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## ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC

Fifty-seventh session 19-25 April 2001 Bangkok

## **REPORTS OF REGIONAL INTERGOVERNMENTAL BODIES**

(Item 10 of the provisional agenda)

## **REPORT OF THE PANEL ON TROPICAL CYCLONES**

Note by the secretariat

The Executive Secretary transmits the report of the Panel on Tropical Cyclones, as submitted, for the information of the Commission.

# ANNUAL REPORT<sup>1</sup> of the PANEL ON TROPICAL CYCLONES for the Bay of Bengal and the Arabian Sea to the ECONOMIC and SOCIAL COMMISSION for ASIA and the PACIFIC (ESCAP) Fifty-Seventh Session

#### A. Main Activities of Members

The Panel reviewed and evaluated in detail its activities undertaken during 2000 under the meteorological, hydrological, disaster prevention and preparedness, training, and research components.

#### 1. Meteorological Component

The Panel noted with appreciation that the European organization responsible for the Exploitation of Meteorological Satellites (EUMETSAT) had shifted the position of its Meteosat 5 to cover a large part of the Panel region.

Myanmar informed the Panel that plans have been drawn up for the installation of a cyclone detection radar at Yangon but so far funds had not been secured.

Sri Lanka informed the Panel that a proposal for the installation of a cyclone detection radar at Colombo had been submitted to the Japan International Cooperation Agency (JICA) and Korea International Cooperation Agency (KOICA) for funding consideration.

The Panel was pleased to learn that the next satellite of the Indian Satellite (INSAT) series, i.e., INSAT-3A, was scheduled for launch sometime during the last quarter of 2001. For meteorological purposes, it will be equipped with Very High Resolution Radiometer (VHRR) and High Resolution Charged Couple Detector Camera (CCD) payloads similar to INSAT-2E.

Oman requested India to increase the frequency of the availability of INSAT images in the India Meteorological Department (IMD) web-site, preferably on an hourly basis.

The Panel reviewed the list of tropical cyclone names submitted by the Members and felt that some of the names were not appealing to the general public. Members were therefore requested to provide the Rapporteur, Mr Ahmed hamoud Mohamed Al-Harthy (Oman) with a new list which in addition to the criteria laid down by the Rapporteur should be appealing to the media and public. Members were requested to submit the new list to the Rapporteur by June 2001.

Oman informed the Panel that their Meteorological Department would soon implement an Ensemble Forecasting System in cooperation with the Canadian Meteorological Center. It is expected to cover the same domain covered by ORM 28.

### 2. Hydrological Component

Based on the programme of 2000, as agreed upon during the twenty-seventh session of the Panel on Tropical Cyclones, the Members continued their sustained efforts in undertaking the programme of work under the hydrological component.

<sup>&</sup>lt;sup>1</sup> Extracted from the Report of the Twenty-eighth Session of the Panel on Tropical Cyclones for the Bay of Bengal and the Arabian Sea, 14 to 20 March 2001, Bangkok, Thailand.

Bangladesh reported that it had improved its flood forecasting capacity based on the Mike 11 hydrodynamic model. In the near future, flood forecasting stations would be increased from 30 to 50 with real-time data collected from 110 water level and 60 rainfall stations.

Pakistan reported that the second Flood Protection Sector Project had been launched in December 1999 with the objective to upgrade the existing flood forecasting system. The project included the installation of one 10-cm Doppler Weather Radar, upgrading of existing Quantitative Precipitation Measurement (QPM) radar station and associated communication facilities. The project also included the extension of gauging, telemetry and radio facilities as well as satellite and radar correlation of data.

Thailand reported on the improvement of their telemetring system for real-time flood forecasting and warning. As of December 2000, 59 per cent of the project was completed. The flood forecasting and warning system was operational in the Nan, Pasak and Prachin river basins.

Considering the individual national reports on the hydrological component, the Panel recognized the importance of Quantitative Precipitation Forecast (QPF) and the estimation of Probable Maximum Precipitation (PMP) and the Probable Maximum Flood (PMF) as vital for the imporvement of flood forecasting especially in combination with tidal and storm surges of its Members. In this regard, the Panel members urged national Hydrological and Meteorological Services to make necessary arrangements to improve the exchange of meteorological and hydrological data in real-time to improve the forecasting capacity.

With a view to strengthening the hydrological component in the activities of the Panel, Members recommended that in future meetings, the national delegations should include the representation from the hydrological services for more active discussions on the said component.

The Panel discussed the hydrological forecasting capacity in the context of tropical cyclones and highlighted the importance to develop response mechanisms as an extension to hydrological forecasting. The Panel recommended that strategies be developed aiming to the effective dissemination of forecasts and communication with affected communities.

#### 3. Disaster Prevention and Preparedness Component

The Members of the Panel continued their sustained efforts in undertaking the programme of work under the disaster prevention and preparedness component and in line with the goals of the International Strategy for Disaster Reduction (ISDR) which succeeded the International Decade of Natural Disaster Reduction.

Bangladesh reported that it had developed a very efficient cyclone preparedness system in cyclone prone areas. Similarly for flood, Bangladesh has also had a very efficient flood warning and response system. As a result of disaster preparedness, Bangladesh had substantially reduced damage and losses due to tropical cyclones and floods.

Myanmar reported that the Department of Meteorology and Hydrology had conducted lectures sponsored by their Ministry of Social Welfare on the nature of natural hazards, disasters and mitigation measures at a number of National Disaster Preparedness Training Courses in their country.

Pakistan reported that efforts were underway, both in national and provincial levels, to undertake disaster awareness programs which was endeavored to result to a more well-coordinated and effective disaster prevention and preparedness strategy.

Sri Lanka reported that an expert from the Asian Disaster Preparedness Centre (ADPC) had visited their country to provide technical advice to their Disaster Management Center.

Thailand reported that activities on disaster prevention and preparedness would continue to be implemented cooperatively at all levels under the National Civil Defense System.

#### 4. Training

The Panel reviewed the involvement of Members in various education and training activities supported through WMO's Voluntary Cooperation Programme (VCP), Technical Cooperation among Developing Countries (TCDC) arranegement, regular budget, and by the Members themselves.

The Panel was satisfied with the number of training events and workshops organized by WMO and member countries in 2000 and noted with appreciation that 16 fellows from the Panel member countries had completed their training during the year.

The Panel expressed appreciation to Panel member countries, which had offered their national training facilities to other Members under bilateral arrangements. These cooperative efforts were found by the recipient countries to be very useful. The Panel strongly recommended that such endeavours be continued in the future and strengthened.

The Panel expressed its appreciation to WMO for the continuing development of its Training Library, particularly its web-site component, the Virtual Training Library (VTL), which provided an efficient operational service to Members using the latest technological advances.

### 5. Research

Research work continued to be an integral part of the three major components of the Members' activities in 2000.

The Panel noted with appreciation that the Comprehensive Tropical Cyclone Landfall Programme submitted to the World Weather Research Programme (WWRP) had been formally approved and arrangements were being made for its implementation. When completed, the programme was expected to improve the current operational tropical cyclone landfall forecast capabilities.

The Panel Members were urged to endeavor to participate in the fifth WMO International Workshop on Tropical Cyclones (IWTC-V) which would be held in Cairns, Australia in early 2002.

#### 6. Review of Publications

The Panel noted with appreciation that the second issue of the Panel on Tropical Cyclones Annual Review for the year 1998 had been published by WMO through the commendable efforts of the Chief Editor from India and the national editors of Members.

The Panel also noted with satisfaction the publication of Panel News No. 14 by the Technical Support Unit (TSU) in October 2000. The Panel invited TSU to continue publishing the Panel News and urged Members to ensure that their written contributions would reach the TSU in time.

#### **B. ACTIVITIES OF ESCAP IN SUPPORT OF THE PANEL**

ESCAP continued to provide support to the activities of the Panel under the hydrological and disaster prevention and preparedness components within the framework of its programme of work.

Under the hydrological component, the Panel noted with appreciation that the ESCAP Secretariat continued to assist the countries in the region to assess their respective water resources. It further noted with satisfaction that the ESCAP Secretariat produced a publication on water allocation

among water-use sectors, and continued to work on the guidelines for promotion of public awareness of water conservation. It also welcomed activities of the ESCAP Secretariat which fielded advisory missions, including those to Pakistan from 10 to 22 July 2000 and Myanmar from 31 July to 6 August 2000 on various aspects of water resources planning and management.

Under the disaster prevention and preparedness component, ESCAP's activities in 2000 on water-related disaster reduction were focused on flood control and management. Efforts are being made to implement the recommendations of the previous studies included in the special publication entitled "Regional Cooperation in the Twenty-first Century on Flood Control and Management in Asia and the Pacific". As in the past, ESCAP continued to include in the September 2000 issue of the Water Resources Journal a review of water-related disaster experiences in the region within the last year and recent developments in water-related disaster reduction.

### C. OTHER MATTERS

The Panel submitted to WMO the changes to be incorporated in the 2001 version of the Panel's Tropical Cyclone Operational Plan. The Panel invited WMO to issue the updated 2001 version of the plan as soon as possible.

WMO, ESCAP, TSU and the Chairman of the Panel were requested to make improved arrangements in the technical discussions at the next Panel session so as to increase interaction among the national and sub-regional institutions involved in the mitigation of tropical cyclone disasters.

The Panel requested Oman, in consultation with the Coordinator of TSU, to formulate institutional arrangements for accepting awards, like the Smith Tumsaroch Fund Award, through the Panel.

The Panel discussed the matter of resource mobilization and requested the Coordinator of TSU to report on this issue at the next session of the Panel.

The Panel expressed the necessity of all Members be present during its sessions and hoped that this could be achieved in future meetings of the Panel.

The Panel expressed appreciation to the provision of 6-hourly warnings/advisories from the Central Pacific Warning Center (CPWC). It noted with appreciation that WMO through its website (http://www.wmo.ch) had established a direct link with the CPWC. However, Members requested that provision of these warnings through the GTS be continued.

Finally, Mr Wanchai Sarathulthat (Thailand) and Dr Qamar-uz-Zaman Chaudhry (Pakistan) were unanimously elected as Chairman and Vice-Chairman of the Panel on Tropical Cyclones, respectively until its next session.