

Typhoon Committee  
Forty-fifth Session  
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Hong Kong, China

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**TYPHOON COMMITTEE SECRETARIAT ACTIVITIES  
ANNUAL REPORT 2012**

**(Item 9 of Provisional Agenda – Report of the Activities of TCS and AWG)**

**(Submitted by Typhoon Committee Secretariat)**

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**Summary and Purpose of Document:**

**This document reviews the principal activities of Typhoon  
Committee Secretariat (TCS) during 2012**

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Action Proposed

The Committee is invited to:

Take note of the major activities of the Typhoon Committee Secretariat during 2012

Advise how to improve the efficiency and effectiveness of the performance of the functions carried out by the Secretariat

## **SUMMARY REPORT ON ACTIVITIES OF TCS IN 2012**

In 2012, the Typhoon Committee Secretariat (TCS), as the executive body of the Committee, made great efforts on maintaining the Committee mechanism running properly for fulfilling the decisions of 44<sup>th</sup> Session of the Committee which was held in Hangzhou, China from 6 to 11 February 2012. TCS issued 316 letters for coordinating the activities of Committee in 2012. With the strong support and kind cooperation from all Members, Working Groups, ESCAP and WMO, TCS has got the achievements and progresses since 44<sup>th</sup> Session in 2012 on following five aspects:

- (1) Executing the decisions of the Committee;
- (2) Coordinating the activities of Annual Operation Plan (AOP) implementation;
- (3) Enhancing the visibility of Committee in the International community, giving presentations in various international meetings not directly related to TC.
- (4) Improving the resource mobilization for the Committee, contacting potential donors.
- (5) Promoting the internal capacity building of TCS.

### **PART 1 EXECUTION OF THE DECISIONS OF THE COMMITTEE**

In 2012, TCS made efforts to provide strong and fundamental support to AWG with effectiveness and efficiency for executing and achieving the general decisions of the Committee made at its 44<sup>th</sup> Annual Session, whose progress was tracked.

- **TCTF Management.**

Based on the Committee's decision of budget allocation for AOPs, TCS kept close communication with WMO on the TCTF management. The Work Plan for 2012 was adjusted timely according to the changes of AOPs' implementation plan made by the working groups to meet the need of WMO financial rules. Consequently, the AOPs have been ensured to be implemented favorably and successfully.

- **Strategic Plan 2012-2016.**

Following the adoption of the strategic plan by the 44<sup>th</sup> Session of the TC, TCS sketched out and printed a booklet in order to make known its contents to Members and other potential stakeholders.

- **TC 7<sup>th</sup> Integrated Workshop, Nanjing, China, 26-30 November.**

In cooperation with Members, ESCAP and WMO, TCS assisted the CMA and the WMO Regional Training Center Nanjing to organize the 7<sup>th</sup> Integrated Workshop with the title of "Effective Warnings" held in Nanjing, China, from 26 to 30 November 2012, namely in what refers to the preparation of the Aide-Memoire, Tentative Programme, Information Note for the Participants and other documents. TCS also summarized the report and AOPs of the WGs, TCTF Budget and Work Plan for 2013.

- **Agreement between WMO Regional Training Center Nanjing and the TC**

In collaboration with the AWG, TCS coordinated the revision of the draft of the agreement between WMO Regional Training Center Nanjing, hosted by Nanjing University of Information Science and Technology (NUIST) and TC for the creation of a training center for the Typhoon Committee in the WMO RTC Nanjing. The Agreement was signed by the President of NUIST, Professor LI Lianshui, and the Secretary of TC, on November 26 and 30 respectively.

- **TC 45<sup>th</sup> Annual Session.**

In kind cooperation with the Hong Kong Observatory, TCS was involved in the preparation of TC 45<sup>th</sup> Annual Session to be held in Hong Kong, China, from 29 January to 1 February 2013, including information note, participants' registration, Tentative Agenda, Annotated Tentative Agenda, Programme and Working Documents.

- **Kintanar Award.**

TCS requested all Members for the appointment or reappointment of representatives for the Kintanar Award Selection Working Group (KASWG), which is currently composed of 8 members. TCS also requested the Members to submit applications for the "Dr. Roman L. Kintanar Award 2012 for Typhoon-related Disaster Mitigation". Only one application has been presented, submitted by Hong Kong-China, proposing the Government Flying Service (GFS) of Hong Kong, which was submitted to the KASWG.

- **Tropical Cyclone Research and Review Papers**

TCS collaborated with the TCRR calling for papers for publication and also writing two papers (*Brief Introduction to Synergized Standard Operating Procedures for Coastal Multi-Hazards Early Warning System*, and *Progresses and Challenges on QPE/QPF Utilization in Hydrology*).

- **Publications**

In 2012, TCS edited and/or coordinated several publications for the Committee since 44th Annual Session as following:

- 1) Tropical Cyclone Research and Review (TCRR) – Vol. 1, Nos.1, 2, 3 and 4;
- 2) The second assessment report on the influence of climate change on tropical cyclones in the Typhoon Committee Region;
- 3) Report on DRR Expert Mission (to Cambodia, Lao PDR and Thailand)
- 4) Final Report of the Project on Hazard Mapping for Sediment-related Disasters;
- 5) Final Report of the Project on Establishment of Flood Disaster Preparedness Indices;
- 6) Assessment Report of the Damages Caused by Tropical Storm Washi;

7) Booklet on Strategic Plan 2012-2016.

8) Typhoon Committee Newsletters - first and second semesters 2012;

## **PART 2 COORDINATING THE ACTIVITIES OF ANNUAL OPERATION PLAN (AOP) IMPLEMENTATION**

At the 44<sup>th</sup> Session, the Committee approved the Annual Operating Plan, which consisted of 25 AOPs. TCS made efforts to provide strong and effective coordination amongst AWG, WGM, WGH, WGDRR and TRCG to successfully implement the AOPs in 2012. The main activities in which TCS has been involved are described below.

- **Meeting on drafting the Guidelines of UFRM, Nanjing, China 13-14 February**

Following recommendation of the TC 6<sup>th</sup> Integrated Workshop held in November 2011 in Nha Trang, Vietnam, and generously offer from WMO Regional Training Center (RTC) Nanjing, the Draft Meeting on Urban Flood Risk Management (UFRM) Guidelines was held in Nanjing from 13 to 14 February. The meeting was chaired by Dr. Zhiyu LIU, leader of the UFRM project and vice Chairperson of WGH, and participated by 14 delegates, including the hydrologist of TCS, Dr. Jinping Liu.

- **Expert Mission on Washi, Manila and Cagayan de Oro, April 23-27, 2012**

Following decision of the TC at its 44<sup>th</sup> Annual Session it was accomplished a mission to assess the impacts of tropical storm Washi (Sendong, national name in the Philippines), which visited Manila and Cagayan de Oro (CDO) city, in Mindanao. Taking advantage of this mission, a seminar on the WGTCDIS, developed by the National Disaster Management Institute (NDMI) of Republic of Korea, was held in Manila, in PAGASA headquarters, and in CDO. Presentations were also given on the introduction and application of the Frequency Analysis of Rainfall Data and to Mountain Flash Flood Prediction System, also developed by NDMI. It was expected to visit Iligan City but due to security reasons, this part of the mission was not accomplished. The team was composed of representatives of ESCAP, NDMI, NEMA, PAGASA and UNDP. TCS was represented by the Secretary. The Report of the mission was published and posted on the TC Website.

- **AWG Meeting, Seoul, Republic of Korea, May 28-29, 2012**

TCS coordinated, with the kind assistance of KMA, the realization of the meeting of the AWG, in Seoul, Republic of Korea, on 28-29 May 2012, in which the main legal documents of TC were revised: Rules of Procedure of The Typhoon Committee; Terms of Reference of TC, Chairperson and Vice-Chairperson of TC, Secretary, Secretariat, Advisory Working Group (AWG), Working Groups on Meteorology, Hydrology, DRR and the Training and Research Coordinating Group; Terms of reference of the Chairs of the WGs.

- **7<sup>th</sup> WGDRR Workshop, Seoul, Republic of Korea, May, 30-31, 2012**

At kind invitation of National Disaster Management Institute (NDMI), representatives of TCS participated at the 7<sup>th</sup> WGDRR Workshop, which was held in Seoul, Republic of Korea, on 30-31

May 2012. For the first time a representative of the Panel on Tropical Cyclones also participated in this workshop, financially supported by NDMI.

- **Meeting on Main Legal Documents of TC, Hong Kong - China, June 22, 2012**

The Secretary and the Meteorologist of TC participated in a meeting in Hong Kong with the Chairperson of TRCG, Mr. Edwin Lai, for revising the report of the AWG Meeting of Seoul, whose final version with inputs from AWG members and KMA was sent to all Members.

- **First Working Meeting of UNESCAP/WMO TC WGH, Seoul, Republic of Korea, 7-10 October 2012**

Referring to the decision of the 44th Session of TC, the Working Group on Hydrology (WGH) had its first working meeting with the theme of "Comprehensive Counterplan for Extra-Ordinary Flood" in Han River Flood Control Office (HRFCO) of Korea, Seoul from 7 to 10 October 2012 at the kind invitation of the Ministry of Land, Transport, and Maritime Affairs (MLTM), Korea with generous offering of financial support.

- **Expert Mission on WGTCDIS, Guam, USA, 08-09 October and Kuala Lumpur, Malaysia, 11-12 October 2012**

Following decision of Typhoon Committee at its 44th Annual Session, and in accordance with the Annual Operating Plan of the Working Group on Disaster Risk Reduction (WGDRR), the Secretary of TC and a team of five experts from the Ministry of Public Administration and Security of the Republic of Korea (MOPAS) visited the headquarters of the Office of Civil Defense of the Guam Homeland Security, on 08-09 October 2012, where was presented an introduction to the project Web GIS based Typhoon Committee Disaster Information System. The second part of this mission consisted of a visit to Kuala Lumpur, Malaysia, on 11-12 October 2012, with similar programme. Mr. Leong Kai Hong (Derek), meteorologist of TCS, represented TC Secretariat in this part of the mission. Taking advantage of this mission the team also presented an introduction to NDMI, and gave presentations on Flash Flood Alert System (FFAS) and Frequency Analysis for Rainfall Data (FARD), developed by National Disaster Management Institute (NDMI).

- **Visit to the Shanghai Typhoon Institute (STI) - Shanghai, China, 3-5 December 2012**

The meteorologist of TCS, Mr. Leong Kai Hong (Derek), under invitation of the Director of Shanghai Typhoon Institute (STI), Mr. LEI Xiaotu, visited this Institute together with Dr. Ki-Ho Chang, researcher of KMA, in his capacity as Visiting Editor of the scientific journal "Tropical Cyclone Research and Review" (TCRR). This visit permitted the discussion on next five-year plan to enhance the STI capacity to meet growing demand of meteorological service and other issues related to TC activities, namely assessment report on the impact of climate change on tropical cyclone track and impact area, verification of typhoon forecast, web-based typhoon forum and the TCRR.

- **Visit to Sun Yat-sen University, Guangzhou, China, September 22, 2012**

Dr. Jinping Liu, hydrologist of TCS, visited Prof. Yangbo CHEN of Sun Yat-sen University on September 22, 2012 to discuss the possibility of jointly developing the Operational System for Urban Flood Forecasting and Inundation Mapping OSUFFIM for TC Members. During the visiting,

he had the opportunity to get information on the system of urban flood inundation mapping developed by the team of Prof. Chen, which is used in Flood Control Office of Dong-guan City of Guangdong Province. A deep discussion was held on the proposal of OSUFFIM and the Funding Agreement issued by Macao Science and Technology Development Fund (STDF).

- **UFRM training course, Guangzhou, China September 24-26, 2012**

Dr. Jinping Liu participated at the UFRM training course which was held in Guangdong Provincial Bureau of Hydrology, Guangzhou, from 24 to 26 September 2012. The course was organized by the Bureau of Hydrology (BOH) under the Ministry of Water Resources (MWR) of China, in cooperation with Typhoon Committee Secretariat (TCS). The main objective was the training on enhancing the capacity of urban flood forecasting and inundation mapping with contents including: (1) application of hydrological/hydraulic modeling (Xin'anjiang model); (2) urban flood inundation mapping; and (3) the skill of hydro-meteorological coupling modeling with QPE/QPF products application.

- **First Working Meeting of TC WGH, Seoul, Republic of Korea, October 7-10, 2012**

Following the decision of the 44<sup>th</sup> Session of the TC, the Working Group on Hydrology (WGH) had its first working meeting with the theme "Comprehensive Counterplan for Extra-Ordinary Flood" in Han River Flood Control Office (HRFCO) of Korea, Seoul from 7 to 10 October 2012 at the kind invitation of the Ministry of Land, Transport, and Maritime Affairs (MLTM), Korea with generous offering of financial support.

- **Roving Seminar 2012, Seoul, Republic of Korea, October 30 - November 1, 2012**

The Roving Seminar (TCRS) 2012, with the main theme *Tropical Cyclone Damage Assessment and Impact Forecast*, was held in Seoul, Republic of Korea. It was organized by the TC and hosted by the National Disaster Management Institute (NDMI) of Republic of Korea, as one of the Sessions of the *International Seminar for Disaster Prevention Cooperation 2012* which was also hosted by NDMI from 30 October to 1 November. The Roving Seminar was attended by 20 participants from Korea (8); Cambodia (2); China (2); Hong Kong (1); Macao (1); Malaysia (1); Philippines (1); Thailand (2); Viet Nam (2) and along with the representative from the Typhoon Committee Secretariat, Mr. Leong Kai Hong, Meteorologist of TCS. The TC Secretary also attended the Seminar as he was invited by NDMI as speaker for the International Seminar.

- **Coordination of Research Fellowship Scheme.**

In 2012 TCS, in collaboration with TRCG, coordinated the participation of the awardees in the activities under the fellowship scheme. Fellowships were offered by Hong Kong, China (fellows from Malaysia and Philippines) and Republic of Korea (fellows from Philippines, Thailand and Lao PDR). The main themes were, respectively, "*Enhancement of rainfall nowcast in tropical cyclone situation*" (HKO) and "*Typhoon Analysis and Prediction System (TAPS), genesis and dissipation of tropical cyclones, and change of typhoon characteristics due to climate change*" (KMA).

- **Forecasters' Training Attachment**

Two forecasters, one from Viet Nam and another from the Philippines visited JMA headquarters from 18 to 27 July 2012 to participate in the 12th Typhoon Committee Attachment Training. The contents of the training included Dvorak technique, storm surges, QPE/QPF and other aspects related to TCs analysis and forecasting.

### **PART 3 ENHANCEMENT OF THE VISIBILITY OF THE COMMITTEE**

In 2012, TCS took all opportunities to enhance the cooperation and linkage with ESCAP, WMO and other regional and international organizations in order to promote the visibility of the Committee in the international community.

- **Workshop on Application of Space Technology for Water-related Disaster Reduction, Macao, China, February 27- March 2, 2012**

ESCAP organized its second Workshop for the Project on Application of Space Technology for Water-related Disaster Reduction from 27 February to 2 March 2012 in Macao, China, which is one of the WGH AOPs, in cooperation with the Typhoon Committee Secretariat (TCS). The Workshop was hosted by Macao Meteorological and Geophysical Bureau (SMG) and financially supported by the Japan Aerospace Exploration Agency (JAXA). The workshop was linked with TC cross-cutting project of Urban Flood Risk Management (UFRM) as a follow up of the outcomes of the Workshop on Space Application to Reduce Water-related Disaster Risk in Asia held in Bangkok from 7 to 9 December 2010 and attended by participants from Cambodia, China, Japan, the Philippines, the Republic of Korea, Thailand, Vietnam and Macao, China.

- **Workshop on the Use of Multi-Global Navigation Satellite Systems for Sustainable Development, Bangkok, March 21-22, 2012.**

The Secretary of TC was invited by ESCAP to participate in this workshop not only due to matters related to applications of GNSS to disaster risk reduction but also to take the opportunity to meet representatives of the Panel on Tropical Cyclones (PTC), Asian Disaster Reduction Center (ADRC) and WMO, partners in the project Synergized Standard Operating Procedures for Coastal Multi-Hazards Early Warning System (SSOP). The participation at the GNSS workshop permitted fruitful revision of the application for the SSOP project.

- **Forum between SMG and Meteorological Societies of China, Hong Kong-China, Portugal - Macao, April 18-20, 2012**

On the occasion of the 60<sup>th</sup> Anniversary of the Macao Meteorological and Geophysical Bureau (SMG) it was held a meeting involving the meteorological societies of China, Hong Kong-China, Portugal and SMG. The Secretary of TC gave a presentation on *Strengthening Capacity Building in Typhoon Committee Members*, in which he emphasized the activities of TC mainly related to training and research.

- **International Seminar on Extreme Hydro-meteorological Events over Consideration of Global Climate Change, Nanjing, China - May 9-10, 2012**

At the request of the Applied Hydrometeorological Research Institute (AHMRI) and the College of Hydrometeorology (COM) under the Nanjing University of Information Science and Technology (NUIST), TCS sent its hydrologist, Dr Jinping LIU to participate in the Seminar on

Extreme Hydro-meteorological Events over Consideration of Global Climate Change, held on 9-10 May 2012 in Nanjing, China. The participants included hydrologists and meteorologists from China, USA, Canada and Holland. Dr. Jinping LIU briefed the organization structure and attribute of TC, the main contents of TC strategic plan 2012-2016 and the advantage of cooperation mechanism of TC in his keynote speech titled Typhoon Committee Strategic Plan and Its Cooperation Mechanism. The participants showed their keen interest to involve in the activities of TC.

- **International Seminar for Disaster Prevention Cooperation – Challenges of Scientific Disaster Management for Future Resilient Society - Seoul, Republic of Korea, October 30 -1 November 1, 2012.**

Under invitation of the National Disaster Management Institute (NDMI) of the Republic of Korea, the Secretary of TC presented the lecture “Strategies for International Cooperation Research for DRR and the role of the Typhoon Committee”. This International Seminar was composed of three parts: “International Workshop for Volcanic Risk Assessment and Disaster Preparedness”, “The 4<sup>th</sup> International Workshop on Natural Disaster Reduction and Management among Taiwan-Japan-Korea” and the “Typhoon Committee Roving Seminar”.

#### **PART 4 IMPROVEMENT OF THE RESOURCE MOBILIZATION**

TCS has tried its best to seek more funds and improve the resource mobilization situation for the Committee in 2012. The main achievements and progresses were briefly described as follows:

- **Macao Endowment Fund.**

Macao Government continued to support TCS through the allocation of the Endowment Fund 2012 for the regular running and staffs’ payment.

- **In-kind Contribution from Members.**

In 2012, TCS coordinated the in-kind contribution from Members including expertise and Macau Society of Certified Practising Accountants (TBD)

- **Macao Science and Technology Development Fund (MSTDF).**

Following the submission by TCS, in cooperation with SMG, of a proposal to MSTDF to seek funding support for developing the Operational System for Urban Flood Forecasting and Inundation Mapping (OSUFFIM), the MSTDF agreed to maintain the offer of MOP 1,400,000 (approximately USD 175,000) until TCS can get from other sources the necessary sum to make up the total needed to implement the project.

- **ESCAP Trust Fund for Tsunami, Disaster and Climate Preparedness.**

Following the submission by TCS of a proposal for getting funds for the project Synergized Standard Operational Procedure for Coastal Multi-Hazards Early Warning System (SSOP), this project was approved and the amount USD 89, 890 (from the total USD 457,000) was already transferred to the account that TCS has opened in Macao for that purpose.

**Under this project the following actions were taken:**

- Telephone Conference on 22 September 2012
- Kick-off Meeting of SSOP, Bangkok, Thailand, on 22-23 October 2012
- Pre-7<sup>th</sup> IWS on SSOP, Nanjing, China – 25 November 2012



- Post-7th IWS meeting of AWG, Nanjing, China – 30 November 2012

## **PART 5 PROMOTING THE INTERNAL CAPACITY BUILDING OF TCS**

TCS has taken the necessary measures on promoting the internal capacity building of the TC Secretariat in order to further improve and enhance the effectiveness and efficiency of Committee. Concretely, the progresses and achievements that TCS has been taking on this aspect could be described as follows:

- Enhancing the communication with Chair/vice-chairpersons and focal points of working groups in Members;
- Enhancing TCS internal meetings;
- Updating the contact information of Leaderships and Focal Points in Members;
- Participation of Ms Lisa Kou, Senior Finance Clerk of TCS, in the "Seminar of Accounting System and Financial Management for Non-profit organizations - Accounting Management System and Practice " held on 18 May 2012, organized by Macau Society of Certified Practising Accountants.

## **PART 6 VISITS TO TCS HEADQUARTERS**

### **• Visit of the Chair and Vice-Chair of TC to TCS headquarters, 17 April**

Ms. JIAO Meiyang, Deputy Administrator of CMA and Chair of the TC and Mr. CM Shun, Director of Hong Kong Observatory and Vice-Chair of TC, visited the headquarters of TCS, in the village of Coloane, in Macao, China, on April 17, 2012. This visit provided a very fruitful conversation about the activities of the Committee and also on the need of reviewing the main legal documents of the TC.