

ESCAP/WMO TYPHOON COMMITTEE  
FIFTY-FIFTH SESSION  
7 TO 9 MARCH 2023  
VIDEO CONFERENCE, MACAO, CHINA

FOR PARTICIPANTS ONLY  
WRD/TC.55/14  
8 March 2023  
ENGLISH ONLY

## **COORDINATION WITH OTHER ACTIVITIES OF THE WMO TROPICAL CYCLONE PROGRAMME**

### **ACTION REQUIRED:**

The Committee is invited:

- a) Review the activities carried out under the TCP since its Fifty-fourth session (Lao PDR, February 2022, online) and the proposals for the future, which are indicated in Appendix B to this document or otherwise reported to the session; and,
- b) Consider what further measures, if any, may be taken to strengthen coordination between its own activities and those conducted under other parts of the TCP.

### **APPENDICES:**

Appendix A – Draft Text for Inclusion in the Session Report  
Appendix B – Coordination under WMO TCP

**APPENDIX A**  
**DRAFT TEXT FOR INCLUSION IN THE SESSION REPORT**

Appendix A – Draft Text for Inclusion in the Session Report

1. The Committee was presented about activities under, and those requiring coordination through, TCP. It appreciated the comprehensive presentation, and thanked WMO support to the Committee.

2. The Committee was informed of EC-75 (June 2022) Resolutions/Decisions relevant to tropical cyclones:

- Decision 3.1(3)/1 (EC-75) - Proposed Approaches to the Business Continuity and Contingency Planning to make sure uninterrupted provision of services under hazardous conditions.
- Resolution 4(2)/1 (EC-75)- UN Global Early Warning / Adaptation Initiative to address the request by UN Secretary-General Dr António Guterres for WMO to lead to prepare for a plan of action to enable the early warning systems to cover every one within 5 years.

3. The Committee was further informed that EC-76 (17 February 3 March 2023) approved resolutions/decision/recommendation relevant tropical cyclones, among others:

- Resolution 3.1(10)/1 (EC-76) - WMO Guide for National Meteorological and Hydrological Services in Support of National Multi-Hazard Early Warning Procedures, Coordination Mechanisms, Systems and Services - Guide No. 1 – Tropical Cyclones. This Guide will promote and support WMO Members prone to tropical cyclones to develop/establish their effective national disaster risk management and response coordination mechanisms, protocols and procedures. It will be published soon as per EC-76 resolution.
- Resolution 3.1(2) (EC-76) - Tropical Cyclone Forecasting Competency Framework – that decides to add the five regional Tropical Cyclone Forecaster Competencies (one for each of the Tropical Cyclone Programme regional bodies) to the Compendium of WMO Competency Frameworks (WMO-No. 1209).
- Resolution 3.1(13)/1 (EC-76) - WMO Coordination Mechanism Implementation Plan – that is facilitating the access to meteorological, hydrological, climate information and data for UN & humanitarian organisations.
- Decision 4(2)/1 (EC-76) - UN Early Warnings for All Initiative Follow-Up - that decided to establish an Expert Team on Early Warning Services (ET-EWS) under the SERCOM Standing Committee on Disaster Risk Reduction and Public Services (SC-DRR). The ET-EWS will be responsible for implementing the UN Early Warnings for All Initiative under Resolution 4(2)/1 (EC-75) mentioned above.
- Recommendation 9(1)/1 (EC-76) to 19th WMO Congress (22 May – 2 June 2023) - Review of previous resolutions of Congress - that recommended to maintain the WMO Tropical Cyclone Programme (Res 23/Cg-XVI).

4. The Committee was informed that the 10th International Workshop on Tropical Cyclones (IWTC-10) was held in Bali, Indonesia, from 5 to 9 December 2022. The workshop will be hosted by the Agency for Meteorology, Climatology, and Geophysics of the Republic of Indonesia (BMKG-BADAN METEOROLOGI, KLIMATOLOGI, DAN GEOFISIKA), in face-to-face modality, and supplemented with simultaneous online mode for its plenary sessions. This is a quadrennial gathering jointly organized by WWRP and TCP. Overall, the workshop was attended by more than 120 in-person participants and over 300 registered online. The main objectives of IWTC are: 1) to report on current knowledge, forecasting and research trends on tropical cyclones from an integrated global perspective; 2) to foster communication within and between operational and research communities; and 3) to identify needs and opportunities in tropical cyclone operational and research and

recommendations for actions that will improve the global knowledge of and response to tropical cyclones. All the reports, presentations, and recordings are available on the IWTC-10 [website](#) . In total, [22 recommendations](#) were made from the workshop. In addition, 11 Members of the Committee were physically represented in the IWTC-10.

5. The Committee was informed that the Advisory Group on Tropical Cyclone (AG-TC) under the SC-DRR of SERCOM organized two meetings with AG-TC-2 that was conducted online on 07 and 09 June 2022, and AG-TC-3 that was conducted on hybrid mode on 10 December 2022 in Bali, Indonesia, back-to-back with the 10th session of the International Workshop on Tropical Cyclones (5-9 December 2022). The AG-TC is looking after the global/general component of the TCP. The AG-TC meetings addressed several important issues with recommendations as follows:

- WMO GDPFS centers' compliance review.
- WMO Coordination Mechanism (WCM) and the Weather4UN project.
- Tropical Cyclone - Probabilistic Forecast Products (TC-PFP) Project.
- Review of the GDPFS Manual related to appendices on TC matters.
- International Workshop on Tropical Cyclones – 10th session (IWTC-10) – recommendations.
- Tropical Cyclone Forecaster Competency.
- Development of Tropical Cyclone Impact-based Forecasting products – Implementation Decision 10 (EC-68).
- WMO Guide for National Meteorological and Hydrological Services in Support of National MHEWS Procedures, Coordination Mechanisms, Systems and Services – Tropical Cyclones.

6. The Committee noted with appreciation that many training activities on tropical cyclones were organized in 2022 to support capacity development of the Members to meet competency and skills that are required for tropical cyclone forecasting and services as set in regional tropical cyclone competencies.

7. The Committee was informed that the regional activities on tropical cyclone regional bodies were well organized in the past year. Those meetings updated regional arrangements for tropical cyclone circumstances, and strengthened regional collaboration and coordination with harmonized approaches toward tropical cyclones.

8. The Committee was informed that all activities in relation to TCP under WMO Annual Operating Plan were very well implemented without delay in 2022. There was no impact by Covid-19 during implementing TCP activities. The Committee expressed sincere appreciation to WMO Secretariat and Members to have made all possible efforts to work closely to enable to carry out TCP activities with success.

9. The Committee Members were brought attention to the following matter: In context of NESDIS/SAB potentially discontinuing Dvorak fixes globally, there is an inquire as to which agencies are providing subjective Dvorak fixes in various regions. In the Typhoon Committee region, which agencies are providing those Dvorak analyses, are they publicly available, through GTS/WIS or through webpages.

Appendix B: Coordination under WMO TCP

**ACTIVITIES CARRIED OUT UNDER THE TROPICAL CYCLONE PROGRAM  
SINCE ITS FORTY-THIRD SESSION**

**1. PROGRAMME IMPLEMENTATION**

1.1 The WMO Tropical Cyclone Programme carries out its activities in accordance with decisions/resolutions by Congress, Executive Council, Technical Commissions and Regional Associations as well as Research Board. It is implemented in two components – general component and regional one, and covers mainly four areas – meteorology, hydrology, disaster risk reduction and capacity development by research and training.

1.2 A list of the events organized or co-sponsored under the Programme during the period from March 2022 may be found the dedicated [TCP website](#) here.

**2. Global Activities**

2.1 SERCOM-2 was held in One major development from the INFCOM is to have organized data conference which gatfrom 17 – 21 October 2022, made serious of recommendations to Executive Council 76th session for approval/adoption, of which one is on “WMO Guide for National Meteorological and Hydrological Services in Support of National Multi-Hazard Early Warning Procedures, Coordination Mechanisms, Systems and Services - Guide No. 1 – Tropical Cyclones. This SERCOM-2 recommendation was adopted by EC-76 (27 February – 3 March 2023).

2.2 The Committee was informed of EC-75 (June 2022) Resolutions/Decisions relevant to tropical cyclones:

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### **Expert Team – MHEWS Technical Guide (ET-MTG)**

2.6 The Expert Team under the SC-DRR of SERCOM has developed a guide for the effective support by the national meteorological services to their national disaster risk management. This guide is focusing on Tropical Cyclones as a first step. The Guide was approved by EC-76 (Resolution 3.(10)/1) and will be published and implemented.

### **Development of Impact-based Tropical Cyclone Forecast Products**

2.7 The AG-TC-2 and AG-TC-3 discussed on carrying forward development of the TC IBF products in relation to implementation of the Decision 10/EC-68 to develop impact-based tropical cyclone forecast (TC IBF) products under the initiative of RSMCs on tropical cyclones, in collaboration with Members with experience in impact-based tropical cyclone forecast and warning services. Based on the list of TC IBF products that were presented during the AG-TC-1 and are currently available and in operational application in some RSMCs, the AG-TC-3 decided to make a survey to WMO Members prone to tropical cyclones on their existing TC IBF products and needs/requirements further development of the TC IBF products. The survey will be circulated to all tropical cyclone prone Members soon.

### **3. UPDATES ON ACTIVITIES in WMO SINCE TC-54**

#### **Tropical cyclone seasonal forecasting**

3.1 The Panel on Tropical Cyclones at its 49<sup>th</sup> session further requested RSMC New Delhi to produce tropical cyclone seasonal forecasting for the Bay of Bengal and the Arabian Sea. RSMC New Delhi will expect to provide tropical cyclone seasonal forecasting after some testing period. RSMC La Reunion has made available tropical cyclone seasonal forecasting before the cyclone season with a monthly updating during the season.

#### **Seventh Session of the Global Platform for Disaster Risk Reduction (GP2022)**

3.2 The seventh session of the Global Platform for Disaster Risk Reduction 'From Risk to Resilience: Towards Sustainable Development for All in a COVID-19 Transformed World' will take place from 23-28 May 2022 in Bali, Indonesia. WMO is also coordinating with members of the International Network for Multi-Hazard Early Warning Systems (IN-MHEWS) to organize the third Multi-Hazard Early Warning Conference (III-MHEWC) immediately preceding the GP2022 event.

#### **Training and Regional activities**

3.3 The Third Miniforum on Tropical Cyclone Outlook in the South West Indian Ocean, 27 October 2022, online.

3.4 The 7<sup>th</sup> International Distance Training Course on Tropical Cyclone Monitoring and Forecasting, WMO RTC Beijing, China, 24 October-4 November 2022, Online.

3.5 RA IV Workshop on Hurricane Forecasting and Warnings and Public Outreach was held from 28 February – 4 March 2022, via online. The same workshop for 2023 is being held face-to-face, 27 February – 10 March.

3.6 The attachment training organized by RSMC New Delhi was successfully conducted online from 4 to 14 April 2022, with two days dedicated to storm surge and wave forecasting, and was attended by 60 participants from PTC Members. The same attachment training in 2023 will be organized from 3 – 14 April, online.

3.7 The attachment training by RSMC Tokyo was held online from 11-13 January 2022. And the same attachment training in 2023 took place online from 11-13 January.

3.8 The 54<sup>th</sup> session of the ESCAP/WMO Typhoon Committee, Lao PDR, 23 - 25 February 2022, online. And the 55<sup>th</sup> session is by Macao China, 7 – 9 March 2023, online.

3.9 The 44<sup>th</sup> session of RA IV Hurricane Committee will be organized online 25-28 April 2022. The 45<sup>th</sup> session of RA IV Hurricane Committee is scheduled in San Jose, Costa Rica, 27 – 31 March 2023, via face-to-face.

3.10 The 49<sup>th</sup> session of the WMO/ESCAP Panel on Tropical Cyclones was held in Saudi Arabia, 27 – 30 June 2023, online.

3.11 The 20<sup>th</sup> session of the RA V Tropical Cyclone Committee for the South Pacific and Southeast Indian Ocean was conducted online from 23-25 August 2022. The 21st session is in planning to be held in Tonga, in July 2023, face-to-face. More details may be referred to the [TCP website](#) later.

3.12 The 2022 Extraordinary session of the RA I Tropical Cyclone Committee for the Southwest Indian Ocean was conducted on 15 November 2022, online.

3.13 Advisory Group on Tropical Cyclones – the first meeting (AG-TC-1) was held on 3 February 2022, online; the second meeting (AG-TC-2) from 7 – 9 June 2023, online; the third meeting (AG-TC-3) on 10 December 2023, face-to-face, back-to-back with IWTC-10; the fourth meeting is scheduled from 16 – 17 May 2023, online.

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