

**WORLD METEOROLOGICAL ORGANIZATION**

**ELEVENTH  
WORLD METEOROLOGICAL CONGRESS**

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**ABRIDGED REPORT WITH RESOLUTIONS**



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spectrum of applications further convinced Congress as to the utility of satellite data and the requirement to integrate them into all WMO programmes. The president of the Commission for Hydrology noted the potential for applications in the area of operational hydrology and water resources.

3.1.7.9 Congress expressed appreciation for the early actions of the Secretariat in consultation with the satellite operators towards assuring a smooth transition from the present analogue satellite services (APT and WEFAX) to digital services by the end of the decade. Congress felt that that initiative should be continued while keeping Members appropriately informed.

### 3.1.8 *Tropical Cyclone Programme* (agenda item 3.1.8)

3.1.8.1 Congress was saddened by the news of the major disaster in Bangladesh caused by the tropical cyclone of 29–30 April 1991. It noted the reports that the prevention measures taken by the Government, particularly cyclone shelters and the early warning system, significantly mitigated the number of casualties. It expressed its appreciation of the favourable results of support given by WMO under its Tropical Cyclone Programme (TCP), to the development of the warning system and, in that connection, with the great value of the frequent advisories provided by RSMC-tropical cyclones New Delhi to support the national Meteorological Service of Bangladesh in issuing very good forecasts and early warnings of that cyclone. Congress congratulated the Bangladesh Meteorological Department for the excellent work it had done in meeting its responsibility for the provision of warnings. However, Congress recognized that there was a pressing need for much more to be done and called for continuing and strengthened efforts under the TCP towards mitigation of disasters caused by tropical cyclones.

3.1.8.2 On reviewing the activities and developments under the Tropical Cyclone Programme, Congress expressed great satisfaction at the considerable progress made, since Tenth Congress, in both the implementation and further planning of the general and regional components of the programme. It commended, in particular, the Members participating in the work of the five regional tropical cyclone bodies and expressed its appreciation to them. Congress also acknowledged the valuable contribution of other WMO Members and the many national and international organizations, especially UNDP, ESCAP, UNDRO and LRCS, towards the implementation of the regional as well as the general components of the TCP. It learnt that Members concerned were particularly pleased with advances made in improvement of the operational tropical cyclone and flood forecasting and warning systems, in the provision of products to meet user requirements, in enhancing the response to warnings and in training of personnel under the programme. Congress noted with satisfaction the very important role played by meteorological satellites in the operational warning systems, particularly in the detection and monitoring of tropical cyclones. Congress also noted the important role of regional co-operation and co-ordination and of the three RSMCs with activity specialization in tropical cyclones, formally designated since Tenth Congress as RSMC Miami-Hurricane Center, RSMC-tropical cyclones New Delhi and RSMC Tokyo-Typhoon Centre. It requested CBS to give early consideration to the recommendations of RA I and RA V that the centres in Réunion and Nadi respectively be designated as similar RSMCs. It further noted the progress in the establishment of additional flood forecasting systems and that procedures for management overview and monitoring of those systems had been instituted in most tropical cyclone regions.

3.1.8.3 Congress was particularly gratified by the valuable assistance provided through the WMO Voluntary Co-operation Programme and bilateral arrangements, which helped accelerate the implementation of WWW facilities, on which the programme relied, and the training of personnel. Additionally, Congress recorded its appreciation for the considerable support with equipment, expert services, fellowships and group training provided by UNDP through inter-country projects to Members of four of the regional tropical cyclone bodies. And that provided, or soon to be provided, by other funding agencies, particularly FINNIDA and the European Development Fund, to facilitate implementation of the programme.

3.1.8.4 Taking into account the support for the International Decade for Natural Disaster Reduction (IDNDR) that can be provided through the TCP, Congress requested acceleration of the activities under the programme and in particular those in disaster preparedness and prevention in co-operation with other organizations concerned, such as UNDRO and LRCS. Stress was placed on the high priority need to upgrade and improve the telecommunication systems in most regions, especially in the southern part of Region IV. Congress also requested intensification of work under the general component, including preparation and updating of guidance material and training of personnel. It agreed on the continuation of the series of International Workshops on Tropical Cyclones to be organized as a joint activity of the Tropical Meteorology Research and Tropical Cyclone Programmes.

3.1.8.5 Congress requested that further steps be taken to strengthen co-ordination among the regional tropical bodies, such as through meetings organized in a cost-effective way, which would also facilitate exchange of experience, consideration of items of mutual concern and inter-regional co-operation. It noted that for the first time, a joint session of two regional bodies, the Panel on Tropical Cyclones and the Typhoon Committee, would be held in February 1992 and that Thailand had offered to host the session.

3.1.8.6 Concerning the tropical cyclone early warning systems, the importance of continuity of services and of contingency plans, to be put into effect when there were disruptions due to cyclones or other causes, was stressed and commended to regional tropical cyclone bodies that had not already made adequate arrangements in that regard.

3.1.8.7 In the light of the humanitarian, social and economic impact of the TCP, and of its great potential for substantial contribution to the success of the International Decade for Natural Disaster Reduction (IDNDR), Congress decided that the programme should be further intensified and accelerated in association with the IDNDR and in accordance with the WMO Plan of Action for the Decade (see paragraphs 9.7, 9.8 and the annex to paragraph 9.8). It adopted Resolution 6 (Cg-XI). It agreed on Programme 1.8—Tropical Cyclone Programme for inclusion in Part II, Vol. 1 of the Third WMO Long-term Plan, which it adopted (see paragraph 7.2.10) under Resolution 28 (Cg-XI). Congress appealed to UNDP and VCP donor Members to continue and, where possible, increase the support provided and to other potential donors to provide support as needed to cyclone-prone Members in connection with TCP activities.

### 3.2 *World Climate Programme* (agenda item 3.2)

#### 3.2.0 *Report of the president of CCI*

3.2.0.1 Congress noted with appreciation the report of the president of the Commission for Climatology (CCI), covering

