guidance. The Association welcomed the initiative and supported the organization of the Conference. It urged the establishment of a mechanism that would ensure sufficient funds for holding the Conference. The Association noted that although the conference is targeting for enough participation from the user community, it urged the WMO Secretariat to ensure that there will be enough participants from NMHSs.

5.2 WORLD CLIMATE DATA AND MONITORING PROGRAMME (WCDMP) *(agenda item 5.2)*

5.2.1 The Association noted the good progress in various aspects of the WCDMP activities in the Region. Through the Commission for Climatology (CCl), experts in the Region made valuable contributions on the three highest priority projects within this programme: Climate System Monitoring, Data Rescue and Digitization, and Climate Database Management.

5.2.2 The Association noted the urgency associated with each of the projects:

(a) Coordinated climate system monitoring is needed to elevate the awareness of risks, for all time-period planning; the Association noted the contribution of RA III Members in providing input to the WMO Statement on the Status of the Global Climate in 2001, 2002, 2003, 2004 and 2005;

(b) Data rescue activities must prevent the irreversible loss to science and society of historical climate datasets, by helping NMHSs to make computerized records of their own climate data holdings, and to find and record the data that are held in other datasets;

(c) Support activities in climate database management are urgently needed to ensure that national climate databases can provide the high quality historical data – including the rescued data – that are needed for the authoritative climate assessments produced through climate system monitoring.

Observing Requirements and Standards for Climate

5.2.3 The Association expressed its appreciation to WCDMP for the efforts made with CCl to develop *Guidelines on Climate Observation Networks and Systems* (WCDMP-No. 52). The Guidelines series provided information on how to organize and implement climate services.

5.2.4 The Association noted with appreciation the collaboration between WCP and GCOS, funded by the USA, to produce a Climate Reporting (CLIREP) software to encode and decode CLIMAT and CLIMAT TEMP messages. The Association also noted that training seminars on CLIMAT & CLIMAT TEMP will be held in Buenos Aires from 25 to 27 October 2006.

5.2.5 The Association noted the request of the Working Group on Climate related matters to get CIIFEN's collaboration in the development of GCOS Action Plan for the region.

5.2.6 The Association took note of the successful conduct of the Fourth International Conference on Automatic Weather Stations held in Portugal, May 2006. The Association noted with satisfaction that WCDMP/OPAG 1 has completed and revised a technical document on the automated versus manual surface meteorological observations - decision factors. This document will be published and disseminated in the course of 2006 and will help in guiding Members toward optimal decisions in AWSs matters.

Climate Watches

5.2.7 The Association noted with appreciation the work done by the CCl Expert Team (ET) to develop Guidelines on Climate Watches. An expert team meeting was held in Brazil to finalize the Guidelines (WCDMP-No 58) and recommended its publication in all WMO official languages and concurred with the conclusion made by CCl in its fourteenth session held in Beijing, China, 3-10 November 2005, on the clarification which was requested by some Members concerning the definition of climate watches as follows:

(a) Climate Watch is a system (i.e. set of functions and responsibilities) providing information on the status of climate, and first of all on its possible negative impacts;

(b) Climate Watch system does not imply or require creation of new entities to run climate watch activities;

(c) Climate Watch advisories are to be issued by NMHSs to their users; Regional Climate entities assist NMHSs by providing regional climate products to NMHSs.

The Association further encouraged Members to develop capacity building on climate watches in the Region by organizing training seminars.

Climate Analysis and Monitoring Techniques (including Climate Change Detection)

5.2.8 The Association noted the continuing strong and effective collaboration with WCRP in the area of climate change detection, and welcomed the decision of CCl-XIV to re-establish a similar group for the next intersessional period with the participation of JCOMM, and requested the WMO Secretariat and Members to continue supporting regional training workshops on climate analysis and monitoring techniques and urged Members to provide daily data records from all CLIMAT and CLIMAT TEMP stations to NOAA/NCDC to build the data sets needed for the calculation of indices.

5.2.9 The Association endorsed the ET's intention to provide guidance for NMHSs, provide software to calculate indices in support of the IPCC process, the organization of training workshops and the use of results in WMO's Climate System Monitoring programme.

5.2.10 The Association noted with satisfaction the significant results that were achieved in CSM. The seventh Global Climate System Review (June 1996–December 2001) published in 2002, assessed the climate variations across the globe for the entire cycle of the El Niño/Southern Oscillation, from neutral conditions through the most intense El Niño event of the 20th century, to the establishment of La Niña conditions. The Association was pleased to note the regular issuing of the annual WMO Statement on the Status of the Global Climate, which started in 2003, and since 2005 is being produced, printed and distributed in all WMO official languages.

5.2.11 The Association welcomed the action taken by WMO/WCDMP following a recommendation of CCl-XIV to extend the geographical coverage of the NOAA/BAMS article on the climate system review and involve authors from the Region. As a result of this, good coverage on major climate events in the Region was reported in the 2005 Article. The Association also appreciated the high value of input provided by CIIFEN in this enterprise.

Data sets, Data management and Data Rescue (DARE)

5.2.12 The Association noted with satisfaction the preparation of a CD-ROM of the 1991-2000 World Records series and the completion of the *Guidelines on Climate Metadata and Homogenization* (WCDMP-No. 53).

5.2.13 The Association was informed on the accomplishment of the WCDMP *Guidelines on Climate Database Management* and looks forward to its publication and dissemination to Members. The Association expressed its thanks to the International Research Centre on El Niño (CIIFEN) for the organization of the Seminar on the Climate Data Rescue and Management, Monitoring, Application and Prediction of Climate, Guayaquil, Ecuador, 31 March–4 April 2003. This seminar was the first of its kind and was attended by 31 experts, including lecturers and moderators from Brazil, Costa Rica, Colombia, Chile, Ecuador and France, as well as representatives of the National Meteorological Services (NMSs) of Argentina, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Honduras, Nicaragua, Paraguay, Peru, the Dominican Republic, Uruguay and Venezuela.

5.2.14 Based on the outcomes of the workshop and noting the existing CDMS activities in the Region, and taking into consideration the need for building capacity of some NMHS in data management, it concurred with the workshop recommendations and:

(a) Expressed the need for national CDMS administrators to make an assessment of their systems to document their capacities, functionalities, problems, etc., and that national CDMSs must adhere to WMO standards for data import and export;

(b) Requested NMHSs that have already developed CDMSs in Spanish to share their systems with RA III and RA IV Members and requested support and assistance from the WMO Secretariat to conduct assessments and produce the relevant documentation;

(c) Endorsed that Costa Rica and Brazil be designated as focal points for training in the management of CDMSs, with the support of the WMO Secretariat, to prepare and conduct seminars in the Region focusing on CDMSs;

(d) Endorsed the workshop recommendation to establish a working group, to determine the requirements (hardware, software and human resources) of a national CDMS, which could be used at regional level, and requested the WMO Secretariat's assistance in resource management for the development and implementation of this system.

5.2.15 The Association appreciated the WMO Secretariat's action to hold a Workshop on the Use of Climate Data for Disasters Prevention and Mitigation, San Salvador, El Salvador, 18-22 April 2005, in which 8 countries from RA III and RA IV took part: Costa Rica, Honduras, Nicaragua, Panama, Belize, El Salvador, Dominican Republic, and Mexico.

5.2.16 Therefore, considering the needs in data rescue, preservation and digitization of data records, the Association concurred with the recommendations of the Workshop:

(a) The WMO Secretariat to organize a regional training on the basics of the rescue and management of climate data including Quality Control and applications;

(b) The WMO Secretariat to support Members of the Region to begin and accelerate the preservation and digitization of their climate records by providing Members with data rescue equipment and the new CDMS systems (equipment, software and training) as required.

5.3 WORLD CLIMATE APPLICATIONS AND SERVICES PROGRAMME (WCASP), INCLUDING CLIMATE INFORMATION AND PREDICTION SERVICES (CLIPS) *(agenda item 5.3)*

Participation in the work of the Commission for Climatology OPAGs 3 and 4

5.3.1 The Association noted the ongoing efforts of the WCASP and CLIPS and the Commission for Climatology (CCl) to promote the development and application of climate

information and prediction services within the Region, and endorsed the decisions taken at the fourteenth session of CCl (3-10 November 2005, Beijing, China) to split the former Open Area Programme Group (OPAG) 3 into a new OPAG 3 on CLIPS, and a new OPAG 4 on Climate Applications and Services. The Members noted an improved level of participation in the work of the Commission in the fourteenth intersessional period (2005-2009), since each Expert Team in OPAGs 3 and 4 now included an expert from the Region, and urged regular communication of relevant information and results within the Region.

Regional Climate Outlook Forums and their sustainability

5.3.2 The Association noted that Regional Climate Outlook Forums (RCOFs) were a regular activity in several sub-regions, contributing to building capacity for climate experts including CLIPS Focal Points (FPs) and recognized the importance of sustainable funding for their continuation. As the availability of financial resources (from traditional funding agencies, development partners, governments and the private sector) is increasingly dependent on performance-based systems that monitor the effectiveness of the predictions and services for the user-communities, Members urged WMO to facilitate development of techniques for evaluation and assessment of the socio-economic value of climate products and services. Members committed to increasing national and regional support for holding RCOFs, and to increasing efforts to gain user support to expand their scope. Members agreed to optimize resources for COFs by adopting practical methods (teleconferences and Internet-based discussions), and by holding full-region COFs. The Association urged CIIFEN, whose facilities and coordination are already an efficient component of the COF programmes for the Region, to extend its activities in this manner.

CLIPS multidisciplinary training

5.3.3 The Association noted that key training priorities for the Region included new prediction and analysis technologies (e.g. CPT, EXEVER, RClimdex), climate modelling, validation and downscaling techniques, cost-benefit analysis and cross-disciplinary training for applications. The Association recognized the importance of Disaster Prevention and Mitigation (DPM), and urged that the WCASP work with WMO's Education and Training Department, the DPM Programme and relevant partners to develop training programmes for climate specialists in risk assessment, hazard analysis and mapping techniques (e.g. GIS).

Partnership building and interaction with users of climate information

5.3.4 The Association agreed to improve two-way communications with users of climate information, to develop user profiles and demand-driven climate services that support decision-making, and urged that user groups are consistently invited to participate in RCOFs. Members urged WMO to publish the outcomes of the conference 'Living with Climate Variability and Change: Understanding the uncertainties and managing the risks' (Espoo, Finland, 17-21 July 2006), as quickly as possible.

Climate Information and Prediction Services (CLIPS) and CLIPS Focal Points

5.3.5 The Association recognized that climate variability, including that related to ENSO, had substantial effect on socio-economic activities in the Region; that effective use of seasonal to interannual climate information and predictions can provide substantial benefit in socio-economic planning; and that tools and technology for seasonal to interannual climate prediction are developing rapidly, requiring training and capacity building in the Region. Members therefore decided that the implementation of end-to-end CLIPS activities should be kept under constant review and coordinated throughout the Region.

5.3.6 The Association agreed to appoint a Rapporteur to coordinate CLIPS reporting to increase efficiency in communicating regional climate information; to keep abreast of research

activities on climate variability; to liaise with relevant CCl Expert Teams and with eventual RA III Regional Climate Centres; and to serve as the Rapporteur on CLIPS Implementation on the Working Group on Climate-related Matters. The Association agreed that all members would appoint one or more National CLIPS Focal Points within their Services to further the development of the CLIPS concept and to enhance coordination of climate information and services, and would provide updated contact information to WMO. To this effect, the Association adopted Resolution 7 (XIV-RA III) on Climate Information and Prediction Services.

El Niño and La Niña

5.3.7 The Association recognized the importance of understanding the science of El Niño and La Niña and of effective communication on ENSO-related matters, and urged the new CCl Expert Team on El Niño and La Niña to regularly inform NMHSs and CIIFEN of progress. Following the recommendations from the CLIPS training workshop (Lima, 2005), the Association suggested that CCl and CIIFEN explore whether development of additional subregional groups in RA III would be of benefit to these initiatives. Members noted the successful WMO publication of global consensus-driven El Niño and La Niña Updates, and urged that these be continued and that the Region be alerted in advance of their issuance, to enhance effectiveness of media coverage. Members urged CIIFEN to continue its support for these WMO Updates.

Climate Applications

5.3.8 Following the Technical Meeting on CLIPS and Agrometeorological Applications for the Andean Countries (Guayaquil, Ecuador, 2003), a regional project was set up and is underway. The Association urged the WMO to provide technical assistance and guidance, specifically for agricultural risk analysis, and statistical reference materials.

5.3.9 Considering the current progress of the pilot projects developed by CIIFEN with NMHSs in the Region on early warning and information systems for prevention of malaria and other diseases, the Association urged WMO and the CCl to develop an inventory of links to relevant regional climate-health projects to promote synergy in information sharing between activities, and encourage partnerships and collaboration between proponents of similar projects in various regions (e.g, Africa/Climate Health partnership).

5.3.10 The Association urged development of a CLIPS training workshop focused on applications to the renewable energy sector for RA III, and accepted the offer of CIIFEN to conduct a pre-workshop survey to develop a baseline status assessment of energy sector demands for climate information, predictions and products, and of current applications of climate services for the energy sector in the Region.

5.3.11 Members noted that in February 2007, Colombia would host a world conference on tourism, and agreed to attend and contribute to the discussions on climate services for tourism. The Association requested that significant results be shared with the Region and with the Commission as soon as possible following the event.

5.3.12 The Association noted that countries in other Regions (e.g. China) wish to share information on applications related to urban and building climatology and to initiate pilot projects. Recognizing the urgent need for studies on urban pollution, urban heat island and its effects on health (heat waves), in major cities in South America, the Association urged that such opportunities be supported by the NMHSs, and urged WMO to complete the Guidelines on Heat-Health Warning Systems as a matter of priority.

5.3.13 Given the interest of UNESCO, regional NMHSs and CIIFEN to conduct a regional pilot project on risk management for water resources, the Association urged the Climate and

Hydrological programmes of WMO and the WMO-UNESCO WCP-Water Programme to provide technical support for effective development of a viable project proposal.

5.4 WORLD CLIMATE RESEARCH PROGRAMME (WCRP) *(agenda item 5.4)*

5.4.1 The Association was informed of the progress of the WCRP in the intersessional period. The Association acknowledged that WCRP during the past 25 years of its existence, has made fundamental contributions to scientific understanding of the physical climate system and climate processes needed to determine to what extent climate can be predicted and the extent of human influence on climate. It acknowledged with appreciation that the significant progress was achieved not only in global issues but also in regional studies of high value for the Association such as the ozone hole in the Southern Hemisphere, seasonal predictability of precipitation over the Region, and operational implementation of long-term El Niño forecasting. The Association welcomed and endorsed the new WCRP strategic framework for 2005-2015 entitled Coordinated Observation and Prediction of the Earth System (COPES) and its aim to facilitate analysis and prediction of Earth system variability and change for use in an increasing range of practical applications of direct relevance, benefit and value to society. The Association was pleased to note the WCRP's new Strategic Framework proposed close collaboration with THORPEX to bridge the gap between weather and climate forecasting activities. The Association was further pleased to note the joint efforts of WCRP and THORPEX to prepare a joint white paper on the grand challenge of establishing a multi-national coordinated research initiative to develop next-generation unified models for prediction of weather and climate taking into consideration of future scenarios of climate change.

5.4.2 The Association was pleased to note that its Members continued to participate actively in all components of the WCRP, including observational projects, process and modelling studies. Of special interest for the Region were the Large-Scale Biosphere Atmosphere Experiment in the Amazon Basin (LBA) and the major continental scale experiment initiated over the La Plata Basin (LPB).

5.5 GLOBAL CLIMATE OBSERVING SYSTEM (GCOS) *(agenda item 5.5)*

5.5.1 The Association welcomed the completion, under GCOS leadership, of the *Second Report on the Adequacy of the Global Observing Systems for Climate in Support of the UNFCCC* (April 2003) and the subsequent *Implementation Plan for the Global Observing System for Climate in Support of the UNFCCC* (October 2004). It noted that these had been developed in collaboration with the broad climate science community and with other observing system initiatives such as the recently-established Group on Earth Observations. The Association encouraged Members to cooperate in implementation of relevant actions recommended in the Plan to the maximum extent possible.

5.5.2 The Association welcomed the decisions adopted by the UNFCCC Conference of the Parties (COP) and its Subsidiary Body on Scientific and Technological Advice (SBSTA) in support of global observing systems for climate and, in particular, those related to the Second Adequacy Report and the Implementation Plan. It noted that COP had invited GCOS to provide information to future sessions on how the actions identified in the Plan were being implemented, and that ensuring such implementation was a major priority for GCOS in the coming years.

5.5.3 The Association welcomed the progress made through the recently completed GCOS Regional Workshop Programme, launched in 2000 following a request from COP in decision 5/CP.5. It recalled that the sixth workshop was held in October 2003 in Santiago, Chile in collaboration with the Meteorological Service of Chile and the WMO Regional Office for the Americas, and had led to development of a Regional Action Plan for South America in 2004. The Association recognized that identifying funds to implement this and the other Regional Actions Plans was crucial to achieving the ultimate objectives of the Programme and

commended the efforts taken by GCOS toward this end. It noted in particular the positive results from the workshop on 'Climate Information for Development Needs: An Action Plan for Africa', held in Addis Ababa in April 2006, and looked forward to the prospect of holding a similar meeting for the South America Region.

5.5.4 The Association noted the improving performance of the GSN and GUAN networks in the Region and expressed its appreciation to the Members involved. It nevertheless noted that CLIMAT and CLIMAT TEMP reporting performance was still well below the desired levels, and that historical daily data for only about one-third of stations had been submitted to the GSN archive. The Association encouraged all Members to make available the historical data for their stations if not already done, and to maximize their efforts to maintain satisfactory operation of their GSN and GUAN stations.

5.5.5 The Association noted with interest that Argentina could increase its current upper-air observation plan at the Marambio Antartic Meteorological Centre during International Polar Year to the extent that it received support for the required consumables.

6. ATMOSPHERIC RESEARCH AND ENVIRONMENT PROGRAMME (AREP) – REGIONAL ASPECTS *(agenda item 6)*

6.0 The Association noted the activities that had taken place within the Atmospheric Research and Environment Programme since 2001 and that its Members had played an active part in many of them. The Association noted with satisfaction that Members in the Region had submitted candidates for the WMO Research Award for Young Scientists, and won the prize in 2006.

6.1 GLOBAL ATMOSPHERE WATCH (GAW), INCLUDING SUPPORT TO OZONE, CLIMATE AND OTHER CONVENTIONS *(agenda item 6.1)*

6.1.1 The Association noted the considerable progress achieved by the GAW programme providing scientists and governments with credible information on atmospheric chemistry aspects of climate change and air quality. RA III Members are making significant contributions to the three major missions of GAW: coordination of global monitoring, support of scientific analysis/ assessment and assisting in developing the means to predict future atmospheric states. It recommended that GAW maintain its focus developing the global networks of six variable groups, namely, ozone, UV, greenhouse gases, aerosols, selected reactive gases and precipitation chemistry.

6.1.2 It was recognized that GAW provided fundamental information underpinning scientific assessments of the measures agreed by governments to address stratospheric ozone depletion (Vienna Convention and Montreal Protocol and subsequent amendments), and the build up of greenhouse gases (notably CO_2 and CH_4) in the atmosphere (UNFCCC and Kyoto Protocol). Members are requested to assign high priority to the integrity of the global ground-based ozone measurement networks through a combination of regular intercomparisons and calibrations of Dobson and Brewer spectrophotometers, comparisons of various types of ozonesondes and quadrennial ozone assessments. The Association was pleased with the near-real time delivery of ozone data for the WMO Antarctic Ozone Bulletins and Members were urged to assist WMO to widen the scope of the Antarctic Bulletin to include issues related to ozone recovery. The Association noted with satisfaction the activities of the Regional Ozone Calibration Centre, operated by Argentina, including the November 2003 Dobson and UV intercomparison and the upcoming one to be held in November 2006. It reminded Members of the importance of the proper maintenance of all GAW measurements. It also urged Members to submit data promptly to the GAW World Ozone and UV Data Center.

6.1.3 The Association was pleased with the substantial contribution to the international Scientific Assessments of Ozone Depletion in 2002 and 2006. The Association noted with interest that, in the framework of a bilateral agreement between Argentina and Spain, and in

accordance with the International Polar Year, a programme for ozonesonde observations at the Global Atmosphere Watch station in Ushuaia had been established. Participating in the programme were the National Meteorological Institute (INM) and the National Institute for Aerospace Technology (INTA) of Spain, and the NMS, the province of Tierra del Fuego, the Antarctic and the islands of the South Atlantic of Argentina.

6.1.4 The Association noted that NMHSs throughout the world are broadening their traditional role of meteorological monitoring and forecasting to include prediction of other environmental phenomena that could potentially affect the health and welfare of their citizens (e.g., plumes from biomass burning, dust storms, and urban air quality). The emergence of chemical weather (air quality) forecasting is an illustrative example. The recent developments in atmospheric chemical transport modelling are leading to more effective linkage of air pollution issues on different scales from urban to global. Thus in urban air pollution studies, it is important to consider also the regional picture and in regional air pollution, the effects of Megacities and hemispheric transport. In recognition of the above, the Association welcomed the continuing implementation of workshops and projects within the GAW Urban Research Meteorology and Environment (GURME) project. The Association was pleased to note that there is collaboration between different agencies in the GURME pilot project "Improvement of Air Quality Forecasting in Latin American Cities" and that the project will form the basis of an emerging IGBP-IGAC Megacities Project in Latin America.

6.1.5 The Association emphasized that the training and education needs in developing countries should continue as a high priority in GAW. In particular, the training offered by the GAW Training and Education Centre (GAWTEC), funded and hosted by Germany, is an effective mechanism for capacity building; eight persons from the Region have attended the two-week courses.

6.1.6 The Association appreciated development and support by Switzerland and the Secretariat of the Web-based GAW Station Information System (GAWSIS), which allows on-line access to the GAW network information including status of data submission to the GAW World Data Centres. Members are urged to check the information on their stations and contacts and requested to routinely update this information in GAWSIS directly through www.wmo.int/web/arep/gaw/
gaw_home.html.

6.2 WORLD WEATHER RESEARCH PROGRAMME (WCRP), INCLUDING THORPEX AND WEATHER MODIFICATION (agenda item 6.2)

6.2.1 The Association noted with satisfaction the high level of interest shown by its Members in the activities of the World Weather Research Programme. Members in the Region had hosted and participated in meetings and workshops organized under WWRP. Members were urged to continue their support to the Programme.

6.2.2 The Association noted the reorganization of the weather research activities of CAS under an OPAG on WWRP, which included major WWRP programme THORPEX, mesoscale and tropical meteorology research, nowcasting, verification, weather modification as well as societal and economic application research components.

6.2.3 The Association noted with satisfaction the great interests of its Members shown in the new WWRP component programme THORPEX established by the WMO Congress in May 2003. THORPEX is led by the CAS Joint Scientific Committee for WWRP and the International Core Steering Committee (ICSC) in cooperation with the JSC/CAS Working Group on Numerical Experimentations and the Commission for Basic Systems.

6.2.4 The Association noted with appreciation that in 2003 the THORPEX International Science Plan was prepared and the International Implementation Plan had been developed (detailed information published on the Web site http://www.wmo.int/thorpex/) with contributions

from the Region and in collaboration with the WWW, WCRP, WMO Space Programme, and other relevant WMO Programmes and international organizations and in connection with GEO and International Polar Year initiatives. The Association urged Members to favour the engagement of NMHSs (operational forecast and research entities and consumers of their products and services) and national academic institutions to THORPEX research, experimentations, and demonstration projects and especially welcomed the involvement of developing countries.

6.2.5 The Association further noted that the THORPEX International Programme Office (IPO) was established in the WMO Secretariat, as well as the Trust Fund to support the office and programme activities. The Association urged all its Members to take an active part in the implementation of THORPEX and to support the IPO.

6.2.6 The WWRP/THORPEX Scientific Conference on "Improving the Global Predictability of High Impact Weather" (Cape Town, South Africa, 13 to 15 February 2006) concluded with the agreement on the formation of the SH Regional Committee. The Committee has now been formed and consists of members from Australia, Brazil, Chile, The Cook Islands, Indonesia, New Zealand and South Africa.

6.2.7 Recognizing the importance and benefits of THORPEX research to all Members of the Region, the Association agreed to establish and appoint a Rapporteur on WWRP-THORPEX and adopted Resolution 8 (XIV-RA III).

6.2.8 The Association noted that Members of the Association continued to show great interest in activities related to the development of the Tropical Meteorology Research Programme. Experts from the region contributed to the Third WMO International Workshop on Monsoon
(IWM-III) (Hangzhou, China, November 2004) and the Fifth International Workshop on Tropical Cyclones (IWTC-V) (Cairns, Australia, December 2002). The Association urged its Members and all concerned to endeavour to implement the recommendations made by these workshops relevant to their activities.

6.2.9 The Association noted the outcomes of the 21st session of the CAS Working Group on Physics and Chemistry of Clouds and Weather Modification Research (WG PCCWMR), held in May 2005, Geneva. WG PCCWMR reviewed the relevant documents, i.e. 'WMO Statement on Weather Modification' and 'Guidelines for the Planning of Weather Modification Activities' and also produced the 'Executive Summary of the WMO Statement on Weather Modification'. As stated in the documents, our understanding of cloud process is not yet sufficient to predict with enough confidence seeding effects in clouds. However, new approaches such as using advanced models, sophisticated measurement techniques, new experiments on storm/cloud process and evolution of precipitation could bring advances in hail suppression and precipitation enhancement operations. Furthermore, CAS-XIV has requested establishment of a process for reviewing the WG PCCWMR documents, asking the newly constituted Expert Team on Weather Modification to take cognizance of this review when it becomes available.

6.2.10 The Association noted the initiation of the WMO/IUGG Science Assessment of Aerosol Effects on Precipitation conducted by the CAS International Aerosol Precipitation Science Assessment Group (IAPSAG). The Group, in its meeting in November 2005, worked on finalizing a peer-reviewed assessment report to be published by 2007.

6.2.11 The Association noted that the Second THORPEX International Science Symposium would be organized in December 2006 in Germany, the Sixth International Workshop on Tropical Cyclones (IWTC-VI) in November 2006 in Costa Rica and the 9th Scientific Conference on Weather Modification in 2007 in Turkey, and encouraged active participation of Members in these important meetings.

7. APPLICATIONS OF METEOROLOGY PROGRAMME (AMP) – REGIONAL ASPECTS
(agenda item 7)

7.1 PUBLIC WEATHER SERVICES (PWS) PROGRAMME (PWSP) *(agenda item 7.1)*

7.1.1 The Association reiterated that a primary result of the provision of PWS to the national community is enhanced public safety and general welfare and convenience. It highlighted the PWS Programme's role in assisting Members to effectively deliver quality products to ensure the protection of life and livelihood and contribute to sustainable development. In this context, the Association noted that the Programme's activities regarding capacity building, coordination with media and emergency management, user focus, performance evaluation, keeping abreast of new technology and improving products and services were along the recommendations of XIV-RA III and the priorities identified by the Region. The Association urged the need to continue with training more experts in PWS in the region.

7.1.2 The Association recognized that the effective application of public weather services to the mitigation of natural disasters presents many opportunities and challenges in taking advantage of technology and in meeting rising community expectations to enable informed decisions and actions. The need to create better public awareness of natural hazards and the risks associated with them was emphasized. NMHSs should move beyond providing early warnings of hazards to ensuring that the risks to society and the environment are better understood. The Association encouraged NMHSs to interact more closely with high-level decision makers in government, civil defence and the media to emphasize the value of warnings, and to help emphasize principles such as the need for a single authoritative voice for public warnings. In this regard, the Association requested that the PWS Programme continue its efforts in building capacity, transferring knowledge, application of technology and publication of guidelines on topics related to NMHSs' service delivery role. The Association requested the Secretary-General to arrange for holding regional training workshops on PWS in support of disaster prevention and mitigation as part of the strategy to assist Members in the all-round effort to minimize the adverse effects of severe and high impact weather.

7.1.3 The Association noted with satisfaction the success and popularity of the World Weather Information Service (WWIS) and Severe Weather Information Centre (SWIC) Web sites among the public and WMO Members. By March 2006, WWIS carried forecasts for 1082 cities from 111 Members including 8 from RA III, and climatological information for 1128 cities from 157 Members in English, Portuguese, Arabic and Chinese, with a French version under construction. The Association received with great satisfaction the announcement by Spain of the inauguration as from 12 September 2006 of the Spanish version of the WWIS, which was accessible on the website http://wwis.inm.es.

7.1.4 The two Web sites became operational in March 2005 and are maintained by the current WWIS and SWIC host Members viz, China; Hong Kong, China; Macao, China and Oman respectively. The (SWIC) Web site provides a centralized source for official tropical cyclone warnings and information issued by NMHSs. The project has global coverage with 20 participating NMHSs and has expanded to include information on rainstorms and heavy snowfall from all Regions.

7.1.5 The Association welcomed the formation of an Expert Group on Public Education and Outreach under the PWS Programme in close collaboration with ETR with the aim of increasing the understanding by the public of the usefulness and limitations of weather forecasts and of the impact of hazards. Experts from NMHSs and the wider community are working to provide public education and outreach materials suitable for adaptation to different languages and cultures in different WMO Regions, to address decision-making authorities, the general public, and educational institutions. The Association requested that the results of the work of the Expert Group be widely made available to the NMHSs in the Region.

7.1.6 The Association noted that liaison had been established through CBS between THORPEX and the PWS Programme and that the PWS Programme would closely collaborate with the social and economic applications tasks of THORPEX. In line with the fundamental principles of PWS in contributing to safety of life and alleviation of poverty through reducing the effects of severe and high impact weather on society as given in the 6LTP, the Association noted the formation of a Task Force on Social and Economic Applications of PWS to specifically assist NMHSs in the evaluation and demonstration of the social, environmental and economic benefits of their public weather services to various user sectors through preparation of methodologies and guidance material. The Association requested that the outcome of the work of the Task Force be shared with NMHSs of Members in the Region. The Association further noted that the Task Force would contribute to the process towards the organization by WMO of the International Conference on Social and Economic Benefits of Weather, Climate and Water Services to be held in Madrid in March 2007.

7.1.7 The Association agreed on the importance of verification of warnings and forecasts as well as service evaluation, noting that user-based service assessment is required input for products and services upgrade and in the development of new products and services. In this regard the Association encouraged its Members to develop and implement service assessment mechanisms to help improve service delivery. It requested the Secretary-General to continue to provide assistance in this area to those Members requiring such assistance.

7.1.8 The Association stressed that in order to satisfy the growing public demand for more relevant, timely, and accurate products and services, the future work of the PWS Programme would focus on the following issues:

(a) Capacity building and transfer of knowledge and technology;

(b) Application of new technology and research in NMHS systems and operations for improved and user-based service delivery;

(c) Increasing the adoption of verification and user-based service assessment;

(d) Raising the level of public awareness, understanding and response to weather warnings as part of natural disaster mitigation and reduction efforts;

(e) Improving relationships and coordination with emergency management and the media;

(f) Assisting NMHSs to more fully exploit and appraise the benefits of their services in different user sectors, such as agriculture, water resources, health, energy, tourism and risk management;

(g) Promoting awareness of the importance of the impact of high quality, well delivered public weather services on the image and visibility of the NMHS;

(h) Improving the use of official and consistent information, facilitating the international exchange of public weather products and making weather information available on the Internet.

7.2 AGRICULTURAL METEOROLOGY PROGRAMME (AgMP), INCLUDING THE REPORT OF THE CHAIRPERSON OF THE WORKING GROUP ON AGRICULTURAL METEOROLOGY *(agenda item 7.2)*

7.2.1 The Association complimented the Secretary-General and the Commission for Agricultural Meteorology (CAgM) for the progress made in the implementation of the Agricultural Meteorology Programme (AgMP), including the publication of a large number of technical notes and CAgM reports.

7.2.2 The Association noted with appreciation the theme adopted by the Commission, "to promote operational applications of agrometeorology using innovative technologies for services to agriculture, silviculture and aquaculture". The Association noted with interest the intersessional activities of the Commission for Agricultural Meteorology and agreed that they would contribute greatly to the economic development of the countries in the Region.

7.2.3 As regards institutional support to AgMP, the Association requested the Secretary-General to provide support to the meeting of the RA III WG on AGM so that the priority issues of promoting sustainable agriculture in the Region could be properly addressed.

7.2.4 The Association noted with appreciation the collaboration with the Centro Internacional para la Investigación del Fenómeno El Niño (CIIFEN) in organizing the Regional Technical Meeting on CLIPS and Agrometeorological Applications for the Andean Countries held from 8 to 12 December 2003 in Guayaquil, Ecuador. The Association complimented the Secretary-General for bringing out the proceedings of the Technical Meeting in time and distributing it to all the Members.

7.2.5 The Association supported the recommendations of the Regional Technical Meeting on CLIPS and Agrometeorological Applications that there is an urgent need to prepare case studies in the Andean countries to demonstrate the potential applications to crop production and to raise awareness among farmers and extension agents through workshops.

7.2.6 The Association noted with appreciation that a Regional Technical Meeting on CLIPS and Agrometeorological Applications for the Mercosur countries was organized at the University of Campinas (UNICAMP) in Campinas, Sao Paulo, Brazil from 13 to 16 July 2005. Two working groups established at the Meeting reviewed in detail the current status of CLIPS and their applications in agriculture in the Region and developed a draft regional programme to enhance climate prediction applications in the agricultural sector. The Association noted that the proceedings of the Technical Meeting were published and distributed promptly.

7.2.7 The Association noted that a meeting of the CAgM Management Group (MG) was held in Guaruja, Brazil from 30 March to 2 April 2004. The MG reviewed the progress in the implementation of the new structure of CAgM and discussed the priorities for the Commission's work programme, including the plans for the CAgM-XIV session to be held in October 2006 in New Delhi, India.

7.2.8 The Association complimented the chairperson and the members of the RA III Working Group on Agricultural Meteorology for the activities carried out and for the final technical report. The Association recommended that the report be published by WMO and distributed widely.

7.2.9 The Association agreed that the application of meteorology to agriculture continues to be of high importance to the Region. Hence the activities of the Working Group on Agricultural Meteorology should be continued, taking into account the developments in the Region, such as investigating the drought indices that are commonly used in RA III; analyzing the methodologies currently used for the evaluation of the impacts caused by the different extreme events that affect the agricultural productivity; analyzing the results of the crop growth models that employ the seasonal to interannual climate forecasts; evaluating the diffusion of information and the awareness raised amongst the farmers of the economic benefits of the use of agrometeorological services and products; and reviewing the studies on agroclimatic and agroecological zonation that make use of GIS and Agrometeoroloigcal Information Systems in RA III and determine the best procedures for their implementation throughout the Region. The Association therefore re-established the Working Group on Agricultural Meteorology with renewed terms of reference and adopted Resolution 9 (XIV-RA III).

7.2.10 The Association noted that the World AgroMeteorological Information Service (WAMIS- www.wamis.org) has products from over 25 countries and provides tools and

resources to help countries improve their bulletins and services. In RA III, one country is actively contributing their products to WAMIS. Currently, there are discussions with several RA III countries concerning putting their products in WAMIS. As of April 2006, WAMIS registered 70,000 visits and 151,000 pages were viewed since the inception of the website. Considering the benefits of WAMIS to Members, the Association urged Members to participate and disseminate their products to the global community as these products can also aid in natural disaster assessments by providing bulletins in both real-time and from a historical perspective.

7.2.11 The Association was pleased to note that a number of experts from the Region had participated in the International Workshops organized by WMO in other Regions. The Association considered that such opportunities for exchange of experiences between the Regions would help strengthen the agrometeorological activities in the Region and urged the Secretary-General to continue to enhance Inter-Regional Cooperation in Agrometeorology.

7.2.12 The Association expressed its satisfaction with, and congratulated Peru for its efficient running of the Regional Agrometeorological Centre of RA III and requested the Secretary-General to continue providing financial support to the centre whenever it is available from extra-budgetary resources. It urged Members to send their agrometeorological publications to the Bibliographical Centre.

7.3 AERONAUTICAL METEOROLOGY PROGRAMME (AeMP) *(agenda item 7.3)*

7.3.1 The Association noted with satisfaction that the Fourteenth Congress in 2003 had re-emphasized the importance it continued to attach to an expanded and vigorous Aeronautical Meteorology Programme (AeMP) to meet the needs of the worldwide aviation community and requested the Secretary-General to assist in its implementation. It also noted with satisfaction that Congress had requested that high priority be given to training requirements.

7.3.2 The Association was pleased to note that a training event organized in Bogota, Colombia from 12–16 November 2001 on ATS/MET Coordination and Volcanic Ash was attended by 73 participants from RA's III and IV. Further Seminars attended by participants from the Region included the AMDAR Workshop held In Johannesburg, South Africa in September 2003, the Training Workshop on Aeronautical Meteorology with Emphasis on Radar and Satellite Products and NWP Applications (Toronto, Canada, in October 2003), as well as the Second International Conference on Volcanic Ash and Aviation Safety (Washington, USA, 21-24 June 2004). The Association welcomed Recommendation 4/1 by the CAeM Session/ICAO Meteorology Divisional Meeting held in 2002 (hereafter Conjoint Meeting) that called for WMO, in coordination with ICAO, to continue to arrange seminars on cost recovery as a matter of priority. In that regard, the Association was pleased to note that a Seminar on Quality Management and Cost Recovery was planned to be held in December 2006 in the Dominican Republic (pending confirmation by the host country).

7.3.3 The Association noted with interest the progress achieved during the intersessional period with respect to the operational implementation of Volcanic Ash Advisory Centre (VAAC) Buenos Aires and the efforts to increase coordination between the Meteorological Services, air traffic services and volcanological bodies.

7.3.4 The Association welcomed Recommendation 4/2 by the Conjoint Meeting that called for ICAO, in coordination with WMO, to extend the current guidance material on cost recovery. In that regard, the Association was pleased to note that the update of the ICAO Manual on Air Navigation Services Economics (Doc. 9161) that contained guidance on cost recovery for air navigation services including aeronautical meteorology had been completed during 2004 and made available on the ICAO/ANSEP Web site at http://icaosec.icao.int/users. Furthermore, the Association was pleased to note that the update of the WMO *Guide on Aeronautical Meteorological Services Cost Recovery* (WMO-No. 904) to reflect changes already introduced in the ICAO Manual above was underway.

7.3.5 The Association shared the concerns of ICAO on lack of trained aeronautical meteorological personnel and welcomed the offer of Argentina, Brazil, Peru and Venezuela to provide support with training courses and the commitment of the other Permanent Representatives to support the development and implementation of the project.

7.3.6 The Association welcomed advances made in reaching the final phase of the World Area Forecast System (WAFS) that came into force on 1 July 2005 after nearly twenty years of development. As of that date, each of the two World Area Forecast Centres (WAFCs) was required to transmit by satellite broadcasts global wind and temperature forecasts in the GRIB coded format only and the current wind and temperature forecast in T4 chart format would have to be produced locally using the GRIB coded information broadcast by the 2 WAFCs. The Association was informed that, due to unforeseen difficulties in completing work on BUFR coded SIGWX forecasts and making available to users relevant workstation visualization software by 1 July 2005, the two WAFCs would continue to broadcast by satellites SIGWX T4 charts until 30 November 2006. The Association urged Members to upgrade their current workstations and their workstation visualization softwares and to ensure that their operational staff had been trained to access, decode and use both the GRIB coded information and BUFR coded WAFS products for the preparation locally of all T4 charts needed for flight documentation.

7.3.7 The Association noted that, owing to factors external to NMHSs, national AMDAR programmes had yet to receive the necessary support from the national and regional air companies. It was therefore considered timely to propose to other regional associations to request those with AMDAR programmes at the international level to contribute with additional observations in RA III and make those operationally available to the NMHSs in South America through the GTS.

7.3.8 The Association urged RA III Members to support the implementation of the WMO AMDAR Programme that was providing significant benefits to various WMO Programmes including the AeMP.

7.3.9 The Association noted with interest that the AMDAR Panel had requested the E-AMDAR Programme to undertake feasibility studies on the visualization of AMDAR data for use in particular by developing countries. As a result, the development of a stand-alone AMDAR software application was being pursued through the development of a software package based on the functionality of the NOAA/Forecast Systems Laboratory (FSL) display system. When completed, this visualization system would enable users, in particular those in developing countries, to receive, decode, archive and display AMDAR data and minimize development costs.

7.3.10 In view of the importance of the AeMP for the Region, the Association decided to appoint a Rapporteur on Regional Aspects of the Aeronautical Meteorology Programme and adopted Resolution 10 (XIV-RA III).

7.4 MARINE METEOROLOGY AND OCEANOGRAPHY PROGRAMME (MMOP) *(agenda item 7.4)*

7.4.1 The Association noted with interest that Cg-XIV had emphasized the importance of the MMOP including its traditional activities in areas such as maritime safety services, the new priorities in operational oceanography, and the implementation of an integrated ocean observing system for climate. Cg-XIV had approved the programme as part of the 6LTP. This programme provided overall objectives as well as detailed guidelines for Members, regional associations and WMO in this field.

7.4.2 The Association noted with satisfaction that JCOMM-II successfully took place in Halifax, Canada, 19 to 27 September 2005. The Association recognized the importance of JCOMM to its Members, noted that delegates from five RA III Members were represented at

JCOMM-II, and offered its strong and ongoing support. Further specific action in that regard is recorded in a subsequent paragraph.

7.4.3 With regard to the implementation of marine meteorological and oceanographic services, specifically in Region III, the Association noted with appreciation the comprehensive report of the Rapporteur on Regional Marine Meteorological and Oceanographic Services, Ms M. Andrioli (Argentina). The Association agreed that the further development of marine meteorological and oceanographic services, together with marine observing systems in the Region, particularly in the light of the opinions of Cg-XIV on the matter, should be an ongoing activity. It therefore decided to re-appoint a Rapporteur and adopted Resolution 11 (XIV-RA III).

Marine meteorological and oceanographic services

7.4.4 The Association noted with satisfaction that meteorological services, through the WMO marine broadcast system under the Global Maritime Distress and Safety System (GMDSS) covering the Region were fully operational. The Association noted that a survey questionnaire for monitoring of marine meteorological services was conducted by JCOMM, and the results were made available at JCOMM-II. Based on these results, the Association recalled that while the great majority of mariners (94%) confirmed their satisfaction concerning accuracy and emphasized the usefulness of radio facsimile products, there was also significant dissatisfaction with the quality of these services and unannounced terminations. In this regard, it noted with interest that JCOMM has been conducting a project regarding possible transmission of SafetyNet graphical products via Inmarsat C to all mariners, both GMDSS and non-GMDSS. The Association also noted with interest that a new Web site (http://weather.gmdss.org) had been established to provide in real-time, the global marine forecasts and warning broadcasts via satellite under the GMDSS marine broadcast. The Association recognized the need to continually review these services, including in particular the views of users, and therefore urged Members in the Region operating VOS to participate actively in the various marine meteorological services monitoring exercises being undertaken.

7.4.5 The Association noted the request made by EC-LVII for the JCOMM Ship Observations Team (SOT) to assess the risks associated with allowing voluntary observing ships (VOS) call signs and positions data being made freely available on external websites not maintained by the NMHSs. It urged its Members to carry out further consultations in their countries on this matter as a preparation for discussion at the WMO Fifteenth Congress.

7.4.6 The Association noted with interest that a major JCOMM marine products workshop (Ocean Ops 04) had taken place in Toulouse in May 2004. The workshop attracted a large number of providers and users of operational ocean products, which resulted in important input for the further development of the JCOMM Electronic Products Bulletin, as well as implementation of the Marine Pollution Emergency Response Support System (MPERSS). The Association noted with interest that a new Web site (http://www.maes-mperss.org) had been established to have in place a coordinated global system for the provision of meteorological and oceanographic information for marine pollution emergency response operations. The Association recalled that the development of operational oceanographic products and services had been identified at JCOMM-II as a high priority activity for the Commission during the present intersessional period.

Systems for marine observations and data collection

7.4.7 The Association shared the view of Cg-XIV that JCOMM was now recognized as a primary implementation mechanism for GOOS, and for operational oceanography in general, for which it was expected to play a role equivalent to that of CBS with regard to the WWW. For this task, JCOMM would require the enhanced, active support of all maritime Members, especially collaboration between NMSs and appropriate national oceanographic

agencies/institutions at the national level. It therefore decided to keep in force Resolution 11 (XIII-RA III) on the subject.

7.4.8 The Association noted the significant progress regarding drifting and moored buoy activities in the Region. A few national programmes are in place and provide a substantial contribution to the Data Buoy Cooperation Panel (DBCP) (e.g. the Brazilian National Buoy Programme (PNBOIA) and NAYLAMP project in Peru (http://www.naylamp.dhn.mil.pe/)). The Association also noted the active involvement of Members in the Region in the Pilot Research Array in the Tropical Atlantic (PIRATA) and in the DBCP action group named International South Atlantic Buoy Programme (ISABP). The Association noted with interest that the twenty-first session of the DBCP and the twenty-fifth session of the Argos Joint Tariff Agreement had taken place in Buenos Aires, Argentina, in October 2005.

7.4.9 The Association noted that the Members in the Region have actively participated in the Argo programme through deployment of profiling floats and provision of deployment opportunities (Argentina, Brazil, Chile and Costa Rica). The Association invited its Members to work closely with the DBCP, the ISABP, the Global Drifter Programme, and Argo for providing deployment opportunities for drifting buoys and profiling floats in data sparse areas.

7.4.10 The Association recognized that efforts remain to be made in the Ship of Opportunity Programme to sample lines according to the requirements expressed by the Upper Ocean Thermal Review. The Association recalled that from the recommended lines, the following Frequently Repeated lines (FRX) have been sampled: AX11 (Europe – Brazil), AX20 (Europe - French Guyana), AX29 (Antigua – Cabo de Sao Roque, Brazil), and PX08 (Auckland, New Zealand – Panama). However, the following FRX lines have not been sampled: AX34 (Gulf of Guinea – Caribbean), PX17 (Tahiti/Maruroa – Panama), PX21 (California – Chile). As far as High Density lines (HDX) are concerned the following ones have been sampled: AX22 (Drake Passage), AX18 (Buenos Aires – Cape of Good Hope). The following HDX lines have not been sampled: PX50 (Valparaiso – Auckland), and PX81 (Honolulu – Coronel, Chile). The Association invited its Members to work with the SOOPIP in order to re-activate the FRX and HDX lines which are not sampled.

7.4.11 The Association noted that a survey questionnaire for determining the real priority requirements for capacity building in the marine countries of the Region was conducted by JCOMM. Based on the results, the Association recalled that problems with GTS access were recognized, especially in the northern part of the Region. In this regard, it noted with interest that the RA III Regional Meteorological Data Communication Network (RMDCN) project was entering its implementation phase, whose upgrades would enable NMHSs of marine countries to significantly enhance their reception and use of highly valuable data and products.

Programme support activities

7.4.12 The Association recognized that specialized seminars, workshops and similar events were of considerable value to Members in the Region, and should be continued. In this regard, the Association noted with satisfaction that a training course on sea level observation and analysis had taken place in Valparaíso, Chile, in April 2003, and a Workshop on Wind Waves and Storm Surge Analysis and Forecasting for Caribbean Countries had been hosted by Canada in June 2003. The Association requested its Members to consider the possibilities for hosting such activities in the future.

7.4.13 The Association noted with interest that the Permanent Commission for the South Pacific (CPPS) and the UNESCO-IOC convened a meeting in Guayaquil, in October 2005, on the Strengthening of the Regional Alliance of the Global Ocean Observing System (GOOS) for the South East Pacific. The Association also noted that the GOOS Regional Alliance for the South Pacific (GRASP) was formalized and the Terms of Reference for the existing Joint Working Group IOC-WMO-CPPS on El Niño were discussed and need to be revised, in order

to adjust to the new coordination scheme in the framework of the JCOMM, as well as the interaction with the International Center on Research Studies for El Niño CIIFEN.

7.4.14 The Association noted the interest of CPPS for a closer collaboration with WMO regarding marine meteorology in particular those activities carried out by ERFEN. In this context, the Association suggested the development of a work plan under the framework of the current agreement between WMO and CPPS involving the participation of the NMHSs of CPPS Member States.

7.4.15 The Association noted with interest that the Joint Consultative Meeting of the IOC Officers and WMO Bureau Members took place in Buenos Aires, Argentina, in January 2006. The Association pointed out that this Meeting was the unique opportunity for high-level representatives from WMO and IOC to meet together to further strengthen the already fruitful cooperation between both organizations. The Association noted that the Meeting discussed the priority activity areas of JCOMM for the next four years and other priority areas and strategies for future cooperation between WMO and IOC such as Tsunami Warning Systems, support of WCRP activities (in particular, El Niño research and operational forecast), contributions to the GEOSS, GOS, GOOS and GCOS, and the preparation of the International Polar Year.

7.4.16 The Association noted with appreciation the work being undertaken by JCOMM in support of marine multi-hazard warning systems, including tsunami warning systems and the preparation of the Guide to Storm Surge Forecasting (due for completion in early 2007), the development of multi-purpose ocean data acquisition systems, the GTS distribution of observational data related to marine hazards, and the dissemination of marine hazards early warnings. In the context of tsunami warning systems, the Association noted with appreciation the support that JCOMM could provide in particular in areas such as deep ocean moorings for tsunami wave monitoring, the GTS distribution of sea level data, and the dissemination of marine hazard warnings.

7.4.17 The Associatio noted that Brazil will organize the 2nd meeting of the Expert Team on Maritime Safety Services (ETMSS) and the 1st meeting of the Expert Team on Marine Accident Emergency Support (ETMAES), to take place in Angra Dos Reis, Rio de Janeiro, 24 to 31 January 2007. The activities are coordinated by the JCOMM as part of the Global Maritime Distress and Safety System (GMDSS).

8. HYDROLOGY AND WATER RESOURCES PROGRAMME (HWRP) – REGIONAL ASPECTS *(agenda item 8)*

8.1 The Association noted that, in general, the needs of Members in the Region were adequately reflected in the priority activities of WMO in the Hydrology and Water Resources Programme given in WMO's Sixth Long-term Plan (6LTP) as approved by Fourteenth Congress. It examined those topics in the Plan which required more emphasis and having considered those of higher interest to countries in Region III, recommended to take them into account as appropriate in the future work of the Working Group on Hydrology and Water Resources.

8.2 The Association noted with appreciation the report of the chairperson of the Working Group on Hydrology (WGH), Mr R. Coimbra (Brazil). It noted the progress made in carrying out activities of particular interest to Members by the chairperson and four coordinators who had been given specific assignments and were supported by other members of the WGH. In particular, it noted with interest that the WGH focused on these four prioritized areas and that the results of the activities were presented during the tenth session of the RA III WGH held from 15 to 19 May 2006 in Maracay, Venezuela. The Coordinators presented activity reports on:

(a) Follow-up to the Action Plan of the Costa Rica Conference and other conferences, forums and meetings connected with water resources management – Mr Alejandro Arcelus (Uruguay);

(b) Promotion, dissemination and commercialization – Mr Lucas Chamorro and Mr Nelson Pérez (Paraguay);

(c) HOMS and Training – Mr Javier Narbona (Chile);

(d) El Niño – Ms Olga Umpiérrez (Venezuela).

8.3 On the basis of the recommendations of the WGH, and taking into account the decisions of Fourteenth Congress, and the recommendations of CHy, the Association decided to re-establish the Group, open to all Members of the Region, and adopted Resolution 12 (XIV-RA III). With respect to the Group's membership, the Association requested its Members to ensure an adequate representation of the NHSs and other institutions working in the field of water. The Association took note of the future programme of work proposed by the WGH, which conformed closely to the 6LTP and included it in Resolution 12 (XIV-RA III). The Association further recommended that at least one session of the working group should be arranged during the intersessional period and that financial assistance be provided by WMO so that the members could attend the session. It also recommended that appropriate support should be given to the Group in the implementation of its work plan.

Commission for Hydrology

8.4 The Regional Association was informed about the outcome of the twelfth session of the Commission for Hydrology. It took note that the Commission had established only an Advisory Working Group (AWG) composed of nine members, and five Open Panels of CHy Experts (OPACHE) on five thematic areas: basic systems (hydrometry and hydraulics); water resources assessment and water use; hydrological forecasting and prediction disaster mitigation – flood and droughts (hydrological aspects); and analysis of hydroclimatological data for variability and trends. The Association noted that the expert of the AWG leading activities associated with WHYCOS and international data access and exchange is from Brazil.

8.5 The Association noted with concern that only one Permanent Representative from the Region and one Hydrological Adviser attended the meeting and that none of them had any participation in the activities of the regional WGH. In this regard, the Association stressed the importance that the Working Group on Hydrology and Water Resources should play in the identification of the regional needs in relation to the Hydrology and Water Resources Programme.

8.6 The Association noted that the Commission had expressed concern with regard to the decline of the financial support provided to the organization of the sessions of regional WGH, and at the low visibility of the WGHs' activities in the annual reports of the presidents of regional associations to the Executive Council. In this respect the Association noted that the Hydrology and Water Resources Programme is a priority programme for the Region and that its Officers took an active role in promoting the activities of the Group.

8.7 The Association welcomed the adoption by the Commission of a WMO Strategy on Education and Training in Hydrology and Water Resources. It noted the priority areas identified by the regional Working Group on Hydrology and decided to allocate the responsibility of following up the regional aspects of the strategy to one of the subgroups within the WGH, in close coordination with the Rapporteur on Education and Training of the Association.

Implementation of the HWRP and its regional aspects

8.8 The Association while appreciating the progress made in putting on line the HOMS Reference Manual (HRM) version in four languages: English, French, Russian and Spanish, noted that the replenishment of the HRM with new components was advancing rather slowly, as very few have been submitted by the National HOMS Reference Centres in the recent years. Aware that in the past members from the Region had been active in supplying components to HOMS, the Association invited Members to renew their commitment with a view to improve on components of particular interest in RA III such as the one proposed by the coordinator on HOMS and Training.

8.9 The Association noted with appreciation that 5th edition of the *Guide to Hydrological Practices* was available on a CD-ROM in four languages. It also noted that the draft of the 6th edition of the *Guide* is under development.

8.10 The session noted with satisfaction the cooperation between WMO and the Intergovernmental Coordination Committee of the La Plata Basin countries (CIC). However, it emphasised the need for similar efforts in other trans-boundary basins in the region. In particular it recognised the need for working together by the member countries of the Amazon basin in data gathering, exchange its synthesis and analysis with capacity building for its use in accordance with the Treaty of Amazon.

8.11 The Association was pleased to learn that the funds allocated by Thirteenth Congress, as recommended by Regional Association III, were used in the organization of a Workshop on Flood Forecasting and Warning Systems in Bogotá, Colombia, in December 2001.

8.12 The Association was informed that in 2003 WMO launched a flood forecasting initiative to improve flood forecasting by enhanced cooperation between NMSs and NHSs to deliver timely and more accurate products and services. The initiative is implemented through the organization of a number of regional workshops and will be concluded by a synthesis conference to be held in 2006. The results of the conference will serve as inputs in the review of cooperation mechanisms between NMHSs, and in promoting of the application of NWP products for flood forecasting.

8.13 The Association was pleased to learn about the support provided by Spain for the organization of one Workshop in Valencia in the frame of the WMO flood forecasting initiative.

8.14 The Association was pleased to note the WMO contribution to the World Water Week (Stockholm, August 2004 and 2005). The Association also noted the progress made in the development of the Global Terrestrial Network – Hydrology (GTN-H) as a “network of networks” of global data centres and information providers for hydrological and relevant meteorological data and information.

8.15 The Association noted that a meeting on Hydrological Sensitivity to Climate Conditions was held in December 2003 at the Centre for Ecology and Hydrology, Wallingford, UK to prepare a global statistical analysis on the sensitivity of runoff to precipitation. The 4th session of the WCP Water had been held in the same location in June 2005, and had discussed the project progress and undertaken a review of the programme. It noted the forthcoming Expert Group meeting on “Climate Information for the Water Managers” in Geneva in December 2006, where CIIFEN was also invited and urged for exploring the possibility of working on the climate change impacts on water resources, particularly in Amazon basin. However, while doing so synergy with other similar initiatives should be ensured.

8.16 The Association was pleased to note the continuous cooperation with the Global Runoff Data Centre (GRDC) in Koblenz (Germany) and was informed that the International Groundwater Resources Assessment Centre (IGRAC) based in Utrecht, The Netherlands had

been in an operational mode since May 2003. It expressed its appreciation to the Government of The Netherlands for the support provided to it.

8.17 The Association was pleased to learn that the *Guidelines for the Education and Training of Personnel In Meteorology and Operational Hydrology, Volume II: Hydrology* (WMO-No. 258) have been prepared by the Editorial Task Force – Hydrology and covered the field of integrated water resources management.

8.18 The Association was seized of the need for projection of the role of NHMSs in implementing the Agenda 21 and how they contributed to the MDGs and noted that close collaboration was maintained between WMO and other UN organizations dealing with water in the framework of UN-Water and that one of the main activities of UN-Water was now directed towards preparation of the World Water Development Report (WWDR) whose second edition was released during the 4th World Water Forum in Mexico. It noted the contribution of WMO to several chapters of the second report.

8.19 The Association was informed that WMO and ISDR had been the lead Secretariats within the United Nations for the global celebration of World Water Day 2004 with "Water and disasters" as the theme. The emphasis in the awareness campaign was 'be informed and be prepared'. WMO prepared an Information Kit that included a booklet, a poster and fact sheets on the activities of various UN agencies in the field of water related disasters.

8.20 The Association noted with interest the development of the "International Flood Initiative" (IFI) originally promoted jointly by WMO and UNESCO and later extended to include other UN agencies. The Initiative will promote an integrated approach to flood management to maximize the long-term benefits of floods and not to minimize the hardship, and damage to goods and assets that result from floods.

8.21 The Association was informed that the UN General Assembly with its resolution A/RES/58/217 adopted on 23 December 2003, had proclaimed the period from 2005 to 2015 as the International Decade for Action, "Water for Life", commencing on World Water Day, 22 March 2005. The resolution called upon the relevant United Nations bodies, specialized agencies, regional commissions and other organizations of the United Nations system to deliver a coordinated response, to the "Water for Life" a "decade for action". The Association invited Members to provide regional perspectives and inputs for the development of the International Decade for Action.

8.22 The Association was pleased to learn of WMO's participation at the 3rd and 4th World Water Forum (WWF3-WWF4) and the Ministerial Conference during the Forums that was held in March 2003 and 2006 in Japan and Mexico respectively.

8.23 The Association noted with appreciation the implementation of the Associated Programme on Flood Management (APFM), funded by Japan and the Netherlands. This joint initiative undertaken by WMO and the Global Water Partnership (GWP) aims at promoting the concept of Integrated Flood Management (IFM) and highlights practical steps for putting it into practice. The Association was pleased to learn that in cooperation with GWP, WMO organized ten workshops on Urban Flooding in South America in 2002. A Pilot Project was developed and implemented in the river Cuareim/Quarai basin (Brazil/Uruguay).

8.24 The Association was informed on progress on the issue of international data exchange and encouragement of the implementation of Resolution 25 (Cg-XIII). It noted the results of the questionnaire on the exchange of hydrological data and products that had been circulated to all Members.

8.25 The Association recognized the importance of standardization of data and metadata in hydrology to facilitate the international exchange of hydrological data and information, and that these requirements be taken into account in the development of the WMO Information System

(WIS). In this connection the Association was pleased to learn that an expert from France had represented CHy in the WIS meetings to incorporate the perspectives of the Hydrology and Water Resources Programme.

9. EDUCATION AND TRAINING PROGRAMME (ETRP) – REGIONAL ASPECTS *(agenda item 9)*

Training events organized/co-sponsored by WMO

9.1 The Association noted with appreciation that from 2002 to 2005, 14 training events were organized by WMO in the Region and that 13 other training events were organized and hosted by national or international institutions, with WMO acting as co-sponsor. The Association expressed its gratitude to all those Members who made available their training facilities and/or experts in order to implement these training events. In particular the Association expressed its strong support to the NOAA Tropical and South American training desks. The 12 students trained every year from RA III as well as the seminars in the region relating to the desks have provided essential training for the Region. Future plans for MSc programmes in English and Spanish are warmly welcomed by the Association. Also the training and fellowship activities supported by Spain are of high importance for the Region.

9.2 The Association noted also that a WMO Regional Training Seminar for National Trainers, focused mainly on instructional design and techniques including the use of the information and communication technologies in the education and training process, was held at Buenos Aires from 17 to 28 May 2004. Thirteen representatives from RA III (including 3 participants from the host country) and 20 representatives from RA IV attended the Seminar. The large majority of participants in these training events declared their satisfaction with respect to the training delivery and its suitability for their subsequent work.

Sharing training resources and promoting distance learning

9.3 The Association was informed that the Coordinating Committee (CO-COM) of the Standing Conference of Heads of Meteorological Training Institutions (SCHOTI) strongly encouraged the sharing of training resources among relevant training institutions. In this respect, the Association appreciated the kind offer of COMET (Cooperative Organization for Meteorological Education and Training, USA), EUMETSAT and EUMETCAL to freely make available some of their training modules to other training institutions, in particular the RMTCs from RA III.

9.4 The Association noted the recent review of the ETRP Web site and the current initiative towards developing an interface to facilitate online access to worldwide training resources, as well as exchange of meteorological case studies and related documentation between advanced and less advanced training institutions. It encouraged Members possessing relevant expertise and experience in this domain to assist the Secretariat in developing and maintaining that interface.

Surveying Members training needs and providing guidance

9.5 The Association was informed that the results of the quadrennial WMO Survey (2002) on Members' training requirements were used as an aid-guide for the overall monitoring of training priorities, as well as for the implementation of relevant activities during the current financial period. It was recognized that additional financial resources would be necessary in order to satisfy all the identified training needs of the Region.

9.6 Noting that only 75% of its Members responded to the Survey-2002, the Association encouraged all Members to respond to the forthcoming Survey-2006, in order to facilitate a

more effective regional planning and implementation of ETRP during the fifteenth financial period.

9.7 The Association was informed that the EC Panel of Experts on Education and Training, at its twenty-first session (2003) established an Expert Team on Accreditation and Certification in Meteorological Education and Training (ETAC-MET). Mandated, amongst others, to clarify certain practical questions raised by some Members in relation to the implementation of the new WMO classification of personnel in meteorology (WMO-No. 258), ETAC prepared a Supplement to publication WMO-No. 258 that provides specific guidance on the training and qualification requirements of aeronautical meteorological personnel. The Association was pleased to note that copies of this Supplement would be distributed to all WMO Members before the end of 2006.

9.8 The Association noted that there is a need to organize training in the field of climate change to strengthen the role of NMHSs. Specifically there is a need for national level expertise in understanding the modeling of future climate, production of useful information for adaptation to climate change as well as in the ability to serve as a focal point in disseminating the outcome of the IPCC work.

Regional Meteorological Training Centres (RMTCs)

9.9 The Association noted with appreciation that WMO RMTCs in the Region continued to carry out satisfactorily the routine training programmes and to organize specialized courses in response to the needs of Members in the Region as well as other Regions. Noting that the post-graduate Diploma Course on Hydrology delivered by the RMTC Venezuela through blended teaching technique – combining face-to-face and distance learning sessions – was well received, the Association agreed that such initiatives should be encouraged and supported by WMO.

9.10 The RMTC Venezuela, following a positive external assessment performed during early 2005, has been recommended for reconfirmation as WMO-recognized RMTC by the 22nd Session of the EC Panel of Experts on Education and Training (Geneva, 14-16 November 2005). Recalling that the RMTC Argentina was already reconfirmed this status, the Association was informed that the external assessment of RMTC Brazil is also underway.

9.11 The Association was informed that the quadrennial Meeting of Directors/Principals of the WMO Regional Meteorological Training Centres (Madrid, Spain, 26 April 2003) stressed, amongst others, the need to further strengthen the interaction of RMTCs with advanced training and educational centers.

Awarding and implementing fellowships

9.12 Noting with appreciation that from 2002 to 2005, 22 WMO fellows from RA III either completed their studies or were under training, the Association called on the Secretary-General to continue to award fellowships to Members from the Region.

9.13 The Association also noted with satisfaction the continued efforts being made to enhance the WMO fellowships programme and improve its effectiveness and transparency in the granting and implementation process. The Association urged its Members to continue to utilize more effectively this programme.

9.14 The Association requested the Secretary-General to continue his efforts to increase the conventional fellowship fund by tapping extrabudgetary resources and by exploring new potential sources of funding for the fellowship activities.

Rapporteur on Education and Training

9.15 The conclusions and recommendations extracted from the Report of the Rapporteur on Education and Training are presented in the Report part of this document.

9.16 In view of continued pressing needs by Members for capacity building and human resources development in meteorology and specialized subjects essentials to economic and social development in the Region, the Association agreed to designate a Rapporteur on Education and Training Matters and adopted Resolution 13 (XIV-RA III) to that effect.

10. TECHNICAL COOPERATION PROGRAMME AND REGIONAL AND SUBREGIONAL OFFICES ACTIVITIES *(agenda item 10)*

10.1 The Association expressed satisfaction for the measures undertaken by the Secretary-General to effect structural and organizational changes in the Secretariat, especially with respect to the restructuration of the Regional and Technical Cooperation Activities for Development (RCD), which now is composed of the Regional, Technical Cooperation and LDCs Programmes. The restructuration is with the view of improving delivery of services to Members and enhancing partnership with national and regional institutions and organizations. It requested the Secretary-General to continue his efforts to strengthen the WMO Office for the Americas for meeting the requirements of Members in the Region.

Technical Cooperation

10.2 The Association reviewed the activities on technical cooperation carried out during the intersessional period and requested the Secretary-General to continue supporting the development and formulation of technical cooperation projects for the development of NMHSs in the Region and enhancing the capacity of these institutions to provide better services to the various socio-economic sectors and to society in general.

10.3 The Association expressed recognition to the Secretary-General for his support in the establishment of a WMO Project Office in Brazil that will benefit not only Brazil but also neighbouring countries through the development of regional projects on meteorology and hydrology supported mainly by the Government of Brazil.

10.4 The Association appreciated the effort made by WMO in completing the Feasibility Study on the Prediction and Amelioration of Socio-economic Impacts of El Niño/Southern Oscillation (ENSO) in Latin America and the Caribbean, a programme to strengthen the capacity of NMHSs in the Region to reduce the harmful social and economic effects of the periodic El Niño climate phenomenon through better scientific monitoring and meteorological forecasting.

10.5 The Association appreciated the support provided by the Secretary-General in assisting several NMHSs in the development of their Services, including among others Bolivia, Brazil, Ecuador and Uruguay. The Association requested the Secretary-General to continue providing this type of assistance by allowing NMHSs to better define their requirements and improve their status and visibility.

Regional Activities

10.6 The Association recognized the labour of the International Research Centre on El Niño Phenomenon established in Guayaquil, Ecuador in 2003, which has continued with the development of innovative products with regional impact. As CIIFEN is in a stage of consolidation where the support of WMO Member countries is essential to achieve its objectives, the Association requested its Members to support CIIFEN in the development of regional initiatives and projects in particular in the area of disaster prevention and mitigation and climate change impacts.

10.7 The Association noted the importance of regional technical conferences and regional seminars as mechanisms for exchanging know-how and training. Those activities should be given high priority. The fourth Joint Technical Conference for RAs III and IV was held in Panama City Panama from 13 to 15 January 2003, where the central theme was Meteorology and Hydrology in the Americas Partnership for Prosperity and Sustainable Development. The fifth Joint Technical Conference for RAs III and IV was held in Brasilia Brazil from 12 to 14 July 2006, where the central theme was socio-economic benefits of weather, climate and water services. This regional conference will also be the Americas interlink to the Global Conference on the same subject scheduled to be held in March 2007 in Madrid, Spain. The technical seminar on prevention and mitigation of natural disasters will be held in Lima, Peru from 4 to 6 September 2006.

10.8 The Association expressed its satisfaction at the successful development and execution of a series of important regional activities carried out in the Region by the Regional and Technical Cooperation Department, in particular the creation of the Conference of Directors of National Meteorological and Hydrological Services (NMHSs) of Iberoamerican countries and the establishment of the Iberoamerican Programme of Cooperation supported by Spain and which will start activities in 2006.

Regional and Subregional Office Activities

10.9 The Association reviewed the activities of the Regional Office for the Americas since its thirteenth session. It noted that the Office continued to fulfil its functions and responsibilities as an integral part of the Secretariat. It also noted that the Regional Office was providing effective support to the president and the vice-president as well as to the establishment of the four Working Groups and rapporteurs of the Association. The Association expressed its appreciation to the Secretary-General and the staff of the Regional Office for their continued support to the RA III activities during the intersessional period.

10.10 The Association noted with satisfaction the increasing role of the Offices as focal points and information centres for regional activities and the collaboration with Members on developing NMHSs and implementing WMO Programmes and other relevant activities of interest to the Region.

10.11 The Association expressed its satisfaction at the commendable efforts of the Regional Office to be in close contact with Members through visits and support to regional events and to strengthen WMO activities in the fields of meteorology and operational hydrology in the Region. It also expressed its satisfaction at the close links with regional intergovernmental organizations.

10.12 The Association noted that the biannual Newsletter of the Regional Office was a useful vehicle for the exchange and dissemination of information on regional activities and a mechanism for maintaining close links between the Regional Office, the Subregional Office and the Members of Regions III and IV. The Association requested the Regional Office to continue publishing the Newsletter and urged Members to participate actively by contributing news items and articles.

10.13 The Association expressed its appreciation to the Government of Paraguay for hosting the WMO Office for the Americas.

Voluntary Cooperation Programme (VCP)

10.14 Within the framework of the VCP, during the period from 2002 to June 2005, 11 Members of Regional Association III submitted 16 VCP project requests. Fourteen (14) VCP projects were related to the implementation of the WWW Programme: five (5) of them concerned the improvement of the upper-air observing stations, and nine (9) the enhancement

of telecommunication systems. One (1) project was related to aeronautical meteorology activities, and one (1) concerned hydrological activities.

10.15 Five (5) Members received support for a total of six (6) VCP projects for equipment. Of these projects, two (2) were completed and four (4) were in the process of being implemented. Three (3) supported projects were aimed at strengthening upper-air observing stations, one (1) at improving telecommunication systems, one (1) at strengthening hydrological activities and one (1) concerned environmental activities. In spite of the support obtained during 2002-2005, 15 valid projects have not received support as of 20 August 2005.

11. NATURAL DISASTER PREVENTION AND MITIGATION PROGRAMME – REGIONAL ASPECTS *(agenda item 11)*

Overall vision, priorities and coordination Framework

11.1 The Association acknowledged the establishment of the new crosscutting WMO Natural Disaster Prevention and Mitigation (DPM) Programme with the vision to enhance contributions of NMHSs, in a more cost-effective, systematic and sustainable manner, towards improvement of safety and security of communities. The Association noted that this Programme addressed capacity development of NMHSs in supporting disaster risk reduction (DRR), including prevention and mitigation, emergency preparedness, response, recovery and reconstruction decision processes . However, based on discussions during the ”Technical Seminar on Disaster Prevention and Mitigation” held in Lima, Peru, from 4 to 6 September 2006, the Association recommended that the naming of the programme as “Natural Disaster Prevention and Mitigation Programme” be reviewed, as it gave the impression that Disasters were only a natural phenomenon, uninfluenced by human activities.

11.2 The Association recalled the crosscutting coordination framework of DPM Programme laid out by EC-LVIII (June 2006) and noted that its successful implementation would require (i) identification of WMO strategic priorities overall and in each Region, and (ii) achieving these priorities through concrete projects at the national and regional levels that are measurable with respect to their benefits and outcomes. Such crosscutting projects should be prioritised and built upon activities of WMO Scientific and Technical Programmes, Technical Commissions, Regional Associations, and strategic partners, with clear definition of their roles, responsibilities and deliverables. The Association stressed its critical development of WMO DPM Programme.

11.3 The Association welcomed that the cross-cutting framework of the DPM Programme, was supported by DPM focal points in Technical Commissions, DPM Working Groups of the Regional Associations, National DPM focal points designated by Permanent Representatives, the Secretariat Steering Committee on DRR, DPM Programme Department and the focal points of WMO Programmes. Furthermore, it noted the role of Presidents of Technical Commissions to coordinate contributions, particularly related to inter-Commission activities.

11.4 The Association acknowledged that as a benchmark, the Secretariat had initiated four fact-finding surveys to document DRR capabilities, activities and needs of WMO Members, WMO Regions, as well as to map related activities of WMO Programmes and Technical Commissions. The Association noted that the outcomes of these surveys along with on-going consultations with the DPM focal points and Working Groups would be used to identify strategic priorities and prioritize concrete regional and national crosscutting projects. The Association stressed the important role of the National DPM focal points and the need for of establishment of the RA III DPM Working Group to participate in this process. The Association adopted Resolution 14 (XIV-RA III).

Major Hazards and their impacts in the Region

11.5 The Association noted that a wide range of hydrometeorological hazards such as flooding, floods, droughts, landslides, glacier retreat, hydrological variability of high-elevation basins, frosts and wind storms as well as other hazards such as earthquake and volcanic eruption presented most risks in RA III. The Association also stressed the need for better understanding of the linkages between climate variability, with a strong focus on the El Niño/Southern Oscillation (ENSO) and hydro-meteorological extremes as this provided critical input for the development of preventive DRR measures. In these regards, the Association stressed the activities of WMO Programmes and Technical Commissions addressing meteorological, hydrological and climate related issues, and the need for interdisciplinary cooperation.

11.6 The Association also noted that in some cases when technological disasters are caused by natural hazards, the WMO Emergency Response Activities under WWW Programme addressed the modelling of transportation of materials through atmosphere primarily for nuclear emergencies and also for other airborne hazards.

Regional Gaps, Needs and Challenges

11.7 The Association noted that need for providing a wide range of user-driven products and services for major weather-, water- and climate-related hazards targeted at these stakeholders as well as the General Public and acknowledged the needs and priorities of the Members expressed in the Country-level surveys. It stressed the importance of establishing rules for the transboundary exchange between NMSs and emergency management bodies of alerts and other “restricted warnings” that were available at national level. The Association also stressed the importance of close cooperation at the national between NMHSs and the civil protection agencies, development, finance and other ministries, community-based agencies, and the Media, as DRR is a crosscutting area that impacts a wide range of sectors and decisions (*See Rep.*). The Association stressed the role of its DPM Working Group in RA III in identifying and prioritizing concrete projects to address these gaps and needs such as the coordination of exchange of hydro-meteorological warnings and other information, restricted among the NHMSs and the emergency management authorities.

11.8 The Association noted that the Guayaquil meeting (Climate Change and Natural Disasters) held from 7 to 9 June 2006 and other meetings had highlighted the importance of the role of the NHMSs in disaster risk reduction and the need for a close collaboration with the civil protection authorities and climate change offices in the Region to make their forecasts more effective and useful in disaster risk reduction.

International Movement in DRR and Opportunities for Regional Partnerships

11.9 The Association noted the international movement in DRR following the World Conference for Disaster Reduction (WCDR, Kobe, Japan, January 2005) for implementation of Hyogo Framework for Action, and stressed that regional activities of the regional office of the International Strategy for Disaster Reduction (ISDR), other humanitarian, development and financial agencies to mainstream DRR present opportunities to strengthen the contributions of NMHSs and the Association in the national and regional strategies and activities. The Association stressed that many of these agencies worked with different ministries at the national level, and thus collaborations could result in enhanced recognition, credibility, financing and therefore better services provided by NMHSs at the national level. The Association requested that through its DPM Working Group opportunities and strategies for closer cooperation with these agencies be developed.

12. WMO SPACE PROGRAMME – REGIONAL ASPECTS *(agenda item 12)*

WMO Space Programme Implementation Plan

12.1 The Association noted that the WMO Space Programme Implementation Plan for 2004-2007 as contained in Section 4 and Annex III to the report of the fourth session of the WMO Consultative Meetings on High-level Policy on Satellite Matters (CM-4) (the report is available at: <http://www.wmo.int/hinsman/publications/CM-4_Final_Report.doc>) had been approved by the fifty-sixth session of the WMO Executive Council and that the Implementation Plan provided further details to the WMO Space Programme Long-term Strategy as approved in the WMO 6LTP by Cg-XIV.

12.2 The Association agreed that it would assign a rapporteur to work with the WMO Space Programme for implementation of regional aspects of the WMO Space Programme Implementation Plan and, in particular, regional ATOVS Retransmission Service (RARS) and regional Advanced Dissemination Methods (ADM) within the context of the planned Integrated Global Data Dissemination Service (IGDDS). In that regard, it appointed a Rapporteur for the WMO Space Programme with terms of reference as contained in Resolution 15 (XIV-RA III).

12.3 The Association looked forward to the launch and commissioning of the GOES-N satellite. It also welcomed the implementation of the EUMETCast ADM by EUMETSAT providing near real time access to Meteosat data and products until 2008 with the possibility of transition to a NOAA broadcast service after 2008.

12.4 The Association was pleased to note NOAA's positive response to the request from WMO RA III to consider moving a retired satellite in support of the countries of the Region. In December last year NOAA announced that, given a healthy GOES constellation and a successful GOES-N launch, that it would be able to move GOES-10 to 60° West for the use of the countries of the Region. NOAA began moving GOES-10 on June 21 and hopes to have it in position and operational by December of this year. The Association encouraged each of its Members to identify a person to represent their interests on operational issues for the GOES-10 satellite. NOAA informed the Association of a teleconference on October 3 to further discuss this matter.

12.5 The Association agreed that WMO, through its Space Programme, had acted as a catalyst to greatly improve the utilization of satellite data and products. The Virtual Laboratory for Education and Training in Satellite Meteorology (VL) had already made a considerable impact through its "Centres of Excellence". The Association was pleased to note the increased utilization of the VL to the benefit of WMO Members especially for fuller exploitation of R&D data, products and services, as well as those from new and existing operational meteorological satellite systems. It looked forward to the establishment of a Centre of Excellence in Buenos Aires.

12.6 The Association noted with interest that Argentina is planning to operate an HRPT station at its Marambio Antarctic Meteorological Centre as a contribution to IPY.

13. INFORMATION AND PUBLIC AFFAIRS (IPA) PROGRAMME – REGIONAL ASPECTS *(agenda item 13)*

13.1 The Association recalled that Resolution 23 (Cg-XIV) of the Fourteenth World Meteorological Congress had underlined the need for greater visibility of the Organization and National Meteorological and Hydrological Services (NMHSs), the importance of communications in mitigating the devastating impact of extreme weather and climate events and the necessity of a WMO Global Communication Strategy to guide and enhance the process of making NMHSs and WMO more visible and better appreciated.

13.2 The Association welcomed the Global Communication Strategy of the Organization comprising five basic elements: projecting a unified and consolidated image of WMO and NMHSs; constituency-building both at national and regional levels; spreading key messages giving a local voice to a global undertaking and vision; fostering strategic alliances with the media; and promoting a communication culture through which to demonstrate the high relevance of WMO and NMHSs to the daily lives of all citizens of the world. In this context, the Association noted with appreciation the increased interaction between the WMO Communications and Public Affairs Office and regional and national IPA Focal Points. The Association encouraged its Members to provide their IPA Focal Point with the necessary support to discharge their responsibilities effectively. In light of the invitation by Congress to strengthen regional public outreach activities, the Association called upon its Members to consider designating a regional IPA Focal Point who may work for a short period with the Communications and Public Affairs Office at the WMO Headquarters to launch regionally targeted outreach activities. The Focal Point would be the team leader of a core group of IPA Focal Points of NMHSs, which would assist the Secretariat in promoting the image of WMO and NMHSs at regional level. It also welcomed the invitation addressed to UN Offices in the field for enhanced interaction with NMHSs.

13.3 In response to Resolution 23 (Cg-XIV), the Association invited its Members to ensure mutual assistance and support in matters related to public information and communication, including partnerships and constituency-building, resource mobilization and closer cooperation with the media, non-governmental organizations and advocacy groups, academic circles, parliamentarians, schools, universities, national meteorological and hydrological societies, the private sector and corporate foundations and other civil society institutions and public figures.

13.4 The Association welcomed the publication of a new brochure entitled *"WMO at a glance"*, which gives in a nutshell basic information about WMO activities for the public at large, and encouraged Members to make use of it. It took note of the fact that the brochure was available on CD-ROM, upon request, allowing Members to add their logo. The Association encouraged Members also to reproduce the cartoon entitled *"We care for our climate"* while adding their logo and to widely disseminate it. The cartoon has been translated into various languages, including Portuguese and Dutch, with the support of Members.

13.5 The Association welcomed the initiative to consult Members on WMO publications and expressed great satisfaction with the revamped *Bulletin* and *MeteoWorld.* These new products are available in print copy and on-line.

13.6 The Association took note of the increase in visits by the public to the WMO Headquarters, notably by Parliamentarians, students on study tours of universities and academic institutions.

13.7 The Association welcomed the continued development of the WMO online News Centre. It took note of the numerous press releases and Info Notes issued on specific WMO topics related to weather, climate and water, and on activities aimed at preventing and mitigating natural disasters. It welcomed the significant increase in media coverage and requested the Secretary-General to pursue his efforts in keeping the press fully briefed on major issues involving WMO and the NMHSs.

13.8 The Association requested the Secretary-General to ensure that the IPA Programme continues to take advantage of available technologies for timely transmission and easy access to media and public information materials issued by WMO and NMHSs. It welcomed the enhancement of WMO communications through the Website, notably through the further development of Meteoworld online, the *News* segment, and *News from Members* in the media section. It noted with appreciation the introduction of the concept of featuring a WMO front-page link to the NMHS of an area struck by natural disaster to create more awareness and provide relief organizations with critical meteorological data. In this context, the Association

invited its Members to provide the Secretariat timely notifications of extreme weather events and other newsworthy activities for attracting the attention of the international media and the public.

13.9 The Association welcomed the actions taken for establishing a linkage between WMO's Website and those of the NMHSs. The Association requested the Members to take steps to set up on the front page of their Website an entry on WMO identifying the Service as part of a world system and showing the public how the NMHSs work with the World Meteorological Organization. It welcomed the availability of an online video library and a power point presentation on WMO programmes and activities. The Association expressed its appreciation for the creation of an online WMO Gallery featuring artworks on weather-, climate- and water-related topics, notably as a means to attract visitors to the WMO Website. In this context it encouraged Members to participate in the drawing competitions for children on weather-related topics. The Association also welcomed the measures establishing electronic access for NMHSs to artworks for major events such as World Water Day (WWD), World Meteorological Day, the Second World Conference on Disaster Reduction (WCDR-II), the International Meeting for the Sustainable Development of Small Island Developing States (SIDS), and the availability of WMD films on DVD in addition to videotapes.

13.10 The Association welcomed the WMO outreach activities for radio and television networks and communication professionals. It requested the Secretary-General to undertake further training activities for NMHSs aimed at improving their presentation and communication skills. It expressed its appreciation for the launch of a WMO online, multilingual weather presenters' forum (www.wmofeed.org), which was expected to improve the communication of meteorological information to the public by encouraging professionals to exchange data and experiences, and to discuss presentation skills.

13.11 The Association recalled the request by Congress that the best possible use of available and extrabudgetary resources be made to strengthen the IPA Programme. It noted with appreciation the sponsoring by the private sector of WMO greeting cards and the electronic access for NMHSs allowing them to freely use the card while adding their logo.

13.12 The Association noted with appreciation the comprehensive public information kit for World Water Day 2004 on the theme of "Water and disasters", developed and disseminated worldwide by WMO, which jointly with ISDR, was the lead agency within the United Nations System for the global public information campaign about the Day. The attractive information folder contained a poster, a booklet and fact sheets. In addition a Message from the Secretary-General and press release were sent to all Members. A special Website (http://www.waterday2004.org) and e-mail address (waterday2004@wmo.int) had been set up by WMO. The Association welcomed the public information products produced and disseminated to all Members in support of national plans for the celebration of WMD 2004 on the theme of "Weather, climate and water in the information age" and WMD 2005 on the theme of "Weather, Climate and Water and Sustainable Development". These included a message from the Secretary-General, a poster, a brochure and a film. It expressed its appreciation for the information kits produced by WMO for the SIDS Conference and the WCDR-II. It welcomed the electronic access for NMHSs to publications and artworks for major events, including World Meteorological Day, and the availability of WMD films on DVD in addition to videotapes. The Association stressed the importance of timely transmission of WMO information materials to NMHSs.

13.13 The Association requested the Secretary-General to arrange for the participation of the Secretariat campaigns encompassed press conferences, information kits, specific media products and exhibitions. In this context, the Association expressed its appreciation for the successful activities undertaken in close cooperation with the National Meteorological Service of Argentina on the occasion of the tenth session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP-10), held in Buenos Aires from

6–17 December 2004. It noted with appreciation that the activities of WMO and its Members were given visibility also at various international exhibitions, and at international events in Geneva, Switzerland.

13.14 The Association saw great benefit in the Public Service Announcements aired by CNNI, at the initiative of WMO to enhance visibility of the relevance of the activities of NMHSs. It took note of the fact that a film entitled *The other side of Paradise* (12 minutes, English), produced for television on the contribution of WMO to the sustainable development of Small Island Developing States (SIDS), had been widely used and had been chosen as an exhibit in Stories from the Field, the First United Nations Documentary Film Festival. It welcomed the fact that the films on "Weather, climate and water in the information age", produced for WMD 2004, on "Weather, Climate and Water and Sustainable Development" produced for WMD 2005 and SIDS, were made available in the six official languages of the Organization, both on videotape and DVD.

13.15 The Association welcomed the progress made in the "branding" of the Organization and the fact that the subtitle "weather, climate and water" featured prominently on all official documentation, correspondence and publications as requested by Congress.

13.16 The Association called upon Members to take appropriate measures to support the Information and Public Affairs Programme, to develop an active public information programme at the national and regional levels and to implement the WMO Global Communication Strategy, giving a local voice to a global vision and make available to the Secretariat relevant material produced at national level.

13.17 The Association noted with satisfaction the efforts of the Regional Office in Paraguay as an information focal point in the Region. In order to enhance WMO's Information and Public Affairs Programme in the Region, it requested the Regional Office to further support the efforts of the Members of the Association in promoting public information activities.

14. LONG-TERM PLANNING (LTP) – REGIONAL ASPECTS (*agenda item 14)*

General considerations

14.1 The Association agreed on the importance of identifying what WMO should be aspiring for as the basis for the WMO LTP, particularly in connection with its leadership role. The Association further agreed that information about the issues that concerned Members would help in formulating an effective strategy on how to address those concerns. For the Region, these include mitigation of natural disasters, improvement of forecasts, warnings and risks assessments, and improved understanding of climate change and variability.

14.2 The Association underscored the importance of support to policy formulation and implementation by WMO (and NMHSs) in relation to natural disasters, climate, water, as well as in other sectors such as aviation, agriculture, health and planning.

14.3 The Association agreed on the importance of ensuring better appreciation of the socio-economic value of the NMHSs products in the planning process. WMO and NMHSs, in partnership with other agencies and users groups, should undertake studies on the social and economic value of meteorological and related products. These could help to secure better recognition of, and more adequate resources for WMO and NMHSs enabling further improvement in services.

14.4 The Association considered that the WMO Long-term Plan was of use to the Members them as it provided broad guidance, especially for the further strategic development of their NMHSs and of relevant services provision in the future.

Sixth WMO Long-term Plan (6LTP)

14.5 The Association expressed its appreciation for the publication of the 6LTP and a separate summary for decision makers which identified the results expected and how those would be realized. It noted that that would help Governments understand better the way in which WMO and Members' NMHSs worked and their contributions, thus helping them to obtain enhanced financial and other support.

14.6 The Association agreed on the importance of ensuring the appropriate implementation of the 6LTP, as well as the related monitoring and evaluation of its implementation. The Association requested its president to ensure the provision of the relevant contribution expected from RA III in the pertinent evaluation process, particularly with respect to the realization of the nine WMO strategies.

14.7 The Association felt that in the implementation of the 6LTP, it was important to bear in mind that there was a wide range of interests and needs that were to be addressed by WMO and NMHSs and that the operating environment was continually changing and evolving as well. In this regard, it was seen as necessary that Members take measures to adapt the implementation of the 6LTP as appropriate.

14.8 The session noted that an evaluation of the implementation of the 6LTP along with the nine WMO Strategies was carried out. It further noted that this evaluation was mainly qualitative and was based on input from programmes and a draft WMO Secretariat programme performance report for the biennium 2004-2005. It agreed on the need for quantitative measures of performance that should be included in the WMO strategic planning framework.

Preparation of the WMO Strategic Plan 2008-2011

14.9 The Association agreed that, with respect to its Region, the following trends, developments and needs should be taken into account and addressed in the preparation of the WMO Strategic Plan 2008-2011:

(a) Need to alleviate poverty;

(b) Increasing diversification of economies;

(c) Increasing competitiveness among stakeholders in a market economy;

(d) Developments in science and technology including rapid changes in information technology;

(e) Impacts of and responses to climate change;

(f) Need for relevant investments in developing countries;

(g) Need for capacity building for bridging the gap.

14.10 The Association also agreed that attention should be given to research needs that would result from the above trends, developments and needs.

14.11 The Association was informed of the deliberations of the EC WG/LTP which met from 28 to 31 March 2006 in Geneva, relating to the WMO long-term planning. These included the proposal for developing a WMO Strategic Plan (2008-2011) with strong emphasis on enhanced performance assessment through the identification of expected results, key performance indicators and key performance targets.

RA III Strategic Plan

14.12 Consistent with the WMO long-term planning system, the Association discussed the development of its RA III Strategic Plan. The Association underscored the importance of a strong linkage of this regional plan to the overall WMO Plan.

14.13 The Association agreed on priority issues that were of specific concern to the Region and should be addressed in the RA III Strategic Plan. These issues relate to the following Programme areas:

(a) World Weather Watch Programme

Support to the following:

Telecommunication system (GTS/RMDCN in RA III);

Data processing and forecasting system (development and functions of the RSMCs and NMCs; participation of the NMHSs in THORPEX; Emergency arrangements related to nuclear accidents);

Data management, distributed databases (including expeditious development of the WMO Information System in RA III);

Exchange of data among neighbouring countries for forecasting purposes;

Strengthened operation and maintenance of observing networks, including the Upper-air Networks, automatic observing systems, and the Global Atmosphere Watch Network;

Strengthened capacities of the NMHSs for receiving and processing data and products from environment operational and R&D satellites.

(b) World Climate Programme

Support to activities of International Research Centre for the El Niño Phenomenon (CIIFEN) and the Permanent South Pacific Commission (CPPS);

Further development of climate applications capacity in NMHSs, including development of future climate scenarios;

(c) Hydrology and Water Resources Programme

Effects of ENSO on extreme hydrological events;

Hydrological modeling and flood forecasting;

Integrated water resources management;

Water resources assessment (transboundary basins included);

Effect of climate change on water resources;

Development of HYCOS projects;

Support to use of GIS for hydrological purposes;

(d) Education and Training Programme

Human resources development through support to training activities and enhancement of fellowships grants;

Support to RMTCs;

(e) Technical Cooperation and Regional Programme Activities

Enhancement of technical cooperation activities including VCP;

Resource mobilization activities to assist development of NMHSs;

(f) Natural Disaster Prevention and Mitigation Programme

Support to capacity building on early warning for disasters prevention and mitigation;

Studies and modelling of risks and potential impacts of disasters, including tropical cylones, for inclusing in national and regional development plans;

Promotion of the use of early warning systems along with climate and weather forecasts as strategy to adapt to climate change.

15. EMERGING ISSUES AND SPECIFIC CHALLENGES *(agenda item 15)*

15.1 EVOLUTION OF WMO AND NMHSS – REGIONAL ASPECTS (*agenda item 15.1)*

15.1.1 The role and operation of National Meteorological and Hydrological Services (NMHSs) were intimately linked to many other issues of major interest to WMO and NMHSs. It was also recognized that such links should be carefully considered and should be such as to help WMO, its Members and their NMHSs to strengthen complementarity and strategic alliances as well as to meet the major challenges and commitments facing the Organization. In this connection, the Association considered that the particular issues of interest to the Region are:

(a) Strengthening the activities of WMO and NMHSs to work with partners in dealing with natural disasters and poverty;

(b) Sustainable development;

(c) Promotion of cooperation with NMHSs in other Regions;

(d) Capacity building for human resource and institutional development as part of bridging the gap.

International Conference "Secure and Sustainable Living: Social and Economic Benefits of Weather, Climate and Water Services"

15.1.2 The Association supported the holding of the WMO International Conference "Secure and Sustainable Living: Social and Economic Benefits of Weather, Climate and Water Services" planned to be held in Madrid, Spain from 19 to 23 March 2007. The socio-economic benefit studies presented at the international conference should help to demonstrate NMHSs contribution to the realization of national development goals. Hence, resources attributed to NMHSs can and should be seen as investments rather than expenditures.

15.1.3 It agreed that the Conference's scope and objectives should be such as to promote the better appreciation of the relevant and social and economic benefits to the wide range of

pertinent stakeholders. The participation of such stakeholders, including decision makers, user groups, development planners, economists and social scientists, should be strongly encouraged. Moreover, special efforts should be extended to facilitate the participation of some eminent personalities that would help to give further credence to the conference and draw special attention to it.

Statement on the Role and Operation of NMHSs

15.1.4 The Association recalled that the Executive Council agreed that two outward-looking EC statements on the role and operation of NMHSs would be prepared:

(a) A succinct, forceful and well targeted statement addressed to decision makers;

(b) A more extended statement for Directors and other senior officials of NMHSs for their guidance.

15.1.5 Furthermore, the Council had agreed on its statement relating to decision makers (see Annex to the present report). This described the international settings which were of interest to decision makers. It had urged support for NMHSs, from the decision makers, by identifying what they do and how these contributed in meeting societal needs and to national strategic planning.

15.1.6 Concerning the second document for Directors and other senior officials, the Association stressed the importance and utility of such a document and recommended that it be developed as soon as feasible.

15.1.7 In this connection, the Association agreed with the Council on the importance of a communication strategy to help facilitate the favourable consideration of these statements and other relevant WMO position papers by decision makers.

Role and Operation of National Hydrological Services

15.1.8 The Association also recognized the need to address the more general question of enhancing the role of NHSs in the framework of WMO. The Association recalled that the Council, noting the diverse but close relationship between NMSs and NHSs, requested that consideration be given on how this diverse range of relationships could best be represented in the framework of WMO.

Other considerations

15.1.9 The Association recognized the importance and need for reinforcing capacity building of NMHSs, particularly through training in such relatively new areas as management, partnership, networking, communication, user interaction, cost recovery, commercialization, and valuation of the socio-economic benefits of meteorological and related services.

15.1.10 The Association also emphasized the importance of continually assessing the role and operation of NMHSs in the light of the rapid changes occurring and of identifying appropriate actions that might be taken by NMHSs and WMO.

15.1.11 The Association agreed that it was important to address the relevant priority areas of concern which provided challenges and opportunities to its Members. It therefore called upon its Members to take appropriate action. Moreover, it felt that Directors of NMHSs should be proactive in this regard.

15.1.12 The Association expressed its appreciation that the chairman of the EC Task Team to Explore and Assess the Possible Changes to the WMO Convention had made available a presentation on the subject in Spanish language, which had been given at sessions of the

other Regional Associations held since Fourteenth Congress. It was noted that the Secretary-General would distribute in the very near future a comprehensive report including a proposal by the EC Task Team for amending the Convention, intended for submission to Fifteenth Congress, to all Members, as he was requested to do by the Executive Council. The Association urged its Members to investigate sufficiently in advance their national position related to a possible change to the WMO Convention and in particular their national legal requirements regarding the proposed amendment.

15.2 EVALUATION OF SOCIO-ECONOMIC BENEFITS *(agenda item 15.2)*

15.2.1 The Association expressed its appreciation to the Secretary-General for planning to organize a WMO International Conference "Secure and Sustainable Living: Social and Economic and Social Benefits of Weather, Climate and Water Services" to be held in Madrid, Spain, from 19 to 23 March 2007.

15.2.2 In view of the limited capacity of NMHSs in RA III, in particular developing countries, in socio-economic benefits studies, the Association requested the Secretary-General to assist NMHSs to increase their capacities in this area through national training seminars/workshops.

15.3 INTERNATIONAL EXCHANGE OF DATA AND PRODUCTS (*agenda item 15.3)*

15.3.1 The Association noted various developments relating to the international exchange of meteorological, hydrological, oceanographical, and aeronautical meteorological data and products.

15.3.2 The Association encouraged its Members to continue their support to the international exchange of meteorological and related data and products, particularly by observing the letter and spirit 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 and Resolution 25 (Cg-XIII) – Exchange of hydrological data and products.

15.4 WMO QUALITY MANAGEMENT FRAMEWORK *(agenda item 15.4)*

15.4.1 The Association recalled that Congress decided (Resolution 27 (Cg-XIV)) that WMO should work towards a Quality Management Framework (QMF) for NMSs that would eventually include and develop the following distinct, though related elements, which could be addressed possibly on a phased basis:

(a) WMO technical standards;

(b) Quality management system(s) including quality control; and

(c) Certification procedure(s).

15.4.2 The Association felt that training on quality management was needed for the Region and requested the Secretary-General to organize capacity building activities, such as training seminars. The Association agreed that training events, such as Regional Technical Conferences to be held in the Region should address the WMO QMF by including this topic in their programmes.

15.4.3 The Association appealed to Members whose NMSs had successfully implemented a QMS, to share their experiences with others by making available relevant documents for information and guidance as well as by direct exchange through expert visits and training within the Region.

15.5 GROUP ON EARTH OBSERVATIONS (GEO) **PROCESS – REGIONAL ASPECTS** (*agenda item 15.5*)

15.5.1 The Association noted the information on activities related to GEO as well as from the fifty-sixth session of the WMO Executive Council which had adopted Resolution 9 (EC-LVI) on the Global Earth Observation System of Systems (GEOSS) affirming its full support for the GEO process and resulting GEOSS.

15.5.2 The Association noted that in the GEOSS resolution approved at EC-LVI, WMO Members should work closely with other earth observation agencies at the national level to ensure the development of well-coordinated national plans for GEOSS implementation. In that regard it appointed a Rapporteur for GEOSS to work on regional implementation aspects of the GEOSS Implementation Plan with terms of reference as contained in Resolution 16 (XIV-RA III).

16. OTHER REGIONAL ACTIVITIES *(agenda item 16)*

16.1 FIFTH TECHNICAL CONFERENCE ON MANAGEMENT OF NMHSS IN REGIONAL ASSOCIATION III (**SOUTH AMERICA**) **AND IN REGIONAL ASSOCIATION IV** (**NORTH AMERICA, CENTRAL AMERICA AND THE CARIBBEAN**) *(agenda item 16.1)*

16.1.1 The Association noted the successful organization of the Technical Conference during the previous financial periods, which served to increase the management skills of the Directors of Meteorological Services in the Region. The Association was also informed that a joint Technical Conference for Regional Associations III and IV was planned for the year 2008.

16.1.2 The Association requested its president to liaise with the president of RA IV, in order to finalize the decision and ensure the success of the joint Technical Conference.

16.2 INTERNAL MATTERS OF THE ASSOCIATION *(agenda item 16.2)*

16.2.1 The Association expressed its thanks to Mr Raúl Michelini (Uruguay), the chairman of the Working Group on Internal Matters of RA III, for the report of the second session of the Working Group on Internal Matters (Montevideo Uruguay, 30 August to 1 September 2005), and congratulated the group on the important tasks undertaken during this period which provided the president of the Association with effective guidance.

16.2.2 The Association noted the need to make a closer follow-up of the activities of working groups and rapporteurs in the RA III, including indicators to measure the progress made. In this context, the Association was informed that the WMO Ofice in Paraguay will continue providing support to the President of RA III for a continuous and effective follow-up of the activities of working groups and rapporteurs nominated for RA III.

16.2.3 The Association decided to re-establish the working group and adopted Resolution 17 (XIV-RA III).

16.3 BRAINSTORMING *(agenda item 16.3)*

16.3.1 The Association discussed in depth the main issues and the urgent need to develop a Strategic Plan and the associated Action Plan for RA III reflecting priority areas and resources required for the implementation of such a Plan.

16.3.2 The Association highlighted many issues that Members in the Region are most concerned, as follows:

Strategic Development Plan and associated Action Plan

The Strategic Development Plan (SDP) for RA III, which should have a clear vision to the future, should take into account the need for horizontal cooperation, be creative and include feasible, specific and practical activities;

SDP should recognize existing differences and gaps between NMHSs in the Region and design strategies for reducing such gaps;

SDP should consider adequate allocation of budgetary resources (WMO and national funds) to ensure implementation of selected priorities;

The Action Plan should include, among others, a time frame for implementing the activities and performance indicators to facilitate efficient and effective monitoring;

SDP should enhance the integration in the Region;

SDP should be linked and consistent with the WMO´s Strategic Plan and with allocation of specific funding for priority projects;

SDP should contain a political strategy, including enhancement of advocacy activities by WMO to decision-makers in support of Members in the development of projects and initiatives;

The SDP should address the need for a more proactive and effective support by the RCD Department and its WMO Office to assist RA III Members and the president in the implementation of the Action Plan;

The SDP should also other relevant issues in the Region such as protection of the environment, disaster risk reduction, water resources management and agricultural productivity.

Visibility of NMHS in RA III

Enhancement of WMO's advocacy activities at national level aimed at assisting NMHSs in the development of projects and initiatives as requested by Members;

The socio-economic value of NMHSs should be demonstrated to National Government Authorities;

Assistance to NMHSs to facilitate their participation and involvement in projects and initiatives for example, on adaptation to climate change.

Other relevant issues

Also the following development needs were identified:

Improvement of telecommunications, enhancement of the regional observing network by increasing the exchange frequency from one report per 3 hours to one report per hour, use and dissemination of products from available NWP models, and training of professional staff;

Study the possibility to purchase consumables for several countries jointly to obtain more favourable prices.

17. SCIENTIFIC LECTURES AND DISCUSSIONS *(agenda item 17)*

17.1 The following scientific lectures were presented during the session:

(a) Experience for the Hydrometeorological Strengthening through Regional Projects by Eco. Gloria Valverde Carbajal, Director of the SENAMHI Budget and Planning Office;

(b) NOAA's GOES-10 satellite by Mrs Cynthia Hampton, NOAA.

17.2 The Association considered the lectures to be very interesting and of great quality. In addition, the Association thanked the lecturers for their presentations.

18. REVIEW OF PREVIOUS RESOLUTIONS AND RECOMMENDATIONS OF THE ASSOCIATION AND OF RELEVANT EXECUTIVE COUNCIL RESOLUTIONS *(agenda item 18)*

18.1 The Association examined those of its resolutions, which were still in force at the time of the fourteenth session.

18.2 The Association noted that most of its past resolutions had been replaced by new resolutions adopted during the session. It was further noted that while a few resolutions had been incorporated in the appropriate WMO publications, some of the previous resolutions were still required to be kept in force.

18.3 The Association accordingly adopted Resolution 18 (XIV-RA III).

18.4 The Association considered that Resolution 8 (EC-LIV) on the report of the thirteenth session of the Regional Association III (South America) need not be kept in force.

19. ELECTION OF OFFICERS *(agenda item 19)*

The Association elected Mr Ramón J. Viñas García (Venezuela) as president and Mr Carlos Costa Posada (Colombia) as vice-president of WMO Regional Association III (South America).

20. DATE AND PLACE OF THE FIFTEENTH SESSION *(agenda item 20)*

20.1 The delegation of Colombia extended its invitation to host the next session of the Association in Colombia. The Association noted the kind invitation and expressed its appreciation for this offer.

20.2 In accordance with Regulation 170 of the WMO General Regulations, the president of the Association should determine the date and place of the fifteenth session in agreement with the President of the World Meteorological Organization and after consultation with the Secretary-General, during the inter-sessional period.

21. CLOSURE OF THE SESSION *(agenda item 21)*

The fourteenth session of Regional Association III (South America) closed at 10h30 on 13 September 2006.

RESOLUTIONS ADOPTED BY THE SESSION

Resolution 1 (XIV-RA III)

WORKING GROUP ON PLANNING AND IMPLEMENTATION OF THE WWW IN REGION III

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 2 (Cg-XIV) – World Weather Watch Programme for 2004-2007,

(2) Resolution 5 (Cg-XIV) – WMO Space Programme,

(3) Resolution 25 (Cg-XIV) – Sixth WMO Long-term Plan (2004-2011),

(4) 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,

(5) The report of the chairman of the Working Group on Planning and Implementation of the WWW in RA III (Buenos Aires, 2005),

Considering:

(1) That WWW data and products are of vital importance to Members in Region III for meeting the increasing requirements of users for meteorological services,

(2) That the implementation of the WWW in the Region should be kept under constant review,

(3) That the introduction of the new WWW concepts will be of great benefit to all Members in the Region,

(4) That full integration of the WWW functional components requires careful coordination among Members of RA III and constant evaluation of the related projects,

(5) That the WMO Long-term Plan needs regular updating from the point of view of regional requirements,

(6) That the regional Working Group on Planning and Implementation of the WWW should be involved in the development and implementation of relevant new cross-cutting programmes and activities of WMO, in particular the Natural Disaster Prevention and Mitigation Programme, the WMO Quality Management Framework, the WWW contributions of the RA III to THORPEX and to the International Polar Year,

Decides:

(1) To re-establish the Working Group on the Planning and Implementation of the WWW in Region III with the following terms of reference:

(a) To monitor the implementation and operation of the WWW in the Region and advise on possible improvements and priorities and appropriate actions to be carried out under the WWW Programme and on the need for external support, where required;

(b) To keep under review the actions taken under the Sixth Long-term Plan with a view to updating and further developing the WWW Programme in RA III;

(c) To develop proposals for further development and full integration of the WWW components with a view to achieving a cost-effective operation of the WWW and better supply of data and products in the Region;

(d) To keep abreast of new developments, guidelines and decisions of the CBS and its working groups in the field of meteorological data processing, observing techniques, telecommunications, data management and applications of meteorological satellites and to make recommendations for their regional use;

(e) To identify and keep under review regional requirements for the exchange of observational data and products and to propose measures and procedures as appropriate to meet those needs for information from within and outside the Region;

(f) To advise the president of the Association on all matters concerning the WWW;

(g) To keep under constant review regional operational practices, in particular the Regional Meteorological Telecommunication Plan and its implementation, including developments in the use of satellites for data collection and distribution, and to assist in the implementation of the WMO Information System (WIS) in the Region;

(h) To contribute to the effective coordination between the WWW and WMO cross-cutting activities, in particular the Natural Disaster Prevention and Mitigation Programme, the Space Programme and the International Polar Year;

(2) That the working group shall have the following composition:

(a) Core members:

Rapporteur on Regional Aspects of the Global Observing System;

Rapporteur on Regional Aspects of the Global Data-processing and Forecasting System;

Rapporteur on Regional Aspects of Information Systems and Services, including the Global Telecommunication System and Data Management;

Rapporteur on Regional Aspects of Public Weather Services;

(b) Experts to be nominated by Members who wish to participate actively in the work of the working group;

(3) To adopt the terms of reference of the rapporteurs that are given in the annex to this resolution;

(4) To designate, in accordance with Regulation 32 of the WMO General Regulation Mr José Afonso (Argentina) as chairperson of the working group;

(5) To invite:

(a) Mr Gastón Torres (Chile) to serve as Rapporteur on Regional Aspects of the Global Observing System;

(b) Mr Ricardo Cisneros (Peru) to serve as Rapporteur on Regional Aspects of the Global Data-processing and Forecasting System;

(c) Mr José Mauro de Rezende (Brazil) to serve as Rapporteur on Regional Aspects of Information Systems and Services, including the Global Telecommunication System and Data Management;

(d) Mr Enrique Palacios (Ecuador) to serve as Rapporteur on Regional Aspects of Public Weather Services;

(6) To request the chairperson of the working group to submit a progress reports to the president of the Association on 1 November of each year, including the contributions from the respective Rapporteurs, and a final report not later than six months before the fifteenth session of the Association.

Annex to Resolution 1 (XIV-RA III)

WORKING GROUP ON THE PLANNING AND IMPLEMENTATION OF THE WWW IN REGION III

The terms of reference for the rapporteurs nominated under Resolution 1 (XIV-RA III) are as follows:

(a) The Rapporteur on Regional Aspects of the Global Observing System:

(i) To keep abreast of developments in observing systems, e.g. surface-based remote sensors and profilers, AMDAR, ASAP and drifting buoys;

(ii) To review and advise on the design and implementation of the Regional Basic Synoptic Network of surface and upper-air stations with a view to improving data quality and coverage of surface and upper-air observations of the RBSN and RBCN;

(iii) Follow up the operational experience of Members in the Region on the use of new observing systems and to formulate recommendations;

(iv) To identify the training requirements of Members in the Region for the successful implementation, operation and maintenance of the observing system;

(v) To advise the chairman of the working group in matters concerning the regional observing systems and new developments in observing techniques, including information on instruments and sensors in the operational systems;

(vi) To represent the Region at sessions of Expert/Implementation Teams of the CBS OPAG on Integrated Observing Systems, as required;

(vii) To collaborate closely with the regional Rapporteur for the WMO Space Programme on matters related to the space-based subsystem of GOS;

(viii) To submit a six monthly activity report to the chairperson of the working group and a comprehensive report not later than 3 months before the scheduled meeting of the working group.

(b) The Rapporteur on Regional Aspects of the Global Data-processing and Forecasting System:

(i) To keep abreast of developments in data-processing equipment and techniques and in numerical analysis and prediction systems techniques and applications which could be beneficially introduced at NMCs or RSMCs to improve their operational capability both within the WWW system and in related areas;

(ii) To formulate recommendations for coordinated implementation of data-processing and forecasting facilities and techniques at GDPFS and other centres and, if required, for multi-purpose use;

(iii) To identify the training requirements of Members in the Region for the successful implementation, operation and maintenance of the data-processing and forecasting system;

(iv) To advise the chairman of the working group in all matters concerning data-processing and forecasting activities;

(v) To represent the Region at sessions of Expert/Implementation Teams of the CBS OPAG on Data Processing and Forecasting System, as required; coordinate and monitor the participation and contributions of GDPFS centres of the Region to the Demonstration Project on Severe Weather Forecasting carried out under the auspices of CBS, and report on the outcomes relevant to the Region;

(vi) To submit a six monthly activity report to the chairperson of the working group each year and a comprehensive report not later than 3 months before the scheduled meeting of the working group.

(c) The Rapporteur on Regional Aspects of Information Systems and Services, including the Global Telecommunication System and Data Management:

(i) To keep abreast of developments in new telecommunication technology and equipment and to study their possible adaptation to the requirements for an efficient regional meteorological telecommunication system, as well as the opportunities to be derived from communication space techniques, using commercial and meteorological satellites; promote the involvement of the Region in WIS development;

(ii) To keep under review the regional meteorological telecommunication plan, particularly as regards the development of the RMDCN, based on the concept of a Valued Added Network (Managed Services Network);

(iii) To identify the training requirements of Members in the Region for the successful implementation, operation and maintenance of the Global Telecommunication System;

(iv) To advise the chairman of the working group in matters concerning the regional meteorological telecommunication system and regional aspects of the WMO Information System (WIS);

(v) To represent the Region at sessions of Expert/Implementation Teams of the CBS OPAG on Information Systems and Services, as required;

(vi) To keep under review data and product selection and presentation to recipients (NMCs) and to take action on regional coding problems; coordinate the establishment of a regional Migration Plan to Table-driven Code Forms (TDCF) and promote and assist in the development of national migration plans;

(vii) To collect information on the level of quality control of data and products, and coordinate related activities;

(viii) To keep under review the WWW data and product recovery procedures in case of major outages of key facilities;

(ix) To coordinate both real-time and non-real-time monitoring of the integrated WWW system in the Region;

(x) To identify the training requirements of Members in the Region for the successful implementation of the WWW data management functions;

(xi) To advise the chairman of the working group in all matters concerning data management and meteorological codes in the Region;

(xii) To keep under review data and information presentation, including exchange formats and codes and conversion between formats and codes, including regional code practices;

(xiii) To submit a six monthly activity report to the chairperson of the working group each year and a comprehensive report not later than 3 months before the scheduled meeting of the working group.

(d) The Rapporteur on Regional Aspects of Public Weather Service:

(i) To keep under review the implementation of the Public Weather Services Programme in Region III;

(ii) To advise the chairman of the working group on matters relating to formulation, presentation and dissemination of forecasts and warnings and establishing good relations with the media and the private sector;

(iii) To keep under review education and training requirements related to the Public Weather Services programme;

(iv) To keep under review, in coordination with the Rapporteur on the Regional Aspects of the GDPS, aspects relating to exchange and coordination of hazardous weather information among neighbouring countries;

(v) To represent the Region at sessions of Expert/Implementation Teams of the CBS OPAG on Public Weather Services, as required;

(vi) To submit a six monthly activity report to the chairperson of the working group each year and a comprehensive report not later than 3 months before the scheduled meeting of the working group.

Resolution 2 (XIV-RA III)

REGIONAL BASIC SYNOPTIC NETWORK

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 2 (XIII-RA III) – Regional Basic Synoptic Network,

(2) The *Manual on the Global Observing System*, Volume I, Part III, Regulations 2.1.3.1 - 2.1.3.5 and the definition of the Regional Basic Synoptic Networks,

(3) The *Manual on the Global Telecommunication System*, Volume I, Part I, Attachment 1-3, Section 3,

Considering that the establishment and maintenance of a regional basic synoptic network of surface and upper-air synoptic stations, adequate to meet the requirements of Members and of the World Weather Watch, constitute one of the most important obligations of Members under Article 2 of the WMO Convention,

Decides that the stations and the observational programmes listed in the Annex to this resolution constitute the Regional Basic Synoptic Network (RBSN) in Region III;

Urges Members:

(1) To spare no effort in their endeavours to secure, at the earliest date possible, full implementation of the network of the stations and observational programmes set forth in the annex to this resolution;

(2) To comply fully with the standard times of observation, the global and regional coding procedures and data collection standards, as laid down in the WMO *Technical Regulations* and the *Manuals on the GOS*, *on Codes* and *on the GTS*;

Authorizes the president of the Association to approve, at the request of the Members concerned and in consultation with the Secretary-General, minor amendments to the list of RBSN stations in accordance with the procedures laid down in the *Manual on the Global Observing System*, *Volume II – Regional Aspects, Region III (South America)*.

Note: This resolution replaces Resolution 2 (XIII-RA III), which is no longer in force.

Annex to Resolution 2 (XIV-RA III)

LIST OF STATIONS COMPRISING THE RBSN IN REGION III

INDEX	STATION NAME	OBSERVATIONS	
ARGENTINA			
87007	LA QUIACA OBSERVATORIO	S	
87022	TARTAGAL AERO	S	
87046	JUJUY AERO	S	
87047	SALTA AERO	S	
87047	SALTA AERO	W	R
87097	IGUAZU AERO	S	
87121	TUCUMAN AERO	S	
87129	SANTIAGO DEL ESTERO AERO.	S	

INDEX	STATION NAME	OBSERVATIONS	
87148	PRESIDENCIA ROQUE SAENZ PENA AERO	S	
87155	RESISTENCIA AERO	S	
87155	RESISTENCIA AERO	W	R
87162	FORMOSA AERO	S	
87166	CORRIENTES AERO.	S	
87178	POSADAS AERO.	S	
87217	LA RIOJA AERO.	S	
87222	CATAMARCA AERO.	S	
87257	CERES AERO	S	
87270	RECONQUISTA AERO	S	
87289	PASO DE LOS LIBRES AERO	S	
87311	SAN JUAN AERO	S	
87320	CHAMICAL AERO	S	
87328	VILLA DOLORES AERO	S	
87344	CORDOBA AERO	S	
87344	CORDOBA AERO	W	R
87349	PILAR OBSERVATORIO	S	
87371	SAUCE VIEJO AERO	S	
87374	PARANA AERO	S	
87395	CONCORDIA AERO	S	
87418	MENDOZA AERO	S	
87418	MENDOZA AERO	W	R
87436	SAN LUIS AERO	S	
87448	VILLA REYNOLDS AERO	S	
87453	RIO CUARTO AERO	S	
87467	MARCOS JUAREZ AERO	S	
87480	ROSARIO AERO	S	
87497	GUALEGUAYCHU AERO	S	
87506	MALARGUE AERO	S	
87509	SAN RAFAEL AERO	S	
87532	GENERAL PICO AERO	S	
87534	LABOULAYE AERO	S	
87548	JUNIN AERO	S	
87576	EZEIZA AERO	S	
87576	EZEIZA AERO	W	R
87582	AEROPARQUE BS. AS. AERO	S	
87585	BUENOS AIRES OBSERVATORIO	S	
87593	LA PLATA AERO	S	
87623	SANTA ROSA AERO	S	
87623	SANTA ROSA AERO	W	R
87641	AZUL AERO	S	
87645	TANDIL AERO	S	
87648	DOLORES AERO	S	
87692	MAR DEL PLATA AERO	S	
87715	NEUQUÉN AERO	S	
87750	BAHIA BLANCA AERO	S	
87765	BARILOCHE AERO	S	
87784	SAN ANTONIO OESTE AERO	S	
87791	VIEDMA AERO	S	
87800	EL BOLSON AERO	S	

INDEX	STATION NAME	OBSERVATIONS	
87803	ESQUEL AERO	S	
87828	TRELEW AERO	S	
87860	COMODORO RIVADAVIA AERO	S	
87860	COMODORO RIVADAVIA AERO	W	R
87904	EL CALAFATE AERO	S	
87909	SAN JULIAN AERO	S	
87925	RIO GALLEGOS AERO	S	
87938	USHUAIA AERO	S	
BOLIVIA			
85033	GUAYARAMERIN	S	
85041	COBIJA	S	
85043	RIBERALTA	S	
85104	SAN JOAQUIN	S	
85109	SAN RAMON	S	
85114	MAGDALENA	S	
85123	SANTA ANA	S	
85139	SANTA ROSA	S	
85140	REYES	S	
85141	RURRENABAQUE	S	
85151	APOLO	S	
85152	SAN BORJA	S	
85154	TRINIDAD	S	
85175	ASCENCION DE GUARAYOS	S	
85195	SAN JAVIER	S	
85196	CONCEPCION	S	
85201	LA PAZ/ALTO	W	R
85207	SAN IGNACIO DE VELASCO	S	
85210	SAN MATIAS	S	
85223	COCHABAMBA	S	
85230	CHARANA	S	
85242	ORURO	S	
85244	VIRU VIRU SANTA CRUZ	W	
85245	SANTA CRUZ/EL TROMPILLO	S	
85247	SAN JOSE DE CHIQUITOS	S	
85264	VALLEGRANDE	S	
85268	ROBORE	S	
85283	SUCRE	S	
85289	PUERTO SUAREZ	S	
85293	POTOSI	S	
85312	MONTEAGUDO	S	
85315	CAMIRI	S	
85345	VILLAMONTES	S	
85364	TARIJA	S	
85365	YACUIBA	S	
85394	BERMEJO	S	
BRAZIL			
82022	BOA VISTA (AEROPORTO)	S	
82042	CARACARAI	S	
82098	MACAPA	S	
82106	SAO GABRIEL DA CACHOEIRA	S	

INDEX	STATION NAME	OBSERVATIONS	
82113	BARCELOS	S	
82141	SOURE	S	
82143	SALINOPOLIS	S	
82145	TRACUATEUA (BRAGANCA)	S	
82181	MONTE ALEGRE	S	
82184	PORTO DE MOZ	S	
82193	BELEM (AEROPORTO)	S	
82193	BELEM (AEROPORTO)	W	R
82198	TURIACU	S	
82212	FONTE BOA	S	
82240	PARINTINS	S	
82246	BELTERRA	S	
82281	SAO LUIZ (AEROPORTO)	S	
82287	PARNAIBA	S	
82317	TEFE	S	
82332	MANAUS (AEROPORTO)	S	
82332	MANAUS (AEROPORTO)	W	R
82336	ITACOATIARA	S	
82353	ALTAMIRA	S	
82361	TUCURUI	S	
82392	SOBRAL	S	
82397	FORTALEZA	W	R
82398	FORTALEZA (AEROPORTO)	S	
82400	FERNANDO DE NORONHA	S	
82400	FERNANDO DE NORONHA	W	R
82410	BENJAMIN CONSTANT	S	
82425	COARI	S	
82445	ITAITUBA	S	
82460	BACABAL	S	
82476	CAXIAS	S	
82533	MANICORE	S	
82562	MARABA	S	
82571	BARRA DO CORDA	S	
82579	TERESINA (AEROPORTO)	S	
82583	CRATEUS	S	
82586	QUIXERAMOBIM	S	
82594	MACAU	S	
82599	NATAL AEROPORTO	S	
82599	NATAL AEROPORTO	W	R
82610	EIRUNEPE	S	
82678	FLORIANO	S	
82678	FLORIANO	W	R
82683	TAUA	S	
82704	CRUZEIRO DO SUL	S	
82723	LABREA	S	
82765	CAROLINA	S	
82765	CAROLINA	W	R
82780	PICOS	S	
82784	BARBALHA	S	
82789	TRIUNFO	S	

INDEX	STATION NAME	OBSERVATIONS	
82791	PATOS	S	
82795	CAMPINA GRANDE	S	
82807	TARAUACA	S	
82824	PORTO VELHO (AEROPORTO)	S	
82824	PORTO VELHO (AEROPORTO)	W	R
82861	CONCEICAO DO ARAGUAIA	S	
82863	PEDRO AFONSO	S	
82879	S.JOAO DO PIAUI	S	
82893	GARANHUNS	S	
82899	RECIFE (AEROPORTO)	S	
82900	RECIFE	W	R
82917	RIO BRANCO	S	
82965	ALTA FLORESTA (AEROPORTO)	S	
82965	ALTA FLORESTA (AEROPORTO)	W	R
82979	REMANSO	S	
82983	PETROLINA	S	
82983	PETROLINA	W	R
82986	PAULO AFONSO	S	
82993	MACEIO (AEROPORTO)	S	
83064	PORTO NACIONAL	S	
83096	ARACAJU	S	
83179	BARRA	S	
83182	IRECE	S	
83186	JACOBINA	S	
83192	CIPO	S	
83208	VILHENA (AEROPORTO)	S	
83208	VILHENA (AEROPORTO)	W	R
83214	MATUPA	S	
83228	PEIXE	S	
83229	SALVADOR	W	R
83235	TAGUATINGA	S	
83236	BARREIRAS	S	
83242	LENCOIS	S	
83248	SALVADOR (AEROPORTO)	S	
83264	GLEBA CELESTE	S	
83270	CANARANA	S	
83288	BOM JESUS DA LAPA	S	
83288	BOM JESUS DA LAPA	W	R
83309	DIAMANTINO	S	
83319	NOVA XAVANTINA	S	
83332	POSSE	S	
83339	CAETITE	S	
83344	VITORIA DA CONQUISTA	S	
83349	ILHEUS (AEROPORTO)	S	
83358	POXOREO (POXOREU)	S	
83362	CUIABA (AEROPORTO)	S	
83362	CUIABA (AEROPORTO)	W	R
83368	ARAGARCAS	S	
83374	GOIAS	S	
83378	BRASILIA (AEROPORTO)	S	

INDEX	STATION NAME	OBSERVATIONS	
83378	BRASILIA (AEROPORTO)	W	R
83384	ARINOS	S	
83386	JANUARIA	S	
83388	MONTE AZUL	S	
83393	PEDRA AZUL	S	
83398	CANAVIEIRAS	S	
83405	CACERES	S	
83423	GOIANIA	S	
83437	MONTES CLAROS	S	
83442	ARACUAI	S	
83470	RIO VERDE	S	
83479	PARACATU	S	
83483	PIRAPORA	S	
83492	TEOFILO OTONI	S	
83497	CARAVELAS (AEROPORTO)	S	
83498	CARAVELAS	W	R
83526	CATALAO	S	
83531	PATOS DE MINAS	S	
83538	DIAMANTINA	S	
83550	SAO MATEUS	S	
83565	PARANAIBA	S	
83566	BELO HORIZONTE (CONFINS)	S	
83566	BELO HORIZONTE (CONFINS)	W	R
83574	FRUTAL	S	
83579	ARAXA	S	
83582	BAMBUI	S	
83592	CARATINGA	S	
83595	AIMORES	S	
83597	LINHARES	S	
83612	CAMPO GRANDE (AEROPORTO)	S	
83612	CAMPO GRANDE (AEROPORTO)	W	R
83618	TRES LAGOAS	S	
83623	VOTUPORANGA	S	
83630	FRANCA	S	
83649	VITORIA (AEROPORTO)	S	
83650	TRINDADE (ILHA)	S	
83650	TRINDADE (ILHA)	W	R
83676	CATANDUVA	S	
83687	LAVRAS	S	
83692	JUIZ DE FORA	S	
83695	ITAPERUNA	S	
83698	CAMPOS	S	
83702	PONTA PORA	S	
83704	IVINHEMA	S	
83716	PRESIDENTE PRUDENTE	S	
83718	CORDEIRO	S	
83726	SAO CARLOS	S	
83738	RESENDE	S	
83746	GALEAO	S	
83746	GALEAO	W	R

INDEX	STATION NAME	OBSERVATIONS	
83766	LONDRINA	S	
83779	MARTE	W	R
83780	SAO PAULO (AEROPORTO)	S	
83783	CAMPO MOURAO	S	
83811	IVAI	S	
83818	SANTOS (AEROPORTO)	S	
83821	IGUAPE	S	
83827	FOZ DO IGUACU (AEROPORTO)	S	
83827	FOZ DO IGUACU (AEROPORTO)	W	R
83836	IRATI	S	
83840	CURITIBA (AEROPORTO)	S	
83840	CURITIBA (AEROPORTO)	W	R
83844	PARANAGUA	S	
83881	IRAI	S	
83887	CAMPOS NOVOS	S	
83899	FLORIANOPOLIS (AEROPORTO)	S	
83907	SAO LUIZ GONZAGA	S	
83914	PASSO FUNDO	S	
83919	BOM JESUS	S	
83925	SANTA MARTA	S	
83927	URUGUAIANA	S	
83928	URUGUAIANA (AEROPORTO)	W	R
83936	SANTA MARIA	S	
83948	TORRES	S	
83964	ENCRUZILHADA DO SUL	S	
83970	MOSTARDAS	S	
83971	PORTO ALEGRE (AEROPORTO)	S	
83971	PORTO ALEGRE (AEROPORTO)	W	R
83980	BAGE	S	
83995	RIO GRANDE	S	
83997	ST.VITORIA DO PALMAR	S	
CHILE			
85406	ARICA	S	
85418	IQUIQUE	S	
85432	CALAMA	S	
85442	ANTOFAGASTA	S	
85442	ANTOFAGASTA	W	R
85469	ISLA DE PASCUA	S	
85469	ISLA DE PASCUA	W	R
85470	COPIAPO	S	
85488	LA SERENA	S	
85574	PUDAHUEL	S	
85585	JUAN FERNANDEZ	S	
85586	SANTO DOMINGO	S	
85586	SANTO DOMINGO	W	R
85629	CURICO	S	
85672	CHILLAN	S	
85682	CONCEPCION	S	
85743	TEMUCO	S	
85766	VALDIVIA	S	

INDEX	STATION NAME	OBSERVATIONS	
85799	PUERTO MONTT	S	
85799	PUERTO MONTT	W	R
85834	ISLA HUAFO	S	
85864	COYHAIQUE	S	
85892	COCHRANE	S	
85930	FARO EVANGELISTA	S	
85934	PUNTA ARENAS	S	
85934	PUNTA ARENAS	W	R
85972	ISLA DIEGO RAMIREZ	S	
COLOMBIA			
80009	SANTA MARTA/SIMON BOLIVAR	S	
80022	CARTAGENA/RAFAEL NUNEZ	S	
80028	BARRANQUILLA/ERNESTO CORTISSOZ	S	
80035	RIOHACHA/ALMIRANTE PADILLA	S	
80035	RIOHACHA/ALMIRANTE PADILLA	W	R
80036	VALLEDUPAR/ALFONSO LOPEZ	S	
80063	MONTERIA/LOS GARZONES	S	
80084	APARTADO/LOS CEDROS	S	
80094	BUCARAMANGA/PALONEGRO	S	
80097	CUCUTA/CAMILO DAZA	S	
80099	ARAUCA/SANTIAGO PEREZ	S	
80110	MEDELLIN/OLAYA HERRERA	S	
80112	RIONEGRO/J.M.CORDOVA	S	
80139	PUERTO CARRENO/JAVIER OLANO	S	
80144	QUIBDO/EL CARANO	S	
80210	PEREIRA/MATECANA	S	
80214	IBAGUE/PERALES	S	
80222	BOGOTA/ELDORADO	S	
80222	BOGOTA/ELDORADO	W	R
80234	VILLAVICENCIO/VANGUARDIA	S	
80252	BUENAVENTURA	S	
80259	CALI/ALFONSO BONILLA ARAGON	S	
80315	NEIVA/BENITO SALAS	S	
80342	PASTO/ANTONIO NARINO	S	
80372	PUERTO ASIS	S	
80398	LETICIA/VASQUEZ COBO	S	
80398	LETICIA/VASQUEZ COBO	W	R
ECUADOR			
84001	SEYMOUR AEROPUERTO (GALAPAGOS)	S	
84008	SAN CRISTOBAL (GALAPAGOS)	S	
84008	SAN CRISTOBAL (GALAPAGOS)	W	R
84018	ESMERALDAS AEROPUERTO (TACHINA)	S	
84071	QUITO AEROPUERTO	S	
84099	EL COCA AEROPUERTO	S	
84101	BAHIA DEL CARAQUEZ AEROPUERTO	S	
84132	NUEVO ROCAFUERTE	S	
84140	PICHILINGUE	S	
84179	PUYO	S	
84200	SALINAS AEROPUERTO	S	
84203	GUAYAQUIL AEROPUERTO	S	

INDEX	STATION NAME	OBSERVATIONS	
84203	GUAYAQUIL AEROPUERTO	W	R
84239	CUENCA AEROPUERTO	S	
84265	CATAMAYO AEROPUERTO (LA TOMA)	S	
FRENCH GUIANA			
81401	SAINT-LAURENT-DU-MARONI	S	
81405	ROCHAMBEAU	S	
81405	ROCHAMBEAU	W	R
81408	SAINT GEORGES DE L'OYAPOCK	S	
81415	MARIPASOULA	S	
GUYANA			
81002	TIMEHRI/CHEDDI JAGAN INTERNATIONAL	S	
81002	TIMEHRI/CHEDDI JAGAN INTERNATIONAL	W	R
81005	KAMARANG	S	
81006	LETHEM	S	
81010	EBINI	S	
81080	KAIETEUR FALLS	S	
81100	MABARUMA	S	
ISLANDS (88: 800 - 998)			
88889	MOUNT PLEASANT AIRPORT	S	
88889	MOUNT PLEASANT AIRPORT	W	R
88903	GRYTVIKEN, SOUTH GEORGIA	S	
PARAGUAY			
86011	ADRIAN JARA	S	
86033	BAHIA NEGRA	S	
86065	PRAT GILL	S	
86068	MARISCAL ESTIGARRIBIA	S	
86086	LA VICTORIA	S	
86097	PEDRO JUAN CABALLERO	S	
86128	POZO COLORADO	S	
86134	CONCEPCION	S	
86170	GRAL. BRUGUEZ	S	
86185	SAN PEDRO	S	
86192	SAN ESTANISLAO	S	
86210	SALTOS DEL GUAIRA	S	
86218	ASUNCION/AEROPUERTO	S	
86218	ASUNCION/AEROPUERTO	W	R
86233	VILLARRICA	S	
86246	AEROPUERTO INT. GUARANI	S	
86255	PILAR	S	
86260	SAN JUAN BAUTISTA MISIONES	S	
86285	CAPITAN MEZA	S	
86297	ENCARNACION	S	
84331	ANDOAS	S	
PERU			
84331	ANDOAS	S	
84370	TUMBES	S	
84377	IQUITOS	S	
84377	IQUITOS	W	R
84390	TALARA	S	
84401	PIURA	S	

INDEX	STATION NAME	OBSERVATIONS	
84401	PIURA	W	R
84425	YURIMAGUAS	S	
84440	RIOJA	S	
84444	CHACHAPOYAS	S	
84452	CHICLAYO	S	
84472	CAJAMARCA	S	
84474	JUANJUI	S	
84501	TRUJILLO	S	
84515	PUCALLPA	S	
84531	CHIMBOTE	S	
84534	TINGO MARIA	S	
84542	ANTA/HUARAZ	S	
84564	HUANUCO	S	
84593	ATALAYA	S	
84628	LIMA/CALLAO	S	
84628	LIMA/CALLAO	W	R
84658	PUERTO MALDONADO	S	
84658	PUERTO MALDONADO	W	R
84673	AYACUCHO	S	
84686	CUZCO	S	
84691	PISCO	S	
84735	JULIACA	S	
84752	AREQUIPA	S	
84773	ILO	S	
SURINAME			
81202	NICKERIE	S	
81209	STOELMANSEILAND	S	
81225	ZANDERIJ	S	
81250	TAFELBERG	S	
81251	SIPALIWINI	S	
81253	COEROENI	S	
81260	KABALEBO	S	
URUGUAY			
86330	ARTIGAS	S	
86350	RIVERA	S	
86360	SALTO	S	
86460	PASO DE LOS TOROS	S	
86565	ROCHA	S	
86580	CARRASCO	S	
86586	LAGUNA DEL SAUCE	S	
VENEZUELA			
80403	CORO	S	
80405	LA ORCHILA	S	
80410	BARQUISIMETO	S	
80413	MARACAY - B.A. SUCRE	S	
80413	MARACAY - B.A. SUCRE	W	R
80415	CARACAS/MAIQUETIA AEROP. INTL. SIMON BOLIVAR	S	
80419	BARCELONA	S	
80421	PORLAMAR (AEROPUERTO INT. DEL CARIBE)	S	
80423	GUIRIA	S	

INDEX	STATION NAME	OBSERVATIONS	
80425	MENE GRANDE	S	
80428	GUANARE	S	
80434	VALLE DE LA PASCUA	S	
80435	MATURIN	S	
80438	MERIDA	S	
80442	CALABOZO	S	
80444	CIUDAD BOLIVAR	S	
80447	SAN ANTONIO DEL TACHIRA	S	
80447	SAN ANTONIO DEL TACHIRA	W	R
80450	SAN FERNANDO DE APURE	S	
80453	TUMEREMO	S	
80457	PUERTO AYACUCHO	S	
80462	SANTA ELENA DE UAIREN	S	
80462	SANTA ELENA DE UAIREN	W	R
80476	LA CANADA	S	
80476	LA CANADA	W	R
80478	TEMBLADOR	S	

Resolution 3 (XIV-RA III)

REGIONAL BASIC CLIMATOLOGICAL NETWORK IN REGION III

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 3 (XIII-RA III) – Regional Basic Climatological Network,

(2) The report of the fourth session of the Working Group on Planning and Implementation of the WWW in Region III,

(3) The *Manual on the Global Telecommunication System*, Volume I, Part I, Attachment 1-3, Section 2.4 (i),

Considering that the Fourteenth WMO Congress welcomed the establishment of Regional Basic Climatological Network (RBCN) in all WMO Regions and the Antarctic and urged Members to ensure that their operational observing stations compiled and transmitted the CLIMAT/CLIMAT TEMP messages according to existing regulations,

Decides that the stations listed in the Annex to this resolution constitute the Regional Basic Climatological Network (RBCN) in Region III;

Urges Members:

(1) To spare no effort in their endeavours to ensure, at the earliest date possible, full implementation of the network of RBCN stations set forth in the annex to this resolution;

(2) To comply fully with the global and regional coding procedures and data collection standards in accordance with procedures laid down in the WMO Technical Regulations and the *Manuals on the GOS, on Codes*, and *on the GTS* when operating RBCN;

Authorizes the president of the Association to approve, at the request of Members concerned and in consultation with the Secretary-General, minor amendments to the list of RBCN stations following the procedures laid down for the RBSN in the *Manual on the Global Observing System, Volume II – Regional Aspects, Region III (South America)*.

Note: This resolution replaces Resolution 3 (XIII-RA III), which is no longer in force.

Annex to Resolution 3 (XIV-RA III)

LIST OF STATIONS COMPRISING THE RBCN IN REGION III

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
ARGENTINA					
87007	LA QUIACA OBSERVATORIO	X		X	
87016	ORAN AERO	X			
87022	TARTAGAL AERO	X			
87046	JUJUY AERO	X			
87047	SALTA AERO	X	X	X	
87065	RIVADAVIA	X		X	
87078	LAS LOMITAS	X		X	
87097	IGUAZU AERO	X			
87121	TUCUMAN AERO	X			
87129	SANTIAGO DEL ESTERO AERO.	X		X	
87148	PRESIDENCIA ROQUE SAENZ PENA AERO	X			
87155	RESISTENCIA AERO	X	X	X	X
87162	FORMOSA AERO	X			
87163	B.DE IRIGOYEN AERO	X			
87166	CORRIENTES AERO.	X			
87178	POSADAS AERO.	X			
87213	CHILECITO AERO	X			
87217	LA RIOJA AERO.	X		X	
87222	CATAMARCA AERO.	X			
87244	VILLA DE MARIA DEL RIO SECO	X			
87257	CERES AERO	X		X	
87270	RECONQUISTA AERO	X		X	
87289	PASO DE LOS LIBRES AERO	X			
87305	JACHAL	X		X	
87311	SAN JUAN AERO	X			
87320	CHAMICAL AERO	X			
87322	CHEPES	X			
87328	VILLA DOLORES AERO	X			
87344	CORDOBA AERO	X	X	X	
87345	CORDOBA OBSERVATORIO	X			
87349	PILAR OBSERVATORIO	X			
87374	PARANA AERO	X		X	
87393	MONTE CASEROS AERO	X			
87395	CONCORDIA AERO	X			
87418	MENDOZA AERO	X	X	X	
87420	MENDOZA OBSERVATORIO	X			
87436	SAN LUIS AERO	X			
87448	VILLA REYNOLDS AERO	X			
87453	RIO CUARTO AERO	X			

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
87467	MARCOS JUAREZ AERO	X			
87480	ROSARIO AERO	X			
87497	GUALEGUAYCHU AERO	X			
87506	MALARGUE AERO	X			
87532	GENERAL PICO AERO	X			
87534	LABOULAYE AERO	X		X	
87544	PEHUAJO AERO	X		X	
87548	JUNIN AERO	X			
87550	NUEVE DE JULIO	X			
87563	LAS FLORES	X			
87576	EZEIZA AERO	X	X		X
87582	AEROPARQUE BS. AS. AERO	X			
87585	BUENOS AIRES OBSERVATORIO	X			
87596	PUNTA INDIO B.A.	X			
87623	SANTA ROSA AERO	X	X	X	
87641	AZUL AERO	X			
87645	TANDIL AERO	X			
87679	PIGUE AERO	X			
87688	TRES ARROYOS	X			
87692	MAR DEL PLATA AERO	X		X	
87715	NEUQUEN AERO	X		X	
87736	RIO COLORADO	X			
87750	BAHIA BLANCA AERO	X		X	
87765	BARILOCHE AERO	X			
87774	MAQUINCHAO	X			
87784	SAN ANTONIO OESTE AERO	X			
87791	VIEDMA AERO	X			
87800	EL BOLSON AERO	X			
87803	ESQUEL AERO	X		X	
87814	PASO DE INDIOS	X			
87823	P.MADRYN AERO	X			
87828	TRELEW AERO	X		X	
87852	PERITO MORENO AERO	X			
87860	COMODORO RIVADAVIA AERO	X	X	X	X
87880	GOBERNADOR GREGORES AERO	X			
87896	PUERTO DESEADO AERO	X			
87904	EL CALAFATE AERO	X			
87925	RIO GALLEGOS AERO	X		X	
87934	RIO GRANDE B.A.	X			
87938	USHUAIA AERO	X			
BOLIVIA					
85041	COBIJA	X		X	
85043	RIBERALTA	X		X	
85104	SAN JOAQUIN	X			
85114	MAGDALENA	X		X	
85141	RURRENABAQUE	X		X	
85152	SAN BORJA	X			
85154	TRINIDAD	X			
85175	ASCENCION DE GUARAYOS	X			
85201	LA PAZ/ALTO	X			

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
85207	SAN IGNACIO DE VELASCO	X		X	
85223	COCHABAMBA	X		X	
85230	CHARANA	X		X	
85244	VIRU-VIRU SANTA CRUZ	X			
85245	SANTA CRUZ/EL TROMPILLO	X			
85268	ROBORE	X			
85283	SUCRE	X			
85289	PUERTO SUAREZ	X		X	
85315	CAMIRI	X			
85364	TARIJA	X		X	
85365	YACUIBA	X		X	
BRAZIL					
82024	BOA VISTA	X		X	
82098	MACAPA	X			
82106	SAO GABRIEL DA CACHOEIRA	X		X	
82113	BARCELOS	X		X	
82191	BELEM	X		X	
82193	BELEM (AEROPORTO)		X		X
82212	FONTE BOA	X			
82246	BELTERRA	X			
82280	SAO LUIZ	X			
82287	PARNAIBA	X			
82326	CODAJAS	X			
82331	MANAUS	X		X	
82332	MANAUS (AEROPORTO)		X		X
82336	ITACOATIARA	X			
82353	ALTAMIRA	X		X	
82397	FORTALEZA	X	X		X
82400	FERNANDO DE NORONHA	X	X	X	
82410	BENJAMIN CONSTANT	X		X	
82425	COARI	X		X	
82445	ITAITUBA	X			
82460	BACABAL	X			
82533	MANICORE	X			
82562	MARABA	X			
82571	BARRA DO CORDA	X		X	
82578	TERESINA	X			
82583	CRATEUS	X			
82586	QUIXERAMOBIM	X		X	
82598	NATAL	X			
82599	NATAL AEROPORTO		X		
82678	FLORIANO	X	X		
82704	CRUZEIRO DO SUL	X		X	
82723	LABREA	X			
82765	CAROLINA	X	X		
82784	BARBALHA	X			
82791	PATOS	X			
82824	PORTO VELHO (AEROPORTO)		X		
82825	PORTO VELHO	X		X	
82900	RECIFE	X	X		

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
82915	RIO BRANCO	X			
82965	ALTA FLORESTA (AEROPORTO)		X		
82983	PETROLINA	X	X		
83064	PORTO NACIONAL	X		X	
83096	ARACAJU	X			
83186	JACOBINA	X			
83208	VILHENA (AEROPORTO)	X	X		
83229	SALVADOR	X	X	X	
83235	TAGUATINGA	X			
83236	BARREIRAS	X		X	
83242	LENCOIS	X			
83264	GLEBA CELESTE	X		X	
83288	BOM JESUS DA LAPA	X	X		
83332	POSSE	X			
83344	VITORIA DA CONQUISTA	X			
83358	POXOREO (POXOREU)	X			
83361	CUIABA	X		X	
83362	CUIABA (AEROPORTO)		X		
83377	BRASILIA	X			
83378	BRASILIA (AEROPORTO)		X		X
83379	MARTE		X		X
83423	GOIANIA	X			
83437	MONTES CLAROS	X			
83481	JOAO PINHEIRO	X		X	
83488	ITAMARANDIBA	X		X	
83492	TEOFILO OTONI	X			
83498	CARAVELAS	X	X	X	
83550	SAO MATEUS	X			
83552	CORUMBA	X			
83565	PARANAIBA	X			
83566	BELO HORIZONTE (CONFINS)	X	X	X	
83579	ARAXA	X			
83587	BELO HORIZONTE	X			
83592	CARATINGA	X			
83612	CAMPO GRANDE (AEROPORTO)		X		
83618	TRES LAGOAS	X		X	
83623	VOTUPORANGA	X			
83630	FRANCA	X			
83648	VITORIA	X			
83650	TRINDADE (ILHA)	X	X	X	
83676	CATANDUVA	X			
83698	CAMPOS	X			
83702	PONTA PORA	X			
83704	IVINHEMA	X			
83716	PRESIDENTE PRUDENTE	X			
83726	SAO CARLOS	X			
83738	RESENDE	X			
83746	GALEAO	X	X	X	
83766	LONDRINA	X			
83779	MARTE		X		

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
83781	SAO PAULO	X		X	
83783	CAMPO MOURAO	X			
83827	FOZ DO IGUACU (AEROPORTO)	X	X	X	
83836	IRATI	X			
83840	CURITIBA (AEROPORTO)		X		
83842	CURITIBA	X		X	
83881	IRAI	X		X	
83897	FLORIANOPOLIS	X			
83928	URUGUAIANA (AEROPORTO)		X		
83967	PORTO ALEGRE	X			
83971	PORTO ALEGRE (AEROPORTO)		X		
83980	BAGE	X			
83997	ST.VITORIA DO PALMAR	X			
CHILE					
85406	ARICA	X		X	
85418	IQUIQUE	X			
85442	ANTOFAGASTA	X	X	X	X
85469	ISLA DE PASCUA	X	X	X	X
85470	COPIAPO	X			
85488	LA SERENA	X		X	
85543	QUINTERO	X		X	
85574	PUDAHUEL	X			
85585	JUAN FERNANDEZ	X		X	
85586	SANTO DOMINGO		X		X
85629	CURICO	X		X	
85672	CHILLAN	X			
85682	CONCEPCION	X			
85743	TEMUCO	X		X	
85766	VALDIVIA	X			
85782	OSORNO	X			
85799	PUERTO MONTT	X	X	X	X
85874	BALMACEDA	X		X	
85934	PUNTA ARENAS	X	X	X	X
COLOMBIA					
80009	SANTA MARTA/SIMON BOLIVAR	X			
80022	CARTAGENA/RAFAEL NUNEZ	X		X	
80028	BARRANQUILLA/ERNESTO CORTISSOZ	X			
80035	RIOHACHA/ALMIRANTE PADILLA	X	X		
80084	APARTADO/LOS CEDROS	X			
80091	BARRANCABERMEJA/YARIGUIES	X			
80094	BUCARAMANGA/PALONEGRO	X			
80097	CUCUTA/CAMILO DAZA	X			
80099	ARAUCA/SANTIAGO PEREZ	X			
80112	RIONEGRO/J.M.CORDOVA	X			
80139	PUERTO CARRENO/A.GUAUQUEA	X			
80144	QUIBDO/EL CARANO	X			
80210	PEREIRA/MATECANA	X			
80214	IBAGUE/PERALES	X			
80222	BOGOTA/ELDORADO	X	X		X
80234	VILLAVICENCIO/VANGUARDIA	X			

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
80259	CALI/ALFONSO BONILLA ARAGON	X		X	
80315	NEIVA/BENITO SALAS	X			
80342	PASTO/ANTONIO NARINO	X		X	
80370	IPIALES/SAN LUIS	X			
ECUADOR					
84008	SAN CRISTOBAL (GALAPAGOS)	X	X	X	X
84071	QUITO AEROPUERTO	X			
84088	IZOBAMBA	X		X	
84135	PORTOVIEJO	X			
84140	PICHILINGUE	X		X	
84203	GUAYAQUIL AEROPUERTO	X			
84270	LOJA/LA ARGELIA	X		X	
84279	MACARA AEROPUERTO	X		X	
FRENCH GUIANA					
81401	SAINT-LAURENT-DU-MARONI	X			
81405	ROCHAMBEAU	X	X	X	X
81408	SAINT GEORGES DE L'OYAPOCK	X			
81415	MARIPASOULA	X			
GUYANA					
81002	TIMEHRI/CHEDDI JAGAN INTERNATIONAL	X			
ISLANDS (88: 800 - 998)					
88889	MOUNT PLEASANT AIRPORT	X	X		X
PARAGUAY					
86011	ADRIAN JARA	X			
86033	BAHIA NEGRA	X			
86065	PRAT GILL	X			
86068	MARISCAL ESTIGARRIBIA	X			
86086	LA VICTORIA	X		X	
86097	PEDRO JUAN CABALLERO	X			
86134	CONCEPCION	X			
86185	SAN PEDRO	X			
86210	SALTOS DEL GUAIRA	X			
86218	ASUNCION/AEROPUERTO	X			
86233	VILLARRICA	X			
86246	AEROPUERTO INT. GUARANI	X			
86255	PILAR	X			
86260	SAN JUAN BAUTISTA MISIONES	X			
86297	ENCARNACION	X		X	
PERU					
84370	TUMBES	X			
84377	IQUITOS	X		X	
84390	TALARA	X			
84401	PIURA	X			
84405	HUANCABAMBA	X			
84425	YURIMAGUAS	X			
84435	MOYOBAMBA	X			
84444	CHACHAPOYAS	X		X	
84452	CHICLAYO	X			
84455	TARAPOTO	X		X	
84472	CAJAMARCA	X			

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
84474	JUANJUI	X			
84501	TRUJILLO	X			
84515	PUCALLPA	X			
84531	CHIMBOTE	X			
84534	TINGO MARIA	X			
84542	ANTA/HUARAZ	X			
84564	HUANUCO	X			
84628	LIMA/CALLAO	X	X		X
84658	PUERTO MALDONADO	X			
84670	QUILLABAMBA	X			
84673	AYACUCHO	X			
84677	QUINCEMIL	X			
84680	CASTROVIRREYNA	X			
84686	CUZCO	X			
84691	PISCO	X			
84721	SAN JUAN	X			
84735	JULIACA	X			
84752	AREQUIPA	X		X	
84773	ILO	X			
SURINAME					
81202	NICKERIE	X		X	
URUGUAY					
86330	ARTIGAS	X		X	
86350	RIVERA	X			
86360	SALTO	X			
86370	TACUAREMBO	X			
86430	PAYSANDU	X			
86440	MELO	X		X	
86460	PASO DE LOS TOROS	X			
86490	MERCEDES	X		X	
86565	ROCHA	X		X	
86580	CARRASCO	X			
VENEZUELA					
80403	CORO	X			
80405	LA ORCHILA	X		X	
80407	MARACAIBO-LA CHINITA	X			
80410	BARQUISIMETO	X			
80413	MARACAY - B.A. SUCRE	X	X		
80416	CARACAS/LA CARLOTA	X			
80418	CARACAS/ GACIGAL OBS	X			
80419	BARCELONA	X			
80421	PORLAMAR (AEROPUERTO INT. DEL CARIBE)	X			
80423	GUIRIA	X		X	
80425	MENE GRANDE	X		X	
80426	VALERA	X			
80427	ACARIGUA	X			
80428	GUANARE	X			
80432	CARRIZAL	X			
80434	VALLE DE LA PASCUA	X			
80435	MATURIN	X			

INDEX	STATION NAME	CLIMAT	CLIMAT TEMP	GSN	GUAN
80437	EL VIGIA	X			
80438	MERIDA	X		X	
80440	BARINAS	X			
80442	CALABOZO	X			
80444	CIUDAD BOLIVAR	X			
80447	SAN ANTONIO DEL TACHIRA	X	X		
80448	GUASDUALITO	X			
80450	SAN FERNANDO DE APURE	X		X	
80453	TUMEREMO	X		X	
80457	PUERTO AYACUCHO	X			
80462	SANTA ELENA DE UAIREN	X	X	X	
80478	TEMBLADOR	X			
80479	PALMICHAL	X			

Resolution 4 (XIV-RA III)

RAPPORTEUR ON REGIONAL ASPECTS OF INSTRUMENT DEVELOPMENT, RELATED TRAINING AND CAPACITY BUILDING

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) *The Abridged Final Report with Resolutions of the Thirteenth Session of Regional Association III (South America)* (WMO-No. 934),

(2) *The Abridged Final Report with Resolutions and Recommendations of the Thirteenth Session of the Commission for Instruments and Methods of Observation* (WMO-No. 947),

Considering:

(1) The importance of information on instrument development as guidance for improving the equipment of surface based observing stations with sensors and automatic weather stations,

(2) The need for updating information on the status of instrumentation used at meteorological stations, on maintenance and calibration of instruments, and on the traceability of measurements to the International System of units (SI),

(3) The need for coordinating education and training activities for observers, station inspectors and technicians in the field of operation, maintenance and calibration of meteorological instruments,

Decides:

(1) To appoint Rapporteur on Regional Aspects of Instrument Development, Related Training and Capacity Building with the following terms of reference:

(a) To update information on instrumentation operated at meteorological stations, on maintenance and calibration of instruments, and on the traceability of measurements to the International System of units (SI);

(b) To prepare guidance for the best effective use of meteorological instrumentation;

(c) To keep abreast of all matters related to instrument development;

(d) To provide guidelines for coordination of education and training activities for instrument technicians in collaboration with the Regional Instrument Centres and the WMO Secretariat;

(e) To facilitate liaison between CIMO and the Regional Association on matters pertaining to capacity building in the field of instruments and methods of observation;

(2) To invite Mr Ramón Changó (Ecuador) to serve as Rapporteur on Regional Aspects of Instrument Development, Related Training and Capacity Building;

(3) To request the rapporteur to submit six months reports and a final report to the president of the Association with a copy to the president of CIMO and the WMO Secretariat at least three months before the next session of the Association.

Note: This resolution replaces Resolution 5 (XIII-RA III), which is no longer in force.

Resolution 5 (XIV-RA III)

RAPPORTEUR ON SOLAR RADIATION

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) The *Abridged Final Report with Resolutions of the Thirteenth Session of Regional Association III (South America)* (WMO-No. 934),

(2) The *Abridged Final Report with Resolutions and Recommendations of the Thirteenth Session of the Commission for Instruments and Methods of Observation* (WMO-No. 947),

(3) Resolution 13 (EC-XXXIV) – Development and comparison of radiometers,

Considering:

(1) The requirements for high quality radiation measurements for meteorological and related environmental applications, for the development of renewable sources of energy and food production, as well as for research in the field of climate change,

(2) The need for regular maintenance and calibration of radiation instruments and to apply consistent quality control procedures to the measured data, and regional cooperation in the processing of radiation data,

(3) The need for technology transfer among Members, related to radiation measurements,

(4) The need for updating the information on the status of instrumentation used in national networks and on maintenance and calibration of instruments,

(5) The need to coordinate education and training activities for observers and technicians in the field of operation, maintenance and calibration of radiation instruments,

(6) The need to assist Members in the planning and implementation of radiation networks,

Decides:

(1) To appoint a Rapporteur on Solar Radiation with the following terms of reference:

(a) To update the information on radiation instrumentation, national radiation networks, the maintenance and calibration and on the traceability of radiation measurements to the World Radiation Reference;

(b) To provide guidance to Members on radiation instrumentation, techniques and their effective application and on archiving and presentation of data in better fulfilling the needs for various applications;

(c) To advise the president of the Association on issues related to National and Regional Radiation Centres and the radiation station network in the Region;

(d) To assist in the preparation and execution of National and Regional Pyrheliometer Comparisons of RA III and in the evaluation of the results and their presentation;

(e) To support an enhanced collaboration with the Baseline Surface Radiation Network operators;

(f) To support the coordination of measures in the field of radiation measurement, including UV-B, in calibration of radiation instrumentation, as well as in education and training;

(g) To initiate a closer collaboration with the Rapporteur on Regional Aspects of Instrument Development, Related Training, and Capacity Building of RA III and the Rapporteur on Solar radiation of RA IV in fields of common concern;

(2) To invite Mr Osvaldo Barturen (Argentina) to serve as Rapporteur on Solar Radiation;

(3) To request the rapporteur to submit six months progress reports and a final report to the president of RA III with a copy to the president of CIMO and the WMO Secretariat at least three months before the next session of the Association.

Note: This resolution replaces Resolution 4 (XIII-RA III), which is no longer in force.

Resolution 6 (XIV-RA III)

RE-ESTABLISHMENT OF THE WORKING GROUP ON CLIMATE MATTERS OF THE RA III

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) The report and recommendations contained in the Working Group on Climate Matters meeting report (Montevideo, 2006),

(2) The declaration of Santa Cruz de la Sierra in the Third Meeting of the Conference of Directors of Iberoamerican Meteorological and Hydrological Services (Bolivia, 2005),

(3) The Sixth WMO Long-term Plan for 2004–2011,

(4) The work, reports and the new structure of WMO's Commission for Climatology (CCl-XIV, Beijing 2005),

(5) The discussions on climate-related issues by the Fourteenth Congress (2003) and in the sessions of the Executive Council (2002-2006),

(6) The report of the Meeting on Organization and Implementation of Regional Climate Centres (WCASP-No. 62, Geneva 2003),

(7) GCOS Regional Action Plan for South America (September 2004),

Considering the need for the Association to strengthen and coordinate its activities in related climate matters of importance to the Region,

Decides:

(1) To re-structure the Working Group on Climate Matters with the following terms of reference:

   (a) To advise the president and the Permanent Representatives of the members of the RA III in climate-related matters and subjects concerning the implementation of Regional Climate Centres;

   (b) To advise on the improvement of climate data exchange and on the development of regional climate observing networks, to liaise with GCOS and make recommendations on the implementation of the GCOS Action Plan in the Region;

   (c) To promote the implementation of Climate Information and Prediction Services (CLIPS) with particular reference to the establishment and training of CLIPS Focal Points;

   (d) To advise the presidency in the communicational coordination among the members of the RA III, the community of donors, WMO and other international organizations;

(2) To select the following experts according with the new structure of the CCl (fourteenth session):

Ing. Ena Jaimes Espinosa (Peru) and Mr Paulo Sergio Lucio (Brazil) as Rapporteurs on the activities carried out by OPAG 1 – Climate Data and Data Management;

Mr Maximiliano Henríquez (Colombia) and Mr Miguel Parra (Venezuela) as Rapporteurs on the activities carried out by OPAG 2 – Monitoring and Analysis of Climate Variability and Change; and assess the capacity of the region in carrying out activities related to future regional climate change scenarios;

Mr Humberto Enríquez (Ecuador) and Mr Mario Bidegain (Uruguay) as Rapporteurs on the activities carried out by OPAG 3 – Climate Information and Prediction Services (CLIPS);

Ms María Skansy (Argentina) and Mr Alejandro Pastén (Paraguay) as Rapporteurs on the activities carried out by OPAG 4 – Climate Applications and Service;

(3) To invite Mr Julián Báez (Paraguay), Rapporteur on Implementation of the CLIPS in the Region, to be part of the Working Group;

(4) To designate, in accordance with Regulation 32 of the WMO General Regulations, Mr Jorge Carrasco (Chile) as chairperson of the Working Group and representative of RA III in the ICT of CCl;

(5) The Members may nominate other experts to serve on the Working Group as required;

Requests:

(1) The working group chairperson and members to liaise with members of OPAGs and Expert Teams of CCl, CBS, and other technical commissions and committees;

(2) The working group chairperson to submit annual reports to the president of the Association and a final report not later than six months before the fifteenth session of the Association.

Note: This resolution replaces Resolution 7 (XIII-RA III), which is no longer in force.

Resolution 7 (XIV-RA III)

CLIMATE INFORMATION AND PREDICTION SERVICES (CLIPS)

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 8 (XIII-RA III, 2001) – Climate Information and Prediction Services,

(2) Report of the CLIPS Focal Point Training Workshop for RA III (Peru, 2005) WMO/TD-No. 1293,

(3) Abridged Final Report with Resolutions and Recommendations of the Fourteenth Session of the Commission for Climatology (WMO-No. 996), general summary, paragraph 6.5.4,

(4) That Members of RA III are contributing to CLIPS activities,

(5) The climatic anomalies associated with the 1997/1998 El Niño event and subsequent El Niño/Southern Oscillation (ENSO) conditions, and their impacts,

Considering:

(1) That international climate variability, including, but not restricted to, variability linked to ENSO, substantially impacts socio-economic activities in the Region,

(2) That effective use of current seasonal to interannual climate information and prediction technology can provide substantial benefit in socio-economic planning,

(3) That improved use of climate information, in addition to, or in combination with, climate predictions, can provide further socio-economic benefit,

(4) That the technology for seasonal to interannual climate prediction is developing rapidly,

(5) That effective application of climate prediction and information services requires capacity building and development of correctly designed and adequately resourced projects,

(6) That the implementation of CLIPS in the Region should be kept under constant review,

(7) That there is a need for close coordination in the implementation of CLIPS in the Region,

Decides:

(1) To appoint a (one) Rapporteur on the Implementation of the CLIPS in the Region, with the following Terms of Reference:

   (a) To act as a coordinator between the Focal Points of the Region and WMO; to collect, edit and summarize national Focal Point reports and submit these to WMO and to the Working Group on Climate-related Matters twice a year;

   (b) To keep abreast of research activities on climate variability in the Region as well as of climate information and prediction services, and to share that information with all the members of RA III;

   (c) To liaise with relevant CCI Expert Teams;

   (d) To work closely with the future RCCs in the Region;

   (e) To serve as the Rapporteur on Implementation of CLIPS in the Region, on the Working Group on Climate-related Matters;

(2) To designate Mr Julián Báez (Paraguay), one of the appointed CLIPS Focal Points from RA III, to be Rapporteur on the Implementation of the CLIPS in the Region;

(3) To request that the Rapporteur submit annual reports to the president of the Association and a final report not later than six months before the fifteenth session of the Association;

Urges:

(1) Those members who have not yet done so, to appoint national CLIPS Focal Points and to provide them with the facilities necessary to undertake their roles;

(2) Members to supplement, through extrabudgetary contributions, the resources required for the further development and implementation of the CLIPS;

(3) All members to inform WMO of any changes to their Focal Points or their contact information to enable regular updates (CCl-XIV);

Requests the Secretary-General:

(1) To provide the necessary support, within available resources, to the Rapporteur on the implementation of CLIPS in the Region and to the national CLIPS Focal Points;

(2) To bring this resolution to the attention of all concerned.

Note: This resolution replaces Resolution 8 (XIII-RA III), which is no longer in force.

Resolution 8 (XIV-RA III)

RAPPORTEUR ON WWRP-THORPEX

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Considering:

(1) The wide interest in participating in the development and implementation of the THORPEX Programme in the Region,

(2) That the Region should be kept informed of the progress of THORPEX, regional plans and activities,

Decides:

(1) To appoint a Rapporteur on WWRP-THORPEX with the following terms of reference:

   (a) To serve as a focal point for WWRP-THORPEX in RA III (South America);

   (b) To encourage and facilitate the participation of the National Meteorological Services, academia and related agencies of the Region in the activities of the THORPEX;

   (c) To liaise with the Commission for Atmospheric Science's Open Programme Area Group on World Weather Research Programme;

   (d) To keep the Association informed on THORPEX activities in the Region in accordance with the THORPEX International Science Plan and the THORPEX International Research Implementation Plan and specific regional activities;

   (e) To advise and promote, within the Region, an exchange of information and publication relating to THORPEX activities;

(2) To invite Mr Enrique Garrido (Chile) to serve as Rapporteur on WWRP-THORPEX;

(3) To request the rapporteur to submit annual reports, as appropriate, to the president of the Association and a final report not later than six months before the next session of the Association.

Resolution 9 (XIV-RA III)

WORKING GROUP ON AGRICULTURAL METEOROLOGY

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 14 (Cg-XIV) — Agricultural Meteorology Programme,

(2) The *Abridged Final Report with Resolutions of the Thirteenth Session of the Commission for Agricultural Meteorology* (WMO-No. 951),

(3) Resolution 9 (XIII-RA III) — Working Group on Agricultural Meteorology,

(4) The recommendations made by the session of the RA III Working Group on Agricultural Meteorology held in Lima, Peru, from 30 November to 3 December 2004,

Considering:

(1) The economic importance of agriculture to the countries in RA III (South America),

(2) The impact of El Niño Southern Oscillation (ENSO) and climate variability on agriculture and forestry in the Region,

(3) The impact of extreme events and natural disasters on agriculture, forestry, livestock and fisheries,

Urges members:

(1) To undertake studies on the more active applications of agricultural meteorology for promoting sustainable agriculture in the Region;

(2) To assess the potential impacts of climate change on sustainable agriculture in the Region and develop appropriate strategies to cope with such impacts;

(3) To strengthen linkages between meteorological services and the agricultural sector;

Decides:

(1) To establish a Working Group on Agricultural Meteorology with the following terms of reference:

   (a) To review and summarize the effects of climate change and climate variability on agriculture, animal husbandry, forestry and fisheries (food aspects);

(b) To investigate the drought indices that are commonly used in RA III in the last 5 years and to evaluate the relation between these indices and the spatial impacts in the agricultural activity registered during this period;

(c) To review and analyze the methodologies currently used for the evaluation of the impacts caused by the different extreme events that affect the agricultural productivity in RA III;

(d) To compile and analyze the scenarios from the crop growth models using the seasonal to interannual climate forecasts;

(e) To evaluate the diffusion of information and the awareness raised amongst farmers of the economic benefits of the use of agrometeorological services and products and to evaluate the human, technical and budgetary resources available to the agrometeorological services;

(f) To evaluate the different ways of diffusion of agrometeorological information for the different users, obtain feedback from the users and to propose appropriate mechanisms to improve it;

(g) To analyze and evaluate the use of crop simulation models in the NMHSs and institutions in RA III and suggest the procedures to implement them;

(h) To review the studies on agroclimatic and agroecological zonation that make use of GIS and Agrometeorological Information Systems in RA III and determine the best procedures for their implementation throughout the Region;

(i) To evaluate and propose appropriate methodologies for the application of remote sensing in agriculture in the Region;

(2) (a) To invite the following experts to serve as members of the working group:

Ms Ana Mancuso (Uruguay)

Ms Adriana Cortés (Venezuela)

Mr Paulo Sentelhas (Brazil)

Mr Gonzalo Hurtado (Colombia)

Ms Liliana Núñez (Argentina)

Mr Edgar Imaña (Bolivia)

Mr Gualterio Hugo (Chile)

Ms Gilma Carvajal (Ecuador)

(b) To invite Mr Constantino Alarcón (Peru) to act as chairperson of the Working Group on Agricultural Meteorology;

(3) (a) To request the chairperson to allocate responsibilities in consultation with the members of the group for the various tasks contained in the terms of reference;

(b) To request the chairperson to submit a final report comprising individual reports of the members to the president of the regional association not later than six months before the next session of the Association.

Resolution 10 (XIV-RA III)

RAPPORTEUR ON REGIONAL ASPECTS OF THE AERONAUTICAL METEOROLOGY PROGRAMME IN REGION III

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) The need for monitoring and keeping under review developments in aeronautical meteorology in the Region,

(2) The need for coordination among RA III Members of activities related to aeronautical meteorology and for reporting these activities to the Region and to the Commission for Aeronautical Meteorology (CAeM),

Considering that the monitoring, review and coordination of aeronautical meteorological issues would be of great benefit to Members in the Region,

Decides:

(1) To appoint a Rapporteur on Regional Aspects of the Aeronautical Meteorological Programme (AeMP) with the following terms of reference:

(a) To review and advise on observational data and product requirements of countries in the Region in the context of the AeMP;

(b) To review the status of the implementation of the AeMP in the Region, including observing systems at aerodromes, aircraft data collection, and services provided under the World Area Forecast System (WAFS), and to formulate proposals through the WMO Secretariat to the appropriate International Civil Aviation Organization (ICAO) bodies for its future development and implementation;

(c) To monitor and promote capacity building activities related to the AeMP within the Region and to identify training requirements;

(d) To develop and implement, in coordination with ICAO, a project to provide short-, medium- and long-term solutions to the lack of trained aeronautical meteorological personnel in the Member countries and territories of Regional Association III;

(e) To keep abreast of matters related to the implementation of AMDAR programmes and projects in the Region;

(f) To liaise by correspondence with CAeM OPAGs and the ICAO meteorological groups through their respective Secretariats on specific regional matters, in particular those related to cost recovery for aeronautical meteorological services;

(g) To provide advice to the president of RA III on aeronautical meteorology matters and to take actions as relevant;

(2) To invite Mr Gustavo Flores (Argentina) to serve as Rapporteur on Regional Aspects of the Aeronautical Meteorology Programme;

(3) To request the Rapporteur to submit annual reports on their activities to the president of the Association as well as final reports six months before the next session of the Association, copied to the WMO Secretariat.

Resolution 11 (XIV-RA III)

RAPPORTEUR ON REGIONAL MARINE METEOROLOGICAL AND OCEANOGRAPHIC SERVICES

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting the report of the Rapporteur on Regional Marine Meteorological and Oceanographic Services,

Considering:

(1) The need for continued development of marine meteorological and oceanographic services in Region III,

(2) The need to continue close liaison with JCOMM with regard to matters affecting the Region, in particular through cross-cutting activities for capacity building,

Decides:

(1) To appoint a Rapporteur on Regional Marine Meteorological and Oceanographic Services with the following terms of reference:

(a) To continuously review the status of the implementation of marine meteorological and oceanographic services and marine observing systems in Region III and to formulate suggestions for their further development;

(b) To suggest actions on marine meteorological and oceanographic matters assigned by the president of RA III;

(c) To liaise with the appropriate JCOMM working groups and subgroups on specific matters concerning Region III, in particular within the framework of the cross-cutting activities for capacity building;

(2) To invite Mr Antonio Quintero (Venezuela) to serve as the Rapporteur on Regional Marine Meteorological and Oceanographic Services;

(3) To request the Rapporteur to submit annual reports, as appropriate, to the president of the Association with a final report to be presented six months prior to the fifteenth session of the Association;

Requests the Secretary-General to assist the Rapporteur in his work as appropriate.

Note: This resolution replaces Resolution 10 (XIII-RA III), which is no longer in force

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Resolution 12 (XIV-RA III)

WORKING GROUP ON HYDROLOGY AND WATER RESOURCES

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Taking into account:

(1) The report of its Working Group on Hydrology,

(2) Resolution 17 (Cg-XIV) – Hydrology and Water Resources Programme (HWRP),

(3) Resolution 37 (Cg-XIII) – Terms of Reference of the Technical Commissions,

(4) The WMO Sixth Long-term Plan (2004–2011),

(5) Resolution 12 (XIII-RA III) – Working Group on Hydrology,

Considering:

(1) That the Regional Association III plays an important and active role in conducting regional WMO activities relating to hydrology and water resources,

(2) That HWRP is a priority programme for the Region,

(3) That the Working Group on Hydrology (WGH) of RA III has carried out excellent work during the last intersessional period,

(4) That at its tenth session, the working group proposed a number of activities for the next intersessional period,

(5) That the IPCC report has indicated an increased climate variability and possible climate change,

Decides:

(1) To establish the Working Group on Hydrology and Water Resources with the following terms of reference:

   (a) To provide assistance and advice to the president of the Regional Association on all issues related to the regional aspects of the Hydrology and Water Resources Programme;

   (b) To determine the best way to meet the Region's needs as regards hydrology and water resources;

   (c) To carry out the HWRP-related activities listed in the Annex to this resolution in close cooperation with the Commission for Hydrology (CHy) experts;

   (d) To cooperate with CHy and other WMO bodies on projects related to hydrology and water resources;

(2) To invite all Members of the Regional Association to designate experts in hydrology and water resources, preferably including the hydrological advisors to the Permanent Representatives and representatives of the Hydrological Operational Multipurpose System (HOMS) National Reference Centers and of other bodies working in the field of water, to participate in the working group during the whole period and to attend its meeting. In selecting such participants, Members should take into account that they will have to devote time and effort to the working group's activities throughout the intersessional period;

(3) To appoint Mr Roberto Coimbra (Brazil) as Regional Hydrological Adviser and Chairperson of the working group and Chairman of the working group and Mr Laureano Andrade (Ecuador) as vice-chairman of the working group.

(4) To appoint the following as members of the working group:

Ms Dora Godniaski (Argentina)

Ms Susana Gordillo (Argentina)

Mr Luis Noriega (Bolivia)

Mr Gilberto Canali (Brazil)

Mr Javier Narbona (Chile)

Mr Brahim Nazarala (Chile)

Mr Hebert Rivera (Colombia)

Mr Marcelo Ayabaca (Ecuador)

Mr Nelson Pérez (Paraguay)

Mr Jorge Sánchez (Paraguay)

Ms Julia Acuña (Peru)

Mr Héctor Vera (Peru)

Ms María Cristina Aramburu (Uruguay)

Ms María Teresa Martello (Venezuela)

Ms Olga Umpiérrez (Venezuela)

Invites the Regional Hydrological Adviser and chairperson of the working group:

(1) To prepare detailed terms of reference and an implementation plan and designate in consultation with the president of the Association, coordinators and rapporteurs from the working group to fulfil the subgroups' terms of reference indicated in the Annex to this resolution;

(2) To participate in Executive Council sessions, as appropriate, during the whole duration of the sessions;

(3) To submit to the president of the Association an annual report on 31 December every year and a final report no late than six months before the fifteenth session of RA III;

Urges Members of the Region to give their full support to the coordinators and the rapporteurs throughout the intersessional period so that they may carry out the tasks entrusted to them;

Invites the Secretary-General to distribute the reports prepared by the working group to all those interested;

Requests the Secretary-General to assist the working group in seeking sources of funding to enable projects identified within the working group's activities to be set up.

Note: This resolution replaces Resolution 12 (XIII-RA III), which is no longer in force.

ANNEX TO RESOLUTION 12 (XIV-RA III)

Terms of Reference of the Subgroups

The themes that are included in this annex were proposed by the Working Group on Hydrology at its tenth session (Maracay, May 2006):

1. Subgroup on Basic Information for Integrated Water Resources Management

(a) Water resources assessment. To cooperate in the conduct of an on-site or virtual Workshop on Basic Water Resources Assessment, including the application of the methodology proposed in the UNESCO/WMO publication "Water Resources Assessment- Handbook for Review of National Capabilities". The possibility of holding the Workshop jointly with UNESCO will be taken into account.

(b) To promote the replication in other basins in the Region of, inter alia, the "Integrated Flood Management in the River Cuareim/Quarai" project, using the experience, documentation and/or methodology acquired during the latter's implementation.

(c) Analysis of hydrological impacts of climate variability and change including those on glaciers, high-elevation basins, and arid zones,

To compile studies and research papers;

To identify affected areas;

To analyze impacts on water resources in pilot basins.

(d) Institutions and legal framework on water resources management

To compile information on the legal framework in force in the field of water resources management;

To identify transboundary basins in South America;

To identify institutions concerned with water resources management.

(e) Hydrological networks

To map the Regional Basic Hydrological Network with a record of its operational status;

To compare the application of WMO recommendations on hydrological networks and data exchange in the various Member Countries of the Region.

(f) Support the active participation of NHMSs of the region in the IWRM activities

2. Subgroup on Promotion and Public Information

(a) To design and create a Website on the working group's activities.

(b) To promote and announce the working group's activities, projects, etc., via the Webpage.

(c) To keep the links with the various Hydrological Services in the Region up to date and also with the WMO official Website.

(d) To promote communication between members of the working group via the Webpage and discussion groups, using available technology.

(e) To disseminate knowledge of basic hydrology and specific related aspects to the general public.

3. Subgroup on HOMS and training

(a) To continue capacity-building activities in the Region through roving seminars as well as in-situ and distance-learning courses, in order to modernize the Region's hydrological networks, with emphasis on any of the following topics:

Installation, operation and maintenance of automatic station networks;

Hydrometric data processing, analysis, validation and dissemination;

Re-design of Hydrological Networks;

Analysis of extreme hydrological events (droughts and floods);

Remote sensing in water resources;

Training in implementation of measurement on large rivers.

(b) To foster the introduction of new HOMS components in line with changing technologies and practices in the Region, requesting, for this purpose, the hydrological advisers to collaborate in identifying and advising about possible components.

Resolution 13 (XIV-RA III)

RAPPORTEUR ON EDUCATION AND TRAINING MATTERS

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 19 (Cg-XIV – Education and Training Programme,

(2) Paragraph 8.6 of the general summary of EC-XLVIII on the role of Rapporteurs appointed by regional associations on education and training matters,

Considering:

(1) That there continues to be a pressing need by several Members from the Region for their meteorological and hydrological personnel to be trained both at basic and specialized level,

(2) That the Region possesses a considerable potential to promote distance learning and to share training resources among Members so that they can better plan, direct, organize and carry out suitable training programmes in meteorology, hydrology and related fields,

Decides:

(1) To designate a Rapporteur on Education and Training Matters with the following terms of reference:

   (a) To keep under review relevant education and training developments, aiming at a better regional coordination; in particular, to promote coherence in the identification of priority areas for regional and specialized training in meteorology and hydrology;

   (b) To identify and assess the regional training needs, opportunities and capabilities in order to improve the science-base of national instructors and stimulate their interest on the application of a technology-intensive approach to training;

   (c) To identify and prioritise requirements for training material and to encourage sharing, particularly through electronic means, of existing training modules, case studies, etc.;

   (d) To advise on opportunities to access and re-utilize training materials prepared by WMO RMTCs and other training institutions in the Region and elsewhere;

   (e) To follow-up on the initiatives and developments by Members in the accreditation of educational institutions/programmes, and in the academic/professional certification of meteorological personnel in the Region;

(2) To invite Mr Ita Maguiña (Peru) to serve as Rapporteur on Education and Training Matters;

(3) To request the Rapporteur to submit annual progress reports, with a final report to be presented to the president of the Association at least six months prior to the next session of the Association;

Requests:

(1) The Secretary-General of WMO to assist the Rapporteur in his work as appropriate;

(2) Members and relevant international organizations to facilitate the work of the Rapporteur, by providing, upon request, information related to items (a) to (e) above.

Resolution 14 (XIV-RA III)

WORKING GROUP ON NATURAL DISASTER PREVENTION AND MITIGATION IN REGIONAL ASSOCIATION III

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 29 (Cg-XIV) — Natural Disaster Prevention and Mitigation Programme,

(2) The *Abridged Final Report with Resolutions of the Fourteenth World Meteorological Congress* (WMO-No. 960), general summary paragraphs 7.4.1 to 7.4.21 and 3.4.1.23,

(3) Resolution 5 (EC-LVI) — Executive Council Advisory Group on Natural Disaster Prevention and Mitigation (EC AGDPM),

(4) The *Abridged Final Report with Resolutions of the Fifty-sixth Session of the Executive Council* (WMO-No. 977),

(5) The *Abridged Final Report with Resolutions of the Fifty-seventh Session of the Executive Council* (WMO-No. 988),

(6) The outcome documents of the World Conference on Disaster Reduction (Kobe, Hyogo, Japan, 18-22 January 2005): Hyogo Framework for Action 2005-2015 (HFA): Building the Resilience of Nations and Communities to Disasters,

(7) That several NMHSs have established partnerships with civil protection agencies and their experience would be valuable for the formulation of DPM Programme,

Considering:

(1) That RA III is exposed to various hydrometeorological hazards such as flooding, floods, droughts, landslides, glacier retreat, hydrology of high basins, frosts,wind storms and El Niño/Southern Oscillation which are of great concern in the Region,

(2) That disaster risk reduction is a major regional concern for human socio-economic activities and environmental protection,

(3) A wide range of activities of WMO Scientific and Technical Programmes and Technical Commissions are related to DRR,

(4) That there is a need for coordinated framework to support regional activities to ensure that gaps and needs are addressed in a prioritized, systematic and sustainable manner,

Decides:

(1) To establish a Working Group on Natural Disaster Prevention and Mitigation in RA III with the following terms of reference:

(a) To consider disaster risk reduction needs of the Region, to contribute actively to the development of WMO DPM Programme and related concrete regional activities, projects and plans of action;

(b) To identify opportunities and facilitate strategic partnerships of regional interest and to propose mechanisms to coordinate its actions with other regional organizations and teams outside of WMO;

(c) To identify and evaluate good practices at regional level integration of NMHSs activities in DRR with emphasis on governance, organizational, operational issues and exchange this information with the respective network of focal points and partners;

(d) To propose or review regional contingency plans, in particular for the exchange between neighbouring countries of alerts and other bulletins of a restricted nature that are available at national level in NMSs, in support of emergencies;

(e) To evaluate the necessity and priorities on capacity development at regional level and propose adequate actions;

(f) To coordinate its activities with other DPM focal points, the WMO DPM Programme Department at the Secretariat, and other Working Groups and Networks in the region;

(g) To advise on how NMHSs can strengthen their cooperation with civil protection, finance, development, planning and other relevant agencies at national and regional levels;

(2) To invite the following experts to serve as members of the working group:

Mr Humberto González (Colombia)

Ms Laura Vanoli (Uruguay)

Mr Ramón Velásquez (Venezuela)

Mr Alaor Dall'Antonia (Brazil)

Ms Pilar Carrillo (Chile)

Mr Oscar Rodríguez (Paraguay)

Mr Jorge Chira (Peru)

Mr Juan Palacios (Ecuador)

(3) (a) To invite Mr Héctor Sosa (Argentina) to act as chairperson;

(b) To request the chairperson to allocate responsibilities in consultation with the members of the group for the various tasks contained in the terms of reference;

(c) To request the chairperson to submit annual reports as appropriate, to the president of the Regional Association with a final report to be presented six months prior to the next session of the Association;

Requests the Secretary-General to take the relevant actions to support the activities of the working group within the available budget.

Resolution 15 (XIV-RA III)

RAPPORTEUR FOR THE WMO SPACE PROGRAMME

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 5 (Cg-XIV) establishing the WMO Space Programme as a new and major cross-cutting Programme,

(2) Resolution 6 (Cg-XIV) establishing the WMO Consultative Meetings on High-level Policy on Satellite Matters,

Recognizing the importance and great potential available through exploitation of satellite data, products and services from the expanded space-based component of the GOS as described in the WMO Space Programme Implementation Plan for 2004 through 2007,

Further recognizing the necessity for involvement of Members of the Region in the implementation of regional activities for the WMO Space Programme,

Decides:

(1) To appoint a Rapporteur for the WMO Space Programme with the following Terms of Reference:

(a) To coordinate with the WMO Space Programme Office on regional aspects of the WMO Space Programme Implementation Plan;

(b) To evaluate the WMO Space Programme Implementation Plan and advise Region Members on regional activities that will contribute fully to the exploitation of satellite data, product and services;

(c) To coordinate with other Regional WMO Space Programme Rapporteurs on relevant Space Programme activities;

(d) To coordinate with the Rapporteur on the Regional Aspects of the Global Observing System (GOS) of the Working Group on the Planning and Implementation of the WWW in RA III on relevant Space Programme activities;

(e) To provide the president of the Association with appropriate information, advice and recommendations for presentation under appropriate agenda items in sessions of technical commissions, joint sessions of the presidents of technical commissions and presidents of regional associations, and the Executive Council;

(2) To invite Mr Luis Augusto Machado (Brazil) to serve as the Rapporteur for the WMO Space Programme;

(3) To request the rapporteur to submit annual reports, as appropriate, to the president of the Association and a final report six months before the next session of the Association.

Resolution 16 (XIV-RA III)

RAPPORTEUR FOR THE GLOBAL EARTH OBSERVATION SYSTEM OF SYSTEMS (GEOSS)

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) The Declaration from the First Earth Observation Summit held in Washington, DC on 31 July 2003 for improved coordination of observing systems towards a comprehensive, coordinated and sustained Earth Observing System or Systems,

(2) The *Communiqué* from the Second Earth Observation Summit held in Tokyo, Japan on 25 April 2004 adopting the Framework Document that describes principal benefits of Earth observations to a broad range of user communities and the fundamental elements to be included in the 10-Year Implementation Plan for what will henceforth be called a Global Earth Observation System of Systems (GEOSS); and the invitation to the governing bodies of international and regional organizations sponsoring existing Earth observing systems to support the action of the Summit,

(3) Resolution 9 (EC-LVI) concerning the Global Earth Observation System of Systems (GEOSS),

Recognizing the significant opportunity for GEOSS to provide societal benefits, capacity building and sustainable development through improved observations and a better understanding of the Earth system, its atmosphere, ocean, land surface and fresh water, geology, natural resources, ecosystems and natural and human-induced hazards and the vast experience and considerable expertise throughout the Region,

Urges Members to become fully involved in the planning and implementation of GEOSS*;*

Stresses the importance of assisting the NMHSs of developing countries in the Region to participate fully in GEOSS through the strengthening of their observing networks and the enhancement of their provision of services in support of social and economic benefits of their national commitments;

Encourages the Permanent Representatives of Members to work closely with other earth observation agencies at the national level to ensure the development of well-coordinated national plans for GEOSS implementation;

Decides:

(1) To appoint a Rapporteur for the Global Earth Observation System of Systems (GEOSS) with the following Terms of Reference:

(a) To evaluate the GEOSS Implementation Plan and advise Members of the Region on regional activities that will contribute fully to the development and implementation of GEOSS including enhanced operation of the World Weather Watch and other WMO-sponsored and jointly sponsored observing systems and components relevant to GEOSS;

(b) To coordinate with other Regional GEOSS rapporteurs on relevant GEOSS activities;

(c) To provide the president of the Association with appropriate information, advice and recommendations for presentation under appropriate agenda items in sessions of technical commissions, joint sessions of the presidents of technical commissions and presidents of regional associations, and the Executive Council; and

(d) To inform the WMO Secretariat on a regular basis of regional GEOSS activities;

(2) To invite Mr Reinaldo Silveira (Brazil) to serve as the Rapporteur for the Global Earth Observation System of Systems (GEOSS);

(3) To request the rapporteur to submit annual reports, as appropriate, to the president of the Association and a final report six months before the next session of the Association.

Resolution 17 (XIV-RA III)

WORKING GROUP ON INTERNAL MATTERS OF REGIONAL ASSOCIATION III

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting the abridged final report of the second session of the Working Group on Internal Matters of RA III,

Considering:

(1) That the Members agree on the importance of continuing the activities of the Working Group on Internal Matters of the Association,

(2) That there is growing need for greater coordination of the activities of RA III,

(3) That a periodical review should be made of the activities of the working groups and rapporteurs of RA III,

Decides:

(1) To re-establish the Working Group on Internal Matters of RA III;

(2) That the working group will be composed of all the Permanent Representatives of RA III Members, or their designated representatives, and will be chaired by the president of the Association;

(3) The working group will meet at least once during the intersessional period;

(4) The working group will follow up all the decisions and studies of the session of RA III, as well as the decisions taken by Congress and the Executive Council, as required. Special attention should be given to the follow-up to the activities of the working groups and rapporteurs;

Requests the president of the Association to report to the fifteenth session of RA III (XV-RA III) on the activities and recommendations of the working group;

Requests the Secretary-General to give the greatest possible support to the working group, so that it can meet its objectives to the maximum possible extent.

Resolution 18 (XIV-RA III)

REVIEW OF PREVIOUS RESOLUTIONS AND RECOMMENDATIONS OF THE ASSOCIATION

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting paragraph 3.7.1 of the general summary of EC-IX,

Considering:

(1) That a number of its resolutions adopted before its fourteenth session have been revised and incorporated in resolutions of the fourteenth session,

(2) That others of its previous resolutions have been incorporated in appropriate WMO publications or have become obsolete,

(3) That some of the previous resolutions are still to be implemented,

Decides:

(1) To keep in force the following Resolutions:

Resolution 22 (VIII-RA III)	Agrometeorological Bibliography Centre;
Resolution 23 (VIII-RA III)	Agrometeorological Services and Training;
Resolution 4 (IX-RA III)	Establishment of Additional National and Regional Radiation Centres in RA III;
Resolution 21 (IX-RA III)	Port Meteorological Services in Region III;
Resolution 4 (X-RA III)	Establishment of a Regional and National Radiation Centre in Chile;
Resolution 5 (X-RA III)	Standardization of Pyranometer Calibrations;
Resolution 7 (X-RA III)	The further development of the Global Observing System;
Resolution 15 (X-RA III)	Recruitment of Mobile Ships;
Resolution 3 (XI-RA-III)	Continuous Evaluation of UV Radiation;

Resolution 10 (XI-RA III)	Use of INMARSAT for the collection of ship's Meteorological and Oceanographic Reports;
Resolution 6 (XII-RA III)	Amendments to the *Manual on the Global Telecommunication System* (WMO-No. 386), Vol. II, Regional Aspects, Region III (South America);
Resolution 5 (XIII-RA III)	Rapporteur on Regional Aspects of Instrument Development, Related Training, and Capacity Building;
Resolution 6 (XIII-RA III)	Regional Meteorological Data Communication Network (RMDCN);
Resolution 11 (XIII-RA III)	Support for JCOMM;

(2) Not to keep in force the other resolutions adopted before its fourteenth session;

(3) To publish the text of the resolutions kept in force in the annex to this resolution.

ANNEX TO RESOLUTION 18 (XIV-RA III)

REVIEW OF PREVIOUS RESOLUTIONS AND RECOMMENDATIONS OF THE ASSOCIATION

Resolution 22 (VIII-RA III)

AGROMETEOROLOGICAL BIBLIOGRAPHY CENTRE

THE REGIONAL ASSOCIATION FOR SOUTH AMERICA,

Noting:

(1) Resolution 19 (Cg-VII) — Agrometeorological activities in aid of food production,

(2) Resolution 7 (CAgM-VII) — Working Group on the Effects of Meteorological Factors on Maize Development and Yield (**CONSIDERING** (2)),

(3) Resolution 9 (CAgM-VII) — Working Group on Agrometeorological Services in Developing Countries (**DECIDES** (1)(a)),

(4) Resolution 15 (VII-RA III) — Working Group on Agrometeorology (**DECIDES** (1)(a–c)),

(5) The Recommendations of the Technical Conference on the Application of Meteorology and Climatology to Agriculture (Bogotá, Colombia, July 1978),

(6) The decisions adopted by the first session of the Working Group on Agricultural Meteorology and Climatology (Lima, Peru, 1975),

(7) The Recommendations proposed by the second joint session of the Working Groups on Agrometeorology of RA III and RA IV (Bogotá, Colombia, July 1978),

(8) The agreement by the seventh session of RA III (Brasilia, Brasil, September 1978) on the establishment of a regional agrometeorological bibliography centre for the collection and distribution of information to all Members of RA III on publications related to the agrometeorological problems of the Region,

(9) Recommendation 10 of the third joint session of the Working Groups on Agrometeorology of RA III and RA IV (Mexico, September 1981),

Considering:

(1) That the Regional Agrometeorological Bibliography Centre is at present in operation and fulfilling its objectives, although on a restricted basis,

(2) That the activities of the regional bibliography centre require greater development and coordination in order to satisfy Members' requests,

(3) That the regional bibliography centre must assume responsibility for the dissemination of the results of studies, research and other activities on agrometeorology in the Region,

INVITES the Members of Regional Association III to cooperate with the Regional Agrometeorological Bibliography Centre by supplying the necessary information and promoting its dissemination;

REQUESTS the Secretary-General to support RA III by authorizing the Regional Director for Latin America to take the necessary steps to fulfil the objectives of the Regional Agrometeorological Bibliography Centre,

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Resolution 23 (VIII-RA III)

AGROMETEOROLOGICAL SERVICES AND TRAINING

THE REGIONAL ASSOCIATION FOR SOUTH AMERICA,

NOTING Resolution 13 (VII-RA III) — Agrometeorological servicea and training,

Recognizing:

(1) That in most countries of the Region agriculture continues to be the main sector of the national economy,

(2) That, for the efficient development and expansion of agricultural activities, meteorological advice and information are indispensable,

Considering:

(1) That the recommendations of the Technical Conference on the Application of Meteorology and Climatology to Agriculture, held in Bogotá (1978), are essential for the development of agrometeorology in a given country,

(2) That training of professional and technical personnel in agricultural meteorology is essential to meet the demands for advice and assistance from agriculturalists, foresters and decision makers,

(3) The need to organize agrometeorological professional training in such a way that both meteorologists and agronomists have a sound knowledge of agrometeorology,

(4) The importance for the Region of the development of studies based on the series of meteorological data available,

URGES Members:

(1) To establish and maintain networks of agrometeorological stations in accordance with the provisions of the WMO Technical Regulations and the *Guide to Agricultural Meteorological Practices*;

(2) To develop, coordinate and promote basic research in agrometeorology for carrying out operational programmes and for providing better services for agriculture, forestry and animal husbandry;

(3) To coordinate with representatives from agriculture, animal husbandry, forestry, and planning bodies, as appropriate, and to establish national coordinating committees and/or working arrangements with them;

(4) To make use of training facilities available in-the Region and, if possible, outside the Region, including universities, both for professional and technical personnel;

REQUESTS the Secretary-General:

(1) To organize training seminars in agrometeorology in the Region to complement the training facilities available in the Region;

(2) To assist Members, through the Director-General of FAO, in improving the coordination between Meteorological Services and FAO field experts in the countries concerned and in including agrometeorological activities in the programmes which FAO develops in the countries of the Region.

Resolution 4 (IX-RA III)

ESTABLISHMENT OF ADDITIONAL NATIONAL AND REGIONAL RADIATION CENTRES IN RA III

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) That only one Regional Radiation Centre exists in RA III, i.e. Buenos Aires,

(2) That only a few National Radiation Centres exist in RA III,

***Considering*:**

(1) The great need for more National and Regional Radiation Centres in RA III,

(2) That the increase of the present number of National and Regional Radiation Centres is indispensable for the improvement of the standardization of solar radiation measurements and the quality of radiation data in RA III,

(3) The Specification of World, Regional and National Radiation Centres in Annex 9.C of the WMO Guide to Meteorological Instruments and Methods of Observation,

(4) That the National Radiation Centre, Lima, meets the requirements for a Regional Radiation Centre,

DECIDES to designate Lima as a Regional Radiation Centre of RA III;

INVITES Members to consider the establishment of additional National Radiation Centres.

Resolution 4 (X-RA III)

ESTABLISHMENT OF A REGIONAL AND NATIONAL RADIATION CENTRE IN CHILE

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) That two Regional Radiation Centres exist in Region III (Buenos Aires (Argentina) and Huancayo (Peru)),

(2) That only two National Radiation Centres exist in Region III (Brazil and Uruguay),

Considering:

(1) That an increase in the present number of National and Regional Radiation Centres is indispensable for the improvement of the standardization of radiation measurements and the quality of radiation data in Region III,

(2) The specification of World, Regional and National Radiation Centres in Annex 9.C of the WMO Guide to Meteorological Instruments and Methods of Observation,

(3) That Chile satisfies the WMO requirements for a WMO Regional Radiation Centre,

DECIDES to designate Santiago (Chile) as a WMO Regional Radiation Centre;

URGES Members in RA III to make every effort to satisfy progressively the requirements for National Radiation Centres.

Resolution 5 (X-RA III)

STANDARDIZATION OF PYRANOMETER CALIBRATIONS

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) That the quality of global radiation data is dependent on the accurate calibration of pyranometers,

(2) The diversity of calibration techniques employed at National and Regional Centres,

(3) Discrepancies of up to 10 per cent between calibrations by different institutions on identical pyranometers as has been shown in work by the International Energy Agency (IEA), and the RA VI pyranometer comparison in Budapest in 1984,

(4) That these discrepancies have occurred despite the much higher accuracies achieved in the calibration of pycheliometers in international and regional pyrheliometer comparison activities,

Considering:

(1) The need for high-quality radiation data in many fields and WMO programmes,

(2) The need for greater standardization in radiation measurements,

REQUESTS Members of RA III to promote the standardization of pyranometer calibration by organizing a project in which a number of pyranometers are circulated between the Regional and National Radiation Centres of the Region;

INVITES Members of the Regional Association to encourage research into the calibration of reference pyranometers.

Resolution 7 (X-RA III)

THE FURTHER DEVELOPMENT OF THE GLOBAL OBSERVING SYSTEM

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 25 (Cg-X) — Second WMO Long-term Plan, including the WWW Implementation Programme for RA III (1988–1997),

(2) The progress being made in the implementation of the ASDAR, ASAP and drifting buoy programmes,

Considering:

(1) That large parts of the Region are data-sparse areas,

(2) The importance of an effective Regional Basic Synoptic Network and the essential need to integrate the RBSN with the overall GOS,

(3) The need to have comprehensive and realistic information on the value of new observing systems, their costs and their interfaces with other parts of the regional programme,

INVITES Members to participate in the deployment and use of new observing systems and, individually or collectively, to evaluate the effectiveness of these systems and their integration in the WWW;

ENCOURAGES Members to seek VCP assistance for the installation of satellite-data ground receiving stations, weather radar and new observing system such as ASDAR, ASAP and buoys;

URGES Members to:

(1) Provide additional surface observations in ocean areas using the Voluntary Observing Ship Scheme, buoys and suitable fixed platforms;

(2) Consider the possibility of deploying ASAP systems on ships and ASDARs or other automated data-collection systems on aircraft flying suitable routes over the ocean;

(3) Examine the communication facilities and data quality-control procedures to ensure that the data are of high quality and received at the data-processing centres in a timely fashion;

REQUESTS the Rapporteur on the Regional Aspects of the Global Observing System to keep abreast of developments in the implementation of this resolution by Members and to report to the next session of the Association.

Resolution 15 (X-RA III)

RECRUITMENT OF MOBILE SHIPS

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 19 (IX-RA III) — Recruitment of mobile ships,

(2) Recommendation 6 (CMM-X) — The WMO Voluntary Observing Ships (VOS) scheme,

(3) Resolution 11 (EC-XII) — Development of a global operational ocean observing system,

CONSIDERING that ships of the VOS scheme remain an essential source of surface meteorological and oceanographic data from the oceans in support of the WWW, WCRP and marine meteorological services,

CONSIDERING further:

(1) That the merchant fleet of Members of RA III possesses the potential for a substantial increase in observing ships,

(2) That data coverage in the Pacific Ocean part of Region III will greatly improve if selected fishing vessels are recruited as VOSs,

(3) That qualification for VCP assistance covers the provision of meteorological instruments for VOSs,

(4) That port meteorological officers are essential for the recruitment and maintenance of VOSs,

Urges:

(1) Members which already participate in the VOS scheme to make additional efforts to increase the number of observing ships amongst those on their national registers and, if possible, on other countries' national registers;

(2) Other Members to initiate action towards recruiting ships from their national registers as observing ships, if necessary using the external assistance available for the provision of meteorological instruments for observing ships;

(3) Members concerned to consider, in cooperation with appropriate national authorities, the possibility of recruiting a selected number of suitably equipped and manned fishing vessels as VOSs;

(4) Members to establish or increase the services of Port Meteorological Officers so that they

develop in an effective manner the duties specified in the Guide to Marine Meteorological Services (WMO-No. 471);

REQUESTS Members to keep the president of the Association and the Secretary-General informed of any action taken and of progress in matters mentioned above.

NOTE: This resolution replaces Resolution 19 (IX-RA III) and Resolution 21 (IX-RA III), which are no longer in force.

Resolution 3 (XI-RA III)

CONTINUOUS EVALUATION OF UV RADIATION

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) The growing importance of UV radiation measurements for studying the behaviour of the ozone layer and the urgent need to obtain those data,

(2) The GAW/GEF project for setting up the "Network for monitoring and analysing ozone and greenhouse gases" in countries in southern South America, in the final text of which, signed by the Governments of Argentina, Brazil, Chile, Paraguay and Uruguay, it was proposed that Argentina serve as the data centre for the network, and also as the training centre for radiation and ozone measurements,

Considering:

(1) That many countries either do not have the necessary instruments for monitoring UV radiation and associated parameters or have such instruments but do not transmit their data to the World Data Centres,

(2) The offer by the Republic of Argentina to expand the activities stemming from paragraph Noting (2) to the rest of RA III,

URGES the Members of RA III to make every effort to acquire instruments and to establish national programmes for the continuous evaluation of UV radiation and associated parameters and to transmit their data to the World Data Centres;

Decides:

(1) To assign to the Buenos Aires Regional Radiation Centre the task of collecting and distributing ozone and UV radiation measurement data within RA III;

(2) To assign to the Regional Meteorological Training Centre, Buenos Aires, the task of providing technical training in ozone and radiation in support of the activities of the Buenos Aires Regional Radiation Centre;

(3) To assign to the Working Group on Solar Radiation the task of formulating the proposals and coordinating the activities necessary to give effect to the tasks established in Decides (1) and (2).

Resolution 10 (XI-RA III)

USE OF INMARSAT FOR THE COLLECTION OF SHIPS' METEOROLOGICAL AND OCEANOGRAPHIC REPORTS

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 19 (Cg-XI) — The collection and dissemination of marine meteorological and oceanographic information using INMARSAT,

(2) The operation of Coast Earth Stations (CES) of INMARSAT in Region III,

(3) The equipping of an increased number of ships participating in the WMO Voluntary Observing Ships (VOS) scheme with Ship Earth Stations (SES) of INMARSAT, in particular with the INMARSAT-C facility,

Considering:

(1) The need to increase the number of ships' meteorological and oceanographic reports from most of the sea areas of Region III,

(2) The considerable improvements to be expected in the receipt of marine meteorological and oceanographic observations from ships at sea through the enhanced use of the INMARSAT system,

(3) The cost-savings which will accrue to those Members collecting such reports through INMARSAT by the increased use of the new INMARSAT-C facility for this purpose,

Being concerned:

(1) That, as yet, none of the CES located within the Region have arrangements with their national Meteorological Services to collect ships' meteorological and oceanographic reports free of charge to the ships,

(2) That problems continue to be related to the timely redistribution to the countries closest to the geographical origin of reports collected through INMARSAT,

Urges:

(1) Members concerned to make arrangements with their CES for the collection of ships' meteorological and oceanographic reports, free of charge to the ships;

(2) Members concerned to make every effort to ensure the timely redistribution of reports collected through INMARSAT to countries in the areas of the geographical origins of those reports;

(3) All Members in the Region operating VOS equipped with INMARSAT-C to make every effort for these ships to be supplied with the new software package for the compilation and transmission of meteorological reports through INMARSAT-C, to ensure the maximum efficiency and cost-effectiveness of such an operation;

REQUESTS the Secretary-General to assist Members in the implementation of this resolution.

Resolution 6 (XII-RA III)

AMENDMENTS TO THE *MANUAL ON THE GLOBAL TELECOMMUNICATION SYSTEM* (WMO-NO. 386), VOLUME II, REGIONAL ASPECTS, REGION III (SOUTH AMERICA)

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 2 (Cg-XII) — World Weather Watch Programme,

(2) The *Manual on the Global Telecommunication System* (WMO-No. 386), Volume II, Regional Aspects, Region III (South America),

CONSIDERING the need to update the RMTN for Region III (South America) to meet the data exchange requirements of Members of Region III,

DECIDES that the Manual on the Global Telecommunication System (WMO-No. 386), Volume II, Regional Aspects, Region III (South America) be amended as given in the annex to this resolution,

AUTHORIZES the president of the Association to approve, in consultation with the Secretary-General, minor amendments to the Manual on the Global Telecommunication System (WMO-No. 386), Volume II, Regional Aspects, Region III (South America);

REQUESTS the Secretary-General of WMO to include the amended text given in the annex to this resolution in Part I of the Manual on the Global Telecommunication System (WMO-No. 386), Volume II, Regional Aspects, Region III (South America).

Annex to Resolution 6 (XII-RA III)

AMENDMENTS TO THE MANUAL ON THE Global telecommunication system (WMO-No. 386), VOLUME II, REGIONAL ASPECTS, REGION III (SOUTH AMERICA)

PART I. ORGANIZATION OF THE REGIONAL METEOROLOGICAL TELECOMMUNICATION PLAN FOR REGION III (SOUTH AMERICA) FOR THE WORLD WEATHER WATCH (WWW)

AMEND paragraph 4 to read:

4. INTERREGIONAL EXCHANGES

The interregional exchanges with the neighbouring Regions should be made through:

(a) The Main Telecommunication Network: Brasilia-Washington;

(b) The Main Telecommunication Network: Buenos Aires-Washington;

(c) The interregional circuit: Cayenne-Washington;

(d) The interregional circuit Georgetown-Washington.

PART II. TELECOMMUNICATION PROCEDURES FOR REGION III (SOUTH AMERICA)

Delete paragraphs 1.5 and 2, and renumber following paragraphs subsequently.

Add the following sentence to (former) paragraph 3: Data Communication protocols:

The TCP/IP (Transmission Control Protocol/ Internet Protocol) could be used on the RMTN

Part III. Engineering of Centres and Circuits in Region III (South America)

Replace the text of paragraph 2.2 by the following:

2.2. For data transmission at data-signalling rates of 2400, 4800, and 9600 bit/s on telephone-type dedicated circuits, preference should be given to use of modems in accordance with ITU-T Recommendation V.29, including multiplexing. For data-signalling rates from 14400 to 64000 bit/s, preference should be given to use of devices in accordance with ITU-T Recommendation V.35.

Delete paragraph 3 and the whole Annex.

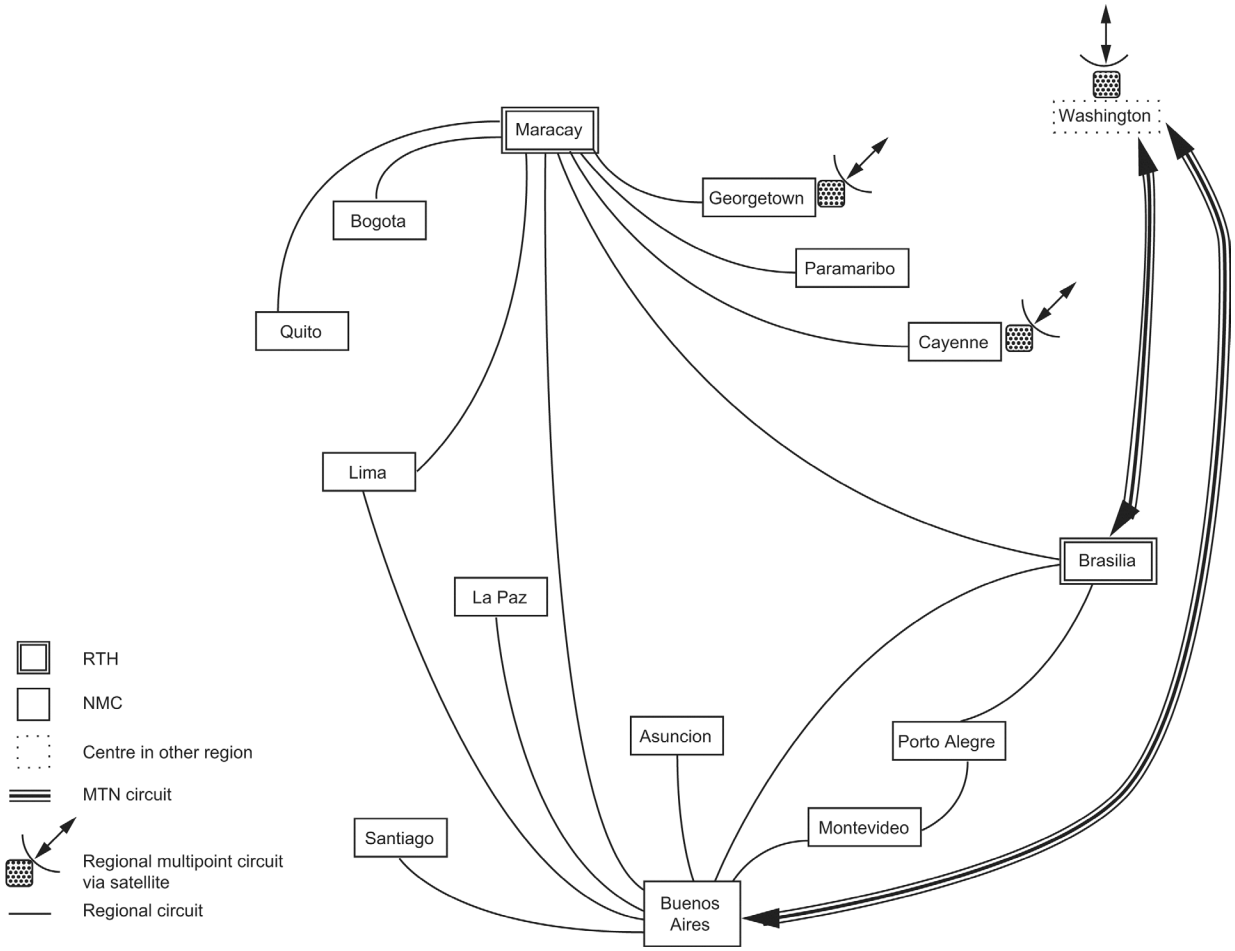

Figure 1 — Regional meteorological telecommunication network for Region III (South America) point-to-point and multipoint circuits.

Resolution 6 (XIII-RA III)

REGIONAL METEOROLOGICAL DATA COMMUNICATION NETWORK (RMDCN)

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) The requirements of RA III Members for a cost-effective and reliable regional telecommunication network in support of their meteorological and hydrological operations,

(2) The deficiencies of the existing Regional Meteorological Telecommunication Network (RMTN),

(3) The high operating costs and technical limitations of the existing RMTN,

(4) The increasing demands on the RMTN for the exchange of more voluminous data and products sets,

REAFFIRMING the agreement of its twelfth session (Salvador, Brazil, 1997) to jointly develop and implement a modern and cost-effective Regional Managed Data-communication Network (RMDCN),

Further noting:

(1) That the study phase of the RMDCN had been completed and the Specification of Requirements had been endorsed by the Permanent Representatives,

(2) That the Working Group on Internal Matters of RA III (Santiago, Chile, November 2000) endorsed the management framework for the development and implementation of the RMDCN project,

(3) That the technical preconditions are now available for establishing a RMDCN which would enable all Members in the Region to reach a high performance level in meteorological telecommunications,

EMPHASIZING that cooperative efforts are needed to facilitate development and implementation of the RMDCN project,

ENDORSES the request from the president of RA III to the Secretary-General to undertake the process leading to the selection of a suitable provider of the RMDCN services;

Decides:

(1) To proceed with the implementation of the RMDCN based on the technical and legal/administrative concept given in the Annex to this Resolution;

(2) To re-establish the RA III RMDCN Steering Group, reporting to the president of the Association, to coordinate the RMDCN activities in collaboration with the Working Group on Planning and Implementation of the WWW (WG-PIW), with the following terms of reference:

(a) To carry out necessary studies concerning technical/administrative issues related to the RA III RMDCN project;

(b) To coordinate the activities necessary to implement and operate the RMDCN;

(c) To advise the president on actions to be taken in the framework of the project;

(3) That the Steering Group should be composed of the following core members:

One expert from each Member operating a Regional Telecommunication Hub (RTH), i.e.:

Argentina

Brazil

Venezuela

One expert from two Members operating a National Meteorological Centre (NMC), i.e.:

Chile

Colombia;

In addition the Steering Group may comprise experts from other Members willing to provide a major contribution;

(4) That the core membership of the Steering Group complemented by a data-communication consultant, as appropriate, should act as the Contract Advisory Committee (CAC) to advise on the selection of RMDCN services provider;

(5) To designate, in accordance with Regulation 32 of the WMO General Regulations, Mr A.C.V. Athayde (Brazil) as chairperson of the Steering Group;

INVITES RA III Members to cooperate and assist in all possible ways and means with a view to facilitating the successful implementation of the RMDCN and the participation of all RA III Members in the new network as early as possible;

REQUESTS the Secretary-General:

(1) To provide coordination and support to the RMDCN plan;

(2) To establish a coordinated cooperation project, including a Trust Fund, in the framework of the Technical Cooperation Programme (TCOP) of WMO with a view to supporting and facilitating the further development and implementation of the RMDCN project, including support to consultant services, meetings of the Steering Group and the CAC as necessary, and implementation at NMCs;

(3) To invite RA III Members and other Members as appropriate, to contribute to the project and Trust Fund for the RA III RMDCN;

(4) To carry out the international tender, and, if so requested by the president of RA III, sign the framework contract with the selected provider.

Annex to Resolution 6 (XIII-RA III)

SUMMARY DESCRIPTION OF THE RA III RMDCN PROJECT

Technical concept

1. The RA III RMDCN will be a homogeneous network in which the selected provider will support a Managed Datacommunication Network Service (MDNS), consisting essentially of a data transport service. The supplier will provide:

(a) All circuits, hardware and software necessary for connectivity;

(b) The management of third parties, such as platform transmitter terminals (PTTs);

(c) The provision of help-desk facilities;

(d) The central management and supervision of all network functions;

(e) Change management as required during the period of the contract; and

(f) The provision of traffic statistics.

2. The main components of the network of the selected supplier are the backbone network, the customer premises equipment (CPE), the points-of-presence (PoP) in the countries served and the Local Access circuits which connect the CPE to the PoP, usually over a leased line provided by the national telephone supplier.

3. The backbone network is a private international network operated by the supplier and shared among many customers. The backbone will have a high capacity and be constructed to be resilient in the event of any failures of circuits or network equipment.

Frame Relay networks are becoming very popular and cost-effective. To further enhance the availability of this network, the supplier will typically have at least two network control centres in different locations.

4. The CPE is the equipment which the supplier provides to interface to the customer's equipment. The CPE would support, on the customer's side, connections to computers operated by the NMHS, including message switching systems and other applications.

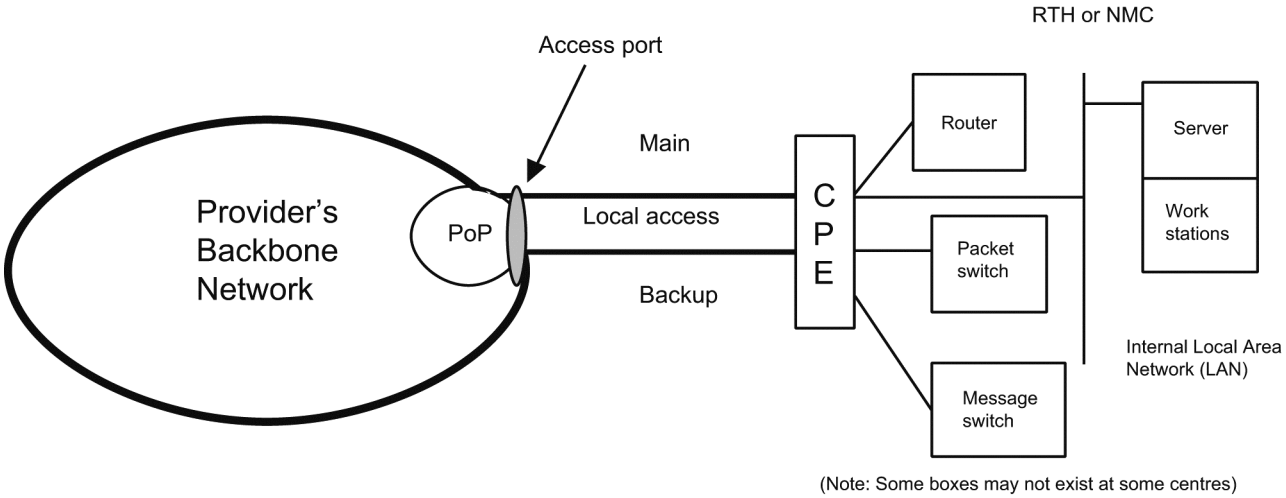

Figure — Typical RMDCN connection at RTH/NMC

5. The suppliers have one or more PoPs in the countries they serve. This enables customers to connect to the their network via a node in their own country, often in their own city.

6. A typical connection of a GTS centre to the supplier's backbone network is indicated in the figure below.

Legal and administrative concept

7. There will be two types of contracts, namely:

(a) A Framework Contract to be concluded between the Secretary-General of WMO and the selected service provider, containing:

(i) Service specifications and conditions for the RA III RMDCN;

(ii) The provider's commitment to cover all of RA III;

(iii) The ceiling cost for access to the RMDCN by each RA III Member;

(iv) The ceiling costs for additional services such as higher bandwidth, service level, etc.;

(v) A specification of the guaranteed service level; and

(vi) No financial commitment for the WMO Secretariat or any Member of RA III;

(b) An individual accession contract between a Member and the service provider, which should contain at least:

(i) Bandwidth (e.g. Committed information Rate) to be provided and other technical features;

(ii) Service level to be provided;

(iii) Payment modalities.

8. Members would join the RMDCN Framework Contract under National Contracts as and when appropriate.

Resolution 11 (XIII-RA III)

SUPPORT FOR JCOMM

REGIONAL ASSOCIATION III (SOUTH AMERICA),

Noting:

(1) Resolution 14 (Cg-XIII) — Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM),

(2) IOC Assembly Resolution XX-12 — The Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology (J-COMM),

(3) The final report of the first session of JCOMM (Akureyri, Iceland, June 2001),

CONSIDERING that oceanographic and marine meteorological observations not only make a significant contribution to operational meteorology and the provision of marine services, but also are essential to global climate studies generally,

Recognizing:

(1) That JCOMM is now the appropriate and sole WMO body for the international coordination and regulation of a global operational ocean observing, data management and services system,

(2) That some Members of the Association are actively involved in the deployment and maintenance of a variety of ocean observation facilities, for both operational and research purposes,

(3) That Members of the Association are also increasingly being required to provide coordinated meteorological and oceanographic services for a large variety of marine user groups,

(4) That the Global Telecommunication System (GTS) will continue to be essential for the operational collection and exchange of many types of ocean data,

RECOGNIZING FURTHER that a substantial increase in the amount of ocean data available operationally is needed to satisfy the requirements of operational meteorology, oceanographic services and research and global climate studies for such data,

URGES Members:

(1) To continue and, where possible, expand their existing operational ocean observing system facilities and activities, as contributions to the World Weather Watch (WWW),

Global Climate Observing System (GCOS) and Global Ocean Observing System (GOOS) and with international coordination effected through JCOMM;

(2) To participate actively in the planning and implementation of these systems and in the work of JCOMM;

(3) To coordinate with appropriate national oceanographic agencies and institutions to ensure the long-term operational maintenance of oceanographic observing systems;

(4) To coordinate with appropriate national oceanographic agencies and institutions in developing oceanographic data management capabilities and oceanographic services;

(5) To enhance two-way ship-shore telecommunication arrangements for oceanographic data and products, in particular through the greater use of satellite-based telecommunications facilities such as the International Maritime Satellite System (INMARSAT) and Argos systems;

REQUESTS the president of the Association to take necessary steps to ensure active involvement of RA III Members in the JCOMM activities, in particular with regard of marine observing systems, data management and capacity building;

REQUESTS FURTHER the Secretary-General to take any action considered necessary, and within the available budgetary resources, to assist Members to participate in the development and maintenance of JCOMM.

NOTE: This resolution replaces Resolution 10 (XII-RA III) which is no longer in force.

ANNEX

Annex to paragraph 15.1.5 of the general summary

EXECUTIVE COUNCIL STATEMENT ON THE ROLE AND OPERATION OF NATIONAL METEOROLOGICAL AND HYDROLOGICAL SERVICES (FOR DECISION-MAKERS)

Key Social and Economic Drivers

1. Governments are striving to improve the well being of their citizens. Population growth, reducing poverty, water security, food security, increasing prosperity, and improving public health, safety and security are key drivers. To deal with these issues, governments have to develop and implement effective policy, promote fundamental tenets of societal and environmental governance. However, as regards environment, it is common knowledge that we are challenged by our natural environment, made worse by changes in the climate, which threatens the sustainable development of human societies through extreme weather events causing disasters, reduced food security, reduced availability of uncontaminated freshwater, and the rise and spread of diseases. This is further compounded by growing urbanization and the expansion of human habitation into previously unoccupied places, such as arid zones, mountain slopes, flood plains and the sea's edge is exposing populations to air and waterborne diseases, heat stress, drought, landslides, floods, storm surges and tsunamis.

The safety of life and protection of property is important for all countries but especially for the sustainability of emerging economies. These countries are highly vulnerable to natural disasters, which can wipe out 10 to 15% of a developing nation's GDP on average. Only with a clear understanding of the potential threats, advanced warning, and adequate disaster reduction and mitigation efforts can we properly protect our societies.

These are issues that must be dealt with if the global community is to attain the targets set through the 2000 Millennium Declaration, which are highlighted by the 2002 Johannesburg Plan of Implementation of the World Summit on Sustainable Development.

The role of National Meteorological and Hydrological Services

2. As has been the case since the beginning of the modern era of societal and environmental management, knowledge of weather and climate is the key to all aspects of human endeavours. It is within this framework that National Meteorological and Hydrological Services (NMHSs) in various countries have been well positioned to identify and deal with a wide range of weather-, climate- and water-related issues that affect human life and socio-economic development. For example, with regard to natural hazards, NMHSs have been tasked to sensitize the population to their impacts, and to provide warnings of individual events, to save lives, to sustain productivity, and to reduce damage to property.

3. NMHSs constitute the single authoritative voice on weather warnings in their respective countries, and in many they are also responsible for climate, air quality, seismic and tsunami warnings. To reduce and mitigate disasters requires well prepared NMHSs as well as governments and populations to take appropriate action in response to warnings. NMHSs, within the framework of the World Meteorological Organization (WMO), are working to help governments improve decision-making to enable populations to adapt to climate change, mitigate natural hazards and sustain development. By helping governments and the people to avert potential disasters, NMHSs are a fundamental component of the crisis management infrastructure of countries in their nation-building endeavours and indeed a contributor to sustainable development, particularly the poverty alleviation effort. NMHSs are working together to implement the WMO Multi-hazard Prevention Strategy, which aims to reduce by 50 percent over the decade 2010-2019 the number of fatalities caused by

meteorological-, hydrological- and climate-related natural disasters compared with the ten-year average fatalities of 1995-2004.

4. NMHSs are continuously monitoring the environment through observations of the Earth system and predict changes in this system. They provide governments with timely and precise warnings of most potential natural hazards and contribute essential environmental information and services for urban planning, sustainable energy development, access to freshwater, and food production.

5. Cooperation between various organizations is essential to provide governments with these services. Partnerships between NMHSs and academia, government departments, international and non-governmental organizations, and where appropriate and possible, the private sector, help society make better decisions based on more complete and accurate weather, water and climate information. These partnerships provide better data coverage and information processing, higher resolution models, and more precise and useful specialized products for societal benefits, including opportunities to better support government and other decision makers regarding safety, economics, and security. NMHSs are encouraging these partnerships by adopting open and unrestricted data policies which make their information easy to access in real-time, in useful forms, and at low cost.

Future requirements

6. In the year 2000, through the internationally-agreed development goals, including those contained within the Millennium Declaration, the international community set forth specific targets to be reached by 2015. To ensure that these goals are met, it is essential that governments take advantage of the myriad advances in science and technology provided by NMHSs and their partners, that include the provision of multi-hazard warnings and related services, 24 hours a day, seven days a week for 365 days in a year, which when properly applied can provide societies with the underpinning information to reduce and mitigate natural disasters. International cooperation is essential, both between countries and within the larger UN framework of specialized agencies.

7. Access to good communication ensures that information is available wherever it is needed. Governments must recognize the importance of continuous monitoring of the environment and recognize the ability of their NMHSs to provide timely and accurate information to inform critical decisions. They are to continuously support NMHSs and their modernization and development.

8. It is essential that societies be prepared to act appropriately in response to warnings. Education and training is paramount for improvement of preparedness. Early warning systems for natural hazards work only if governments and their public know how to respond. Information must be easy to understand and use.

9. Climate change requires societies to understand and assess impacts and to develop the necessary adaptation strategies. By providing fundamental knowledge of the climate system and predictions based on climate models, NMHSs can help societies transform.

10. To be completely effective, NMHSs and their international network, coordinated through WMO, must be recognized as critical partners in societies' goal to reduce poverty and increase the prosperity of the world's citizens.

APPENDIX

LIST OF PARTICIPANTS

1. Officers of the session

Acting president	R. Michelini (Uruguay)
Vice-president	R.J. Viñas García (Venezuela)
Regional Hydrological Adviser to the Acting President of RA III	R. Coimbra (Brazil)

2. Representatives of WMO Members within the Region

Argentina

M.A. Rabiolo	Principal Delegate
A.G. Ventura	Delegate
H.O. Sosa	Delegate

Bolivia

C. Díaz	Principal Delegate

Brazil

A.D. Moura	Principal Delegate
A.M. Dall'Antonia Jr.	Alternate Delegate
B. Pagnoccheschi	Delegate
C.R. Henriques	Delegate
W. Gambi de Almeida	Delegate
C. Flores (Sra)	Delegate
C.A. Chaves Leal Silva	Delegate

Chile

H. Oliva	Principal Delegate
R. Castro	Delegate

Colombia

C. Costa Posada	Principal Delegate
D. Pava Camelo	Delegate
E. Castro Duque	Delegate
M. Henríquez	Delegate

Ecuador

L. Andrade Chávez	Principal Delegate

France

P.-E. Bisch	Principal Delegate
P. Livenais	Delegate

Paraguay

Miguel Á. Vázquez	Principal Delegate
D.A. Franco Echevarría	Delegate

Peru

E. Díaz Villalta	Principal Delegate
J. Ames Ruiz	Delegate
R. Cisneros Pinto	Delegate
C. Medina Zea	Delegate
W. Lozada Maldonado	Delegate

J. Villafuerte Osambela	Delegate
C. Alarcón Velazco	Delegate
J. Ordóñez Gálvez	Delegate
I. Trebejo Varillas (Ms)	Delegate
N. Ita Maguiña	Delegate
E. Jaimes Espinoza	Delegate

Uruguay

R. Michelini	Principal Delegate

Venezuela

R.J. Viñas García	Principal Delegate

3. Representatives of WMO Members not within the Region (observer status)

Spain
F. Cadarso González

United States of America
J.J. Kelly (Jr.)
R.O. Masters
C.L. Hampton (Ms)
K. Turner (Ms)

4. Representatives of international organizations

C. Marschalik	– Association of Hydro-Meteorological Equipment Industry (HMEI)
L. Castello	– Food and Agriculture Organization of the United Nations (FAO)
F. Rojas Pérez	– Inter-American Institute for Cooperation on Agriculture (IICA)
N. Arias (Mrs)	– International Civil Aviation Organization (ICAO)
G. Pereira Puchy	– Permanent South Pacific Commission (CPPS)
M. Palacios Moreno	– Permanent South Pacific Commission (CPPS)
J.L. Camacho Ruiz	– Centro Internacional Investigación Fenómeno de El Niño (CIIFEN)
M. Peña	– World Health Organization (WHO)
H. Silva	– World Health Organization (WHO)

5. Other participants

C.R. Becker	Suriname
J. Segovia	Spain

6. Invited Experts

R. Thigpen	– Global Climate Observing System (GCOS)

7. WMO Secretariat

M. Jarraud
Hong Yan
D. Schiessl
P. Taalas
B. Nyenzi
A. Tyagi
F. Villalpando
J. de Sousa Brito
O. Arango
F. Requena
M. Peeters