

ESCAP/WMO Typhoon Committee
Fiftieth Session
28 February to 3 March 2018
Hanoi, Viet Nam

FOR PARTICIPANTS ONLY
WRD/TC.50/10.1
25 January 2018
ENGLISH ONLY

REPORT ON TCS ACTIVITIES IN 2017

(Submitted by TCS)

ACTION REQUIRED:

The Committee is invited:

- a) To take note of the major TCS activities in 2017
- b) To advise the improvement of the functions carried out by the Secretariat
- c) To approve the recommendations of TCS for 2018

APPENDICES:

- 1) DRAFT TEXT FOR INCLUSION AT SESSION REPORT
- 2) TCS ACTIVITIES REPORT 2017

APPENDIX A:

DRAFT TEXT FOR INCLUSION IN THE SESSION REPORT

10.1 Report of the Typhoon Committee Secretariat (agenda item 10.1)

10.1.1 The Committee took note of the report of the Typhoon Committee Secretariat.

10.1.2 The Committee noted with appreciation the TCS's activities 2017 in order to enhance coordination and support to Members, improve the cooperative mechanism between TC and PTC, implement SSOP II project, increase the visibility of Typhoon Committee via the social media, improve the TC website for sharing the forecast products and information, coordinate Working Groups activities, and keep TCS operation smoothly when Typhoon Hato hit Macao and the office seriously damaged.

10.1.3 The Committee expressed appreciation to Members for their donation for the Typhoon Committee Trust Fund and in-kind contributions, and encourage Members to continue support activities of the Committee.

10.1.4 The Committee dealt with related issues under the relevant agenda items.

10.1.5 The Committee approved the recommendations submitted by TCS as expressed in paragraph XX.

(Additional text to be added in the light of discussion on this item)

APPENDIX B:

TCS ACTIVITIES REPORT 2017

1. Introduction

In 2017, under the supervision of TC Chair, Vice Chair and the AWG of the Committee, the Typhoon Committee Secretariat (TCS) made efforts on maintaining the Committee mechanism running properly for fulfilling the decisions of 49th Session of the Committee. With the strong support and kind cooperation from all Members, Working Groups, ESCAP and WMO, TCS endeavored to carry out its functions successfully in 2017 as the executive body of the Committee.

2. Execution of the Decisions of the Committee

- Inviting Members to join based on the Terms and Conditions of EXOTICCA, expressing the benefits on joining the project
To invite Members to join the EXOTICCA project, the Second Organizing Committee Meeting was held in Shanghai, China from 7 to 8 September 2017. Experts from China, Hong Kong, Thailand, Malaysia and Viet Nam and USA were invited to share and discuss current techniques in typhoon intensity monitoring and the difficulties encountered. In conjunction to the meeting, a Research Fellowship was held in Shanghai from 1 to 30 September 2017 for the study and analysis of the data collected during past EXOTICCA experiments. Experts from Viet Nam and Thailand participated in the Fellowship to get familiar with the project and demonstrate the benefits on joining the project.
- Implementation of SSOP II
Since TC 49th Session, TCS cooperated closely with the Steering Committee (SC) on implementation of SSOP-II activities, including:
 - Signed the Letter of Agreement (No. 2016-0031) with ESCAP on 24 April 2017.
 - Provided secretariat support for nomination and selection of project manager and signed the LETTER OF SERVICE AGREEMENT with selected project manager Mr. Tom EVANS.
 - Coordinated with PTC Secretariat and 10 beneficiary countries for the activities of nomination and selection of lecturers/experts.
 - Coordinated with PTC Secretariat, RSMC-Tokyo and selected PTC countries for attachment training in RSMCs Tokyo and New Delhi.
 - Conducted with RIMES for implementation of activity 2: consulting workshops (2 days) at national-level for selected 3 nations from TC and PTC regions on supporting updating and improving the existing SOPs by using the knowledge of Manual of SSOPs in combine with Monsoon Forums of RIMES in 2018.
 - Collaborated with PTC Secretariat, WMO Regional Training Center (RTC) Nanjing (also ESCAP/WMO Typhoon Committee Training Center) and 10 beneficiary countries for organizing the SSOP-II activity 1: Training Workshop on Synergized Standard Operating Procedures for Coastal Multi-Hazards Early Warning System, which was held in the Nanjing University of Information Science and Technology (NUIST), Nanjing, China from 24 to 26 October 2017.
 - Provided secretariat support for submitting the first progress report to ESCAP.

- Provided budget schedule and arrangement for all activities.
- Preparation of 50th Anniversary of Typhoon Committee
Following the Decisions of TC-49 on 50th Anniversary of Typhoon Committee, TCS coordinated with Members and AWG on the following:
 - As approved at the 49th Session of the Committee, held in Yokohama, Japan, the Committee approved the activities for the celebration of the 50th Anniversary of the Typhoon Committee. A back-to-back organization of the 3rd TRCG Forum in a Technical Conference (TECO) format was approved with the 2-days event on Monday and Tuesday (26-27 February 2018), with the TC50 Session to follow from Wednesday to Saturday (28 February-03 March 2018).
 - Two Task Teams were setup for TECO and TC50, respectively composed the 3 secretariats (ESCAP, WMO and TCS), TRCG Chair, Viet Nam representative and other Members from TRCG; and TC50 composed by the 3 secretariats (ESCAP, WMO and TCS), AWG Chair, Viet Nam representative and other interested Members.
 - The ideas on the celebration activities, commemorative items, gifts and souvenirs to be organized or produced for TC50 were approved such as: TC50 Logo, Photo Book, Photo Contest, Gifts and a special issue of Typhoon Committee's Journal "Tropical Cyclone Research and Review" with the TECO presentations.
 - In order to make this event more significant, the Committee also approve the invitation of the TC Old Friends guests who have made a great contribution to the Typhoon Committee to join the TC50 Celebration as well a display area for Member's to display their country milestones historical items and materials.
 - TECO main theme is "Embracing new technologies and knowledge to meet the challenges in the new era of tropical cyclone forecasting" and will include both invited keynote presentations and submitted technical presentations for the three topics under the main theme.
- The theme for 12th IWS
As request, TCS worked with WG Chairs on the theme for the 12th IWS. The Integrated Workshop was held in Jeju, Republic of Korea, 30 October-3 November 2017 themed *"Tropical Cyclone Related forecast, warning and DRR in the era of big data and social media: challenges and opportunities."*
- Strategic Plan 2017-2021
The Strategic Plan 2017-2021 has been approved by Forty-ninth session of Typhoon Committee. It has been printed and distributed to Members.
- Kintanar Award
To coordinate the selection process of the nomination for the "Dr. Roman L. Kintanar Award for Typhoon-Related Disaster Mitigation - 2017". TCS would like to thank all KASWG members for their kindly contribution and cooperation. The two institutions to receive the award for this year "Dr. Roman Kintanar Award":
 - **The National Centre for Hydro-Meteorological Forecasting of National Hydro-Meteorological Service(NHMS) – Viet Nam**
In recognition of their outstanding contribution towards the typhoon-related risk reduction and damage mitigation and achievements on their professional tasks, scientific research and international/regional cooperation in 2017.

- **National Disaster Management Research Institute (NDMI) – Republic of Korea**
In recognition of their commitment and outstanding contribution towards typhoon-related disaster mitigation and WGDRR's activities, particularly in research on Disaster Management sharing on typhoon related policies and technologies within the Typhoon Committee's Region and international/regional cooperation in 2017.

3. **Coordination and Participation in the Activities of Annual Operation Plan Implementation**

- **Working Group on Meteorology**

- **12th Integrated Workshop**

The 12th Integrated Workshop (IWS) was held in Jeju, Republic of Korea from 30 October to 3 November 2017. During the parallel sessions WGM Members presented the Members Reports and Progress Reports of the AOPs, POPs and PPs. New plans for 2018 were also introduced and discussed.

- **Technology Transfer of Typhoon Operation System**

The technology transfer of Typhoon Operation System (TOS), previously known as Typhoon Analysis and Prediction System (TAPS) was conducted by Republic of Korea for Thailand and Philippines this year. KMA experts visited TMD from 11 to 12 October 2017 and PAGASA from 13 to 14 October 2017 to provide training and support which included installation of TOS, typhoon forecasting procedure of TOS, manager and user education and emergency response.

- **EXOTICCA 2nd OC Meeting and Research Fellowship**

The Second Organizing Committee Meeting of Experiment of Typhoon Intensity Change in Coastal Area (EXOTICCA) was held in Shanghai, China from 7 to 8 September 2017. Participants from China, Hong Kong, Thailand, Malaysia, Viet Nam as well as USA reported progress of the project, and delivered lectures in instrumentation, surveillance strategy and observation techniques. Future plans for the project were also discussed. In conjunction with the project, a Research Fellowship for the study and analysis of data collected during EXOTICCA period was held in Shanghai from 1 to 30 September 2017 with experts from Viet Nam and Thailand.

- **Technical Meeting on Radar Composite Map Project**

The technical meeting between JMA, TMD and MMD on radar composite map project was held in Japan from 12 to 15 December 2017. During the meeting, progress of the project and special issues were reviewed and JMA provided technical advice and discussed the way forward in 2018.

- **Working Group on Hydrology**

- Coordinated the activities with participating Members for OSUFFIM activities including pilot study in China, Thailand and Malaysia; field survey in Laos, Malaysia and Vietnam; and workshop held in Sun Yat-Sen (SYS) University, Guangzhou, China from 27 to 30 December 2017.

- Provided secretariat support to and participated in the WGH 6th Working Meeting which was held in Seoul, Republic of Korea from 25 to 28 September 2017.

- Set up, with support from Han River Flood Control Office (HRFCO) of Republic of Korea, the WGH webpage (<http://www.typhooncommittee.org/wgh-web-page/>).

- Coordinated the publication of two technical reports, including “*Development of Extreme Flood Forecasting System*” (TC/TD-No.0015) and “*Practical Guidelines of Preparedness for Extreme Flood Risk Management in TC Region*” (TC/TD-No._0016).
- Provided secretariat support to and participated in the WGH parallel session at TC 12th IWS.
- Composed “*Typhoon Committee Hydrological Development Review and Prospect*” for TCRR.
- **Working Group on Disaster Risk and Reduction**
 - Participation in 12th WGDRR Annual Workshop
The 12th WGDRR Annual Workshop with the theme of “Future Strategic Plan of WGDRR after Sendai Framework” was successfully held in Ulsan, Republic of Korea on 30 May to 02 Jun 2017 that was hosted and contributed by National Management Institute (NDMI) of Republic of Korea. All TCS colleagues participated and coordinated in the workshop with the kind invitation from NDMI. The main objective of the workshop is for the follow-up of WGDRR activities and sharing information related to disaster risk reduction among the TC Members, in order to enhance the capacity of disaster management. TCS coordinated the Members’ participation and elaboration of the programme of the workshop and DRR Expert of TCS was invited to share a topic related to Social Media use in DRR.
 - Coordinated the Research Fellowship in STI, China
According to the proposal at the TC 49th Session, Shanghai Typhoon Institute conducted a research fellowship concerning the Project of Benefit Evaluation of Typhoon Disaster Prevention and Preparedness for TC Members on 04-17 September 2017. With the coordination by TCS, a participant from Malaysia successfully took part in the fellowship.
 - Participated and coordinated the Expert Mission
Following the decision at the TC 49th Session, the WGDRR Expert Mission was successfully held in Hawaii, USA on 16-20 October 2017. The expert team delegated by NDMI with TCS exchanged the information related to DRR with the participants from Disaster Management related agencies in Hawaii such as FEMA Pacific Area Office, Central Pacific Hurricane Center and Civil Defense Agency etc. TCS coordinated the organization of the Mission with NDMI and NOAA, USA and took this opportunity to introduce TC to the participated agencies.
 - Coordinated the Community Weather Station Training Workshop in November
For implementation of the WGDRR’s project (iCowin) which aims to promote setting up of community weather station among TC Members for raising public awareness on climate change and extreme weather. Hong Kong Observatory successfully conducted the training workshop for the participating Members from Guam, USA and Lao PDR on 01-03 November 2017 with coordination by TCS.
 - Reestablishment of the forum on TC Website
The forum on TC website that created by WGDRR as one of AOPs is aimed at improving the capacities of disaster management among TC Members through exchange information related to DRR. As it was found that some unknown persons invaded the forum, TCS reestablished the forum, meanwhile, set up the password for each Member to access to the forum.

- **Training and Research Coordination Group**

- The RSMC Tokyo Attachment Training in 2017 was held at JMA Headquarters from 11 to 21 December 2017. In addition to the three forecasters from Thailand, Viet Nam and Hong Kong, China of the Typhoon Committee, as part of the project of SSOP-II, three forecasters from Bangladesh, Myanmar and Maldives of the Panel on Tropical Cyclones also joined the Training. The Training included basic tropical cyclone topics, as well as lectures on warning coordination to enhance capacity in warning development through coordination with disaster risk reduction (DRR) stakeholders.
- To promote the Typhoon Committee's regional cooperation and enhance Members' typhoon monitoring and early warning capability, the China Meteorological Administration organized the International Training Course on Typhoon Monitoring and Forecast from 18 to 27 September 2017. Three forecasters from Viet Nam, Thailand and the Philippines participated in the training course. The course was designed to help trainees to learn how to utilize meteorological satellite information in tropical cyclone and marine weather analysis. A practical session on Dvorak technique was also arranged.
- In 2017, research fellowships were offered by Republic of Korea, China and Hong Kong, China.
 - ✓ The National Typhoon Center (NTC) of KMA provided a training and research program to four participants: one from the Philippines, and two from the Thailand for two weeks (From 16 to 29 April 2017), and one from the Viet Nam for 12 days (From 16 to 27 April 2017). The program consisted of theoretical lectures on typhoon track and intensity forecast, numerical weather prediction, and typhoon re-analysis methods.
 - ✓ The Shanghai Typhoon Institute (STI) of CMA offered two research fellowships in 2017: (i) Two forecasters from Thailand and Viet Nam participated in the fellowship on "Observational Study on Intensity and Structure of Offshore Typhoon for EXOTICCA" which was conducted from 1 to 30 September 2017 in Shanghai Typhoon Institute (STI). (ii) The fellowship on "Benefit evaluation of Typhoon disaster prevention and preparedness" was offered to a forecaster from Malaysia (4-17 September 2017).
 - ✓ Subject to the availability of the participant, the HKO will host the Typhoon Committee Research Fellowship in January-February 2018 on a topic entitled "Short-term Rainfall Forecast for Tropical Cyclone Using Himawari-8 Data and NWP Model Products".

- **Participating in the 73rd Session of ESCAP**

73rd Session of the Economic and Social Commission for Asia and the Pacific was held in Bangkok from 15-19 May 2017. Typhoon Committee Secretariat submitted the TC annual report to the Session (E/ESCAP/73/INF/3/Rev.1). Mr. YU Jixin, on behalf TCS, attended the Session, and made a statement. He informed the Session that ESCAP/WMO Typhoon Committee officially established in 1968, and has already a long history of about forty-nine years. Since established, the committee has been playing a unique role in reducing the loss of life and properties and minimizing social, economic, and environmental impacts by typhoon-related disasters. Typhoon Committee will

hold a special event in next year to celebrate 50th Anniversary of Typhoon Committee in Viet Nam for its contributions to society development. He mentioned that during the year 2015 and 2016, the TC in partnership with the PTC has been managing a project to develop Synergized Standard Operating Procedures for Coastal Multi-Hazards Early Warning System (SSOPs), with financial support from the ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness. The project has been successful ended. He explained appreciations to ESCAP for the kindly support of SSOP II. The newly supported SSOP-II would provide an excellent opportunity to further refine our targets in obtaining the goals of ESCAP and WMO to deepen regional cooperation for disaster risk reduction and resilience in Asia and the Pacific.

4. **The internal capacity building of TCS**

- Under the strong supports of the Macao Meteorological and Geophysical Bureau, the “Agreement between the Government of the Macao Special Administrative Region of the People’s Republic of China and the ESCAP/WMO Typhoon Committee Regarding Administrative, Financial and Related Arrangements for the Typhoon Committee Secretariat” has been completely implemented in 2016.
- On 23 August, typhoon Hato hit Macao, China and made catastrophic damage. TCS office was seriously damaged by high winds and storm surge. However, TCS all staffs made great efforts, and found ways to ensure our functions implementation. The office has been recovered in a shortest period.
- According to the Terms of Reference of Secretary of the Typhoon Committee, Paragraph 2 (The Secretary shall maintain and manage an adequate workforce in TCS for effective delivery of TCS output), and the Agreement Between the Macao Special Administrative Region of the People’s Republic of China and The ESCAP/WMO Typhoon Committee Regarding Administrative, Financial and Related Arrangements for the Typhoon Committee Secretariat, the Typhoon Committee Secretariat has been continually employed Mr. Clarence Fong Chi-kong in the position of Meteorologist, Mr. Jinping LIU in the position of Hydrologist. Mr. LEI PunChi (Barrie) is working as the Disaster Risk Reduction (DRR) Expert on secondment continually.

5. **Other Issues**

- **China-ASEAN Meteorological Disaster Prevention Workshop**
As the invitation of CMA, TCS attended China-ASEAN Meteorological Disaster Prevention Workshop which was held in Haikou, China, 9-10 November 2017. It is one of the actions following Nanning Initiative on China-ASEAN Cooperation in Meteorology. It was enhanced the cooperation between TC and ASEAN countries.
- **ASEAN Regional Forum on Typhoon Disaster Risk Reduction and Water-related Damage Mitigation**
Presented “Cooperation Mechanism on Typhoon-related Water Disaster Reduction in TC Region” at ASEAN Regional Forum Workshop on Typhoon Disaster Risk Reduction and Water-related Damage Mitigation which was held in Guangzhou, China from 4 to 7 December 2017.
- **Assisting KMA in its International Internship Programme**
Following request from Korea Meteorological Administration (KMA) through Korea Meteorological Institute (KMI), TCS accepted two interns. TCS and KMI agreed to sign a MEMORANDUM OF UNDERSTANDING for Korean International Meteorological

Internship Program to enhance cooperative relations between two parties by encouraging human resource development cooperation

- **Composed “Review of ESCAP/WMO Typhoon Committee Development in Past 50 Years” for TCRR.**

6. Recommendations

Based on the experience of routine operation in 2017 and in the past years, and considering needs and possibility, TCS made the following recommendations to Typhoon Committee Fiftieth Session for consideration:

- To allocate US\$28,000 from TCTF for supporting overall TCS activities; US\$3,000 for supporting IWS hosting in 2018 and US\$2000 for IWS related activities;
- To express appreciations to Members for their donation for the Typhoon Committee Trust Fund and in-kind contributions, encourage Members to continue support activities of the Committee.
- To thank Members for their cooperation and supporting SSOP phase II.