**APPENDIX XIX**

**UPDATE OF THE TYPHOON COMMITTEE OPERATIONAL MANUAL**

1. The Typhoon Committee Operational Manual - Meteorological Component (TOM) has been reviewed and updated every year since its first issue in 1987. The 2021 edition was completed and posted on the WMO website in 2021 in accordance with the approval of amendments to the 2020 edition by the Typhoon Committee 53rd session (23 - 25 February 2021, Japan, video conference).

2. At the 53rd session, the Committee decided that the rapporteur of the RSMC Tokyo - Typhoon Center in Japan Meteorological Agency (JMA) continues arrangements for updating the TOM. In this connection, on 7 October 2021 in advance of the annual revision of TOM, the rapporteur, Mr. HOSOMI Takuya of the RSMC Tokyo - Typhoon Center requested the focal points of the meteorological component of the Members to input on tropical cyclone analysis and forecast procedure by the NMSs.

3. Input on analysis and forecast procedure were submitted by five focal points of Hong Kong, China; Japan; Malaysia; the Philippines and Thailand.

4. On 28 January 2022, the rapporteur proposed some revisions, including reflection of the inputs such as TC analysis and forecast procedure from the members, to the focal points of the meteorological component of the Members and invited them to further provide comments for the revision and proposals for updates.

5. Proposed revisions, updates and amendments are embedded as a format of MS-WORD track-changes as attached in Annex 1. The major points of the revisions are given below:

* Proposal by the RSMC-Tokyo – Typhoon Center
* Revision of the description on the section responsible for the maintenance of the format given in Appendix 7-B (Section 7.3)
* Update of the information on the list of names for tropical cyclones adopted by the Typhoon Committee for the western North Pacific Ocean and the South China Sea (Appendix 1-B)
* Revision and update of the number of vertical levels, ensemble members in deterministic models and global EPS provided by RSMC Tokyo - Typhoon Center available at the Numerical Typhoon Prediction Website (Appendix 3-A)
* Proposal by the seven focal points of China; Hong Kong, China; Japan; Malaysia; the Philippines; the United States of America: and Thailand
* Addition of the meanings of terms used for regional exchange (Section 1.3)
* Revision of the registration platform of surface and upper-air stations in the regional basic synoptic network (Section 2.1)
* Revision of the description on issuance of advisory information by TCAC Tokyo (Section 4.5)
* Update of the information on the list of stations from which enhanced surface observations are available (Appendix 2-A)
* Update of the information on the list of stations from which enhanced upper-air observations are available (Appendix 2-B)
* Update of the distribution of the radar stations of Typhoon Committee Members (Appendix 2-D)
* Update of the information on the technical specifications of radars of Typhoon Committee Members (Appendix 2-E)
* Update of the information on the technical specifications of satellite operated by Typhoon Committee Members (Appendix 2-F)
* Revision and update of the table on the satellite imagery receiving facilities at Typhoon Committee Members (Appendix 2-G)
* Revision of the description on reconnaissance flights conducted by Typhoon Committee Members (Appendix 2-I)
* Update of the products provided by RSMC Tokyo – Typhoon Center (Appendix 3-A)
* Update of the information on the analysis methods, forecasting methods and NWP (Appendix 3-B)
* Updates of the classifications of tropical cyclones in the western north pacific internally used by Members (Appendix 4-A)
* Update of the information on the present operational status of the meteorological telecommunication network for the Typhoon Committee region (Appendix 5-B)
* Update of the contact details (Appendix 5-C)
* Update of the abbreviated headings for the tropical cyclone warnings (Appendix 5-D)
* Update of the list of collection and distribution of information related to tropical cyclones (Appendix 5-E)
* Update of the table of abbreviated headings (TTAAii CCCC) (Appendix 5-F)
* Revision of the description and formats on standard procedures for the verification of typhoon analysis and forecast at national meteorological centres (Appendix 6-D, 6-E)