

**IN-KIND CONTRIBUTION
FROM TYPHOON COMMITTEE MEMBERS**

(Item 14 of Provisional Agenda - In-kind Contribution)

(Submitted by Typhoon Committee Secretariat)

ACTION REQUIRED:

The Committee is invited:

To take note of the In-kind contributions from the Members

APPENDICES:

- 1) DRAFT TEXT FOR INCLUSION AT SESSION REPORT
- 2) SUMMARY AND LIST OF IN-KIND CONTRIBUTION FROM TYPHOON COMMITTEE MEMBERS

APPENDIX A:

DRAFT TEXT FOR INCLUSION IN THE SESSION REPORT

REPORT OF TYPHOON COMMITTEE SECRETARIAT

14.3.1 The Committee expressed appreciation for the in-kind contributions from some Members, namely China, Hong Kong, China; Japan, the Philippines, Republic of Korea, Thailand and Viet Nam. The Committee also invited the other Members to report their in-kind contributions, quantifying the corresponding unit of Man-months that have consumed in actions related to TCTF projects. (Appendix xxx).

14.3.2 The Committee also expressed the importance of having in-kind contributions with correspondence values.

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

APPENDIX B:

IN-KIND CONTRIBUTION FROM TYPHOON COMMITTEE MEMBERS FOR 2020

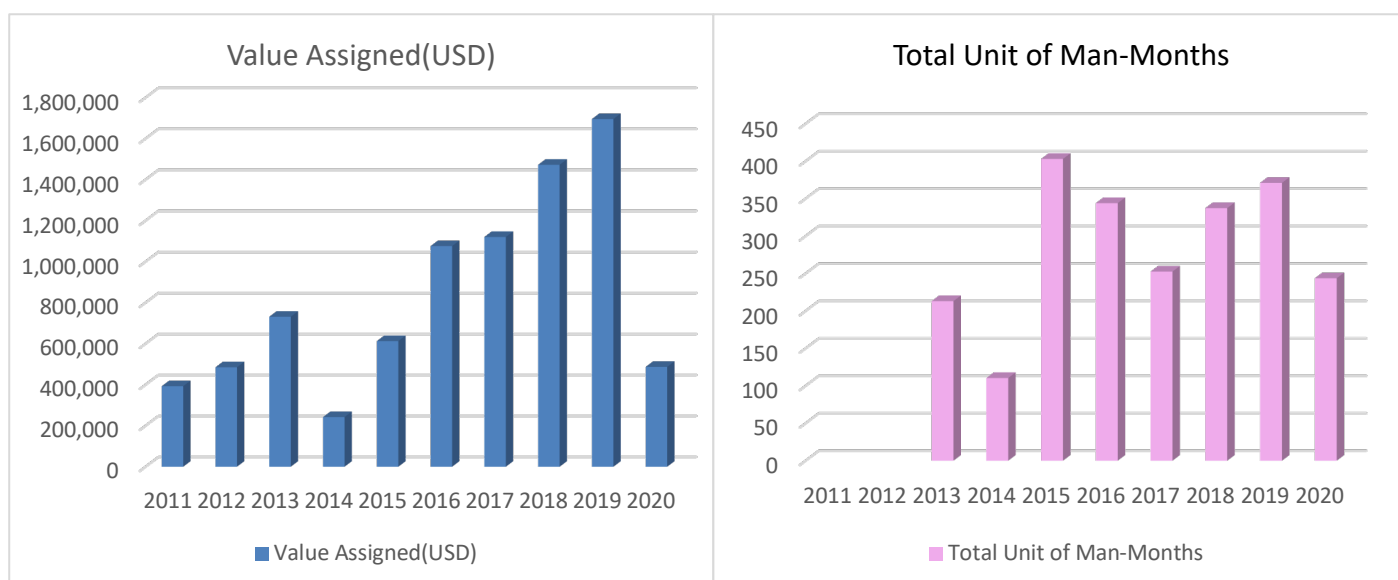
Total In-Kind Contributions for 2020

Total Value Assigned (USD): 487,064.88

Total Unit of Man-Months: 243.66

Member	Unit of Man-Months	Value Assigned(USD)	Remarks
China	119.00	351,195.20	
Hong Kong	5.45	30,700.00	
Japan	34.25	4,500.00	
Philippines	0.64	122.68	
Republic of Korea	70.32	98,830.00	
Thailand	12.00	-	
Vietnam	2.00	1,717.00	
Total :	243.66	487,064.88	

Annually In-Kind Contributions



In-Kind Contributions for 2020

Member Name: China

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Publication of Tropical Cyclone Research and Review (Shanghai Typhoon Institute)	24.00	45,600.00	Online submission system installation, printing and delivery expense for quarterly Journal
Tropical Cyclone Ensemble Forecast Information Website (Shanghai Typhoon Institute)	6.00	5,100.00	Replacement and maintenance of the server machine
AOP2 Tropical Cyclone Research (Guangzhou Institute of Tropical and Marine Meteorology)	12.00	-	Tropical cyclone research and numerical modelling
Construction and Maintenance of Tropical Cyclone Forecast Information Website (Guangzhou Institute of Tropical and Marine Meteorology)	2.00	65,800.00	Expenses of website construction and web server replacement and maintenance
Verification of operational TC model (Guangzhou Institute of Tropical and Marine Meteorology)	4.00	22,000.00	Objective verification of tropical cyclone operational forecasting model by a third party; developing a verification website for tropical cyclone operational forecasting model
Publication of Tropical Cyclone Research and Review (Guangzhou Institute of Tropical and Marine Meteorology)	12.00	18,400.00	Fees for online submission and publication of Journal articles and technical documents
Support to attend Integrated Workshop (IWS) and other activities (Guangzhou Institute of Tropical and Marine Meteorology)	6.00	14,200.00	Reviews and technical reports of performance of Tropical Region Atmospheric Model System(TRAMS); Hosting a seminar on TC NWP model.
The Fifth International Training Course(virtual) on Tropical Cyclone Monitoring and Forecasting (National Meteorological Center)	10.00	5,195.20	Virtual conference online technical support and training platform technical support (92 participants)
International Training Activities (WMO RTC-Beijing)	20.00	152,900.00	In 2020,RTC-Beijing (WMC-Beijing) held 6 distance training courses in the fields of tropical cyclone monitoring and forecasting, meteorological satellite product application ,nowcasting, meteorological observation and short-term climate prediction, there were 94 trainees from 8 TC Members completed these courses.
WGH-AOP4-OSUFFIM project related activities	10.00	18,000.00	6 man-month field survey and data collection to the Chinese pilot study, 4 man-month modeling work on Chinese pilot study
WGH-AOP5-Impact Assessment of Climate Change on Water Resource Variability in TC Members	5.00	4,000.00	Development and Improvement of RCCC-WBM model
WGH-Support to attend 52th VC session	2.00	-	
WGH-Support to attend 9th VC WGH working meeting	2.00	-	
WGH-Support to attend 15th Integrated Workshop (IWS)	4.00	-	
Total :	119.00	351,195.20	

In-Kind Contributions for 2020

Member Name: Hong Kong, China

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
WGM - Web-based typhoon forum and CoDi platform (POP2)	0.10		Collaborate with NMC/CMA to conduct trials, development and report progress of CoDi platform.
WGM - Verification of tropical cyclone operational forecast (POP5)	0.10		Provide support to prepare raw data of TC forecast tracks issued by the Observatory for verification
WGM - Radar nowcasting based on RaINS/SWIRLS (AOP4)	0.75		<ul style="list-style-type: none"> - Provide technical support on the installation, configuration and use of Community SWIRLS - Review and implement development of RaINS / SWIRLS - Provide support to MMD on development of satellite nowcasting in SWIRLS
WGM - Contribution for EXOTICCA-II (AOP6) and Typhoon Landfall Forecast Demonstration Project (TLFDP-IV)	0.75		<ul style="list-style-type: none"> - Provide support on collecting aircraft observations and collaborative research projects. - Provide support on development of various team projects on data sharing platform of tropical cyclone observations, analysis and forecast techniques for TLFDP - Preparation and attendance of the 2nd Joint WMO Workshop on EXOTICCA, UPDRAFT and TLFDP held online on 23-25 Nov 2020
WGDRR - Making Education Videos related to DRR (AOP6)	0.50		<ul style="list-style-type: none"> - Provide support on adding English subtitles and voice over on one of the Observatory educational videos "Cool Met Stuff" with topic related to storm surge for sharing with Typhoon Committee Members to raise public awareness on typhoon disaster. The finalized video had been passed to Typhoon Committee for uploading to website as a WG DRR educational video in Q4 2020. - Provide support in preparing "clean" version of the video to Typhoon Committee Members to add subtitles and voice over in their languages
TRCG - Typhoon Committee Research Fellowship	0.25		<ul style="list-style-type: none"> - Provide support on planning of the project and related logistic matters with TCS - Provide support to the awarded fellow from STI / CMA to conduct the research project remotely in Q1/2021
Hosting of the 52nd Session of the Typhoon Committee	3.00	30,700.00	- Provide logistic support for hosting the TC52, including the 1st and 2nd video conferencing meetings
Total :	5.45	30,700.00	

In-Kind Contributions for 2020

Member Name: Japan

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Maintaining the communication platform	1.00	1,300.00	maintenance of the platform.
Publication of "Annual Report on the Activities of the RSMC Tokyo - Typhoon Center"	3.00	3,000.00	Edition, coordination and proofreading
Publication of "Technical Review"	2.00	200.00	Coordination and proofreading
Development and maintenance of the JMA Numerical Typhoon Prediction (NTP) website	5.00	-	Coordination, development and maintenance
Update of TOM	1.50	-	Coordination
Development of regional radar network	5.25	-	Making a sample composite map using new participating members' data Implementing experimental radar composite data exchange Drafting Quantitative Precipitation Estimation and Quantitative Precipitation Forecasting (QPE/QPF) manual documents
Use of tropical cyclone ensemble forecast in the North-west Pacific region	3.00	-	Development of products using ensemble forecast maintenance of web site.
Enhancement of disaster risk reduction against heavy rain in collaboration of AOP#7 of WGH	0.50	-	Coordination with ICHARM regarding data provision on longer-range forecast
Enhancing utilization of Himawari-8/9 products	1.00	-	Training of Joint development of RDCA products Coordination
Storm Surge Watch Scheme	3.00	-	Development of a new storm surge model framework.
Upgrade of temporal resolution on High-resolution Cloud Analysis Information (HCAI)	9.00	-	Coordination, development and implementation
Total :	34.25	4,500.00	

In-Kind Contributions for 2020

Member Name: Philippines

Activities Supported	Unit of Man-Months ²	Value Assigned (USD) ³	Comments
52nd ESCAP/WMO TC Annual Session: First Video Conference	0.14	19.68	(2) Time spent in attending the Video Conference. (3) Logistic support.
52nd ESCAP/WMO TC Annual Session: 2nd Video Conference	0.14	20.00	(2) Time spent in attending the Video Conference. (3) Logistic support.
9th ESCAP/WMO TC-WGH Virtual Meeting: <i>Attended the 9th TC-WGH Virtual Meeting on 22 October 2020</i>	0.27	62.00	(2) Time spent in attending the Video Conference. (3) Logistic support.
15th ESCAP/WMO TC Virtual IWS: <i>Attended the 15th ESCAP/WMO Typhoon Committee IWS on 02 December 2020</i>	0.09	21.00	(2) Time spent in attending the Video Conference. (3) Logistic support.
Total :	0.64	122.68	

In-Kind Contributions for 2020

Member Name: Republic of Korea

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
[KMA] Development of Typhoon Seasonal Prediction System	12.00	-	Operation and improvement of web-portal for typhoon seasonal prediction
[NDMI] Hosting the WGDRR Video Meeting	3.00	1,330.00	Expenses for the lease of meeting room and internet access
[NDMI] Promote International Cooperation on DRR Project	23.32	45,500.00	Maintenance for 2013 ~ 2015 project in the Philippines
[HRFCO] Establishment of technical criteria for hydrological missing data and outliers processing of hydrological data quality control in TC members	10.00	24,000.00	Finalizing the Technical Methodology of the Data Processing
[HRFCO] Development of the hydrological data quality control system in TC members : Phase I	5.00	6,000.00	Designing the Schematic System of a Draft Version
[HRFCO] Finalization of a draft of technical report for the hydrological data quality control	4.00	4,000.00	Finalizing a Draft of Technical Report and Narrative Review by a Native Speaker
[HRFCO] Establishment of direction for flood forecasting framework with radar rainfall data in TC members	6.00	12,000.00	Determining the Status in TC Members
[HRFCO] Modification of the Extreme Flood Forecasting System modules	4.00	5,000.00	Modification of the System's Module for Application Expansion with Technical Processing with a System Engineer
[HRFCO] Virtual pre-meeting of expert mission wrap-up	3.00	1,000.00	Utilizing a Virtual Meeting System
Total :	70.32	98,830.00	

In-Kind Contributions for 2020

Member Name: Thailand

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
TMD supported 5 staff to serve as experts team in Development of regional radar network (AOP3)	12.00	-	
Total :	12.00	-	

* Thai Meteorological Department (TMD)

In-Kind Contributions for 2020

Member Name: Viet Nam

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Hosting of the 15th Integrated Workshop 2020	2.00	1,717.00	Preparing the online equipment system such as the monitor, camera, microphone, and other activities
Total :	2.00	1,717.00	