

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

(Item 15 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

15.2.1 The Committee expressed appreciation for the in-kind contributions from some Members, namely China; Hong Kong, China; Japan; Malaysia; the Philippines; Republic of Korea; Thailand and USA. 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).

15.2.2 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 2022

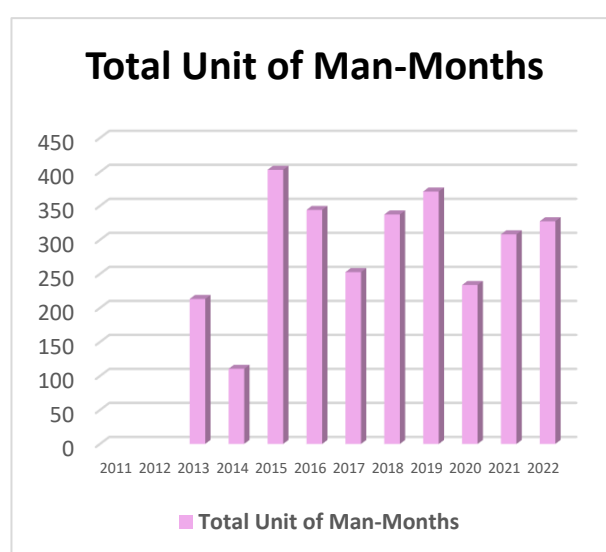
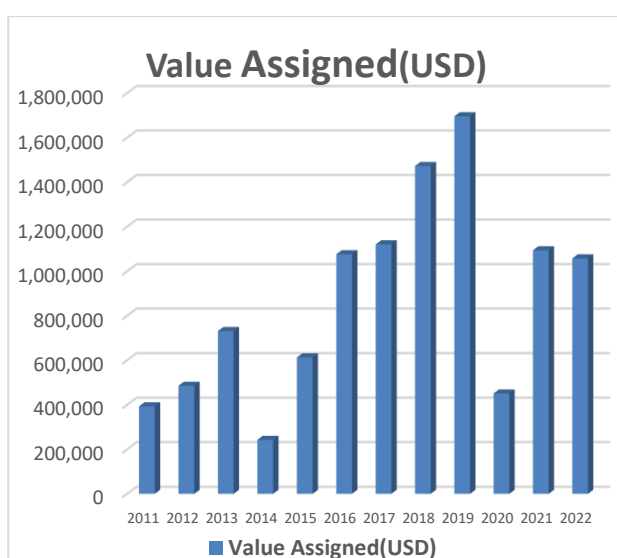
Total In-Kind Contributions for 2022

Total Value Assigned (USD): 1,057,383.31

Total Unit of Man-Months: 327.34

Member	Unit of Man-Months	Value Assigned (USD)	Remarks
China	167.32	254,762.59	
Hong Kong, China	3.45	-	
Japan	31.85	60,007.00	
Malaysia	10.58	22,420.00	AOP2, AOP4 and AOP6
Philippines	3.80	63.72	
Republic of Korea	96.55	717,530.00	
Thailand	12.26	600.00	
USA	1.53	2,000.00	
Total :	327.34	1,057,383.31	

Annually In-Kind Contributions



In-Kind Contributions for 2022

Member Name: China

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Publication of Tropical Cyclone Research and Review	24.00	45,600.00	Online submission system installation; printing and delivery expense for quarterly journals
Online International Training Activities (WMO RTC-Beijing)	32.00	76,810.31	RTC-Beijing held 11 distance training courses in the fields of tropical cyclone monitoring and forecasting, meteorological satellite product application, nowcasting, meteorological observation, and numerical weather prediction etc. Trainees from 12 TC Members completed these courses.
Member report editing and reviewing; update of TOM	4.00	4.00	Editors reviewing manuscripts
Update of Chinese Naming of Tropical Cyclones	2.00	3.00	Specialists consulted and maintenance of websites
Online International Training Activities	21.32	44,270.28	NUIST (RTC-Nanjing) hosted tropical cyclone training courses with 77 trainees from TC Members attending.
WGH-AOP4-OSUFFIM project related activities	30.00	20,000.00	Model improval and preparation of the draft report of OSUFFIM
WGH-AOP5-Impact Assessment of Climate Change on Water Resource Variability in TC Members	50.00	60,000.00	Improve RCCC-WBM model, conduct training workshops on model application, draft technical report of RCCC-WBM model and its application
WGH-AOP8-Training Course on Hydrological Monitoring and Flood Management for Developing Countries	4.00	8,075.00	Launch annual training course with TC WGH activities and bring TC Members Cambodia, Lao PDR, Malaysia and Philippines benefits from the training programme including facilitates, expertise and funding resources.
Total :	167.32	254,762.59	

In-Kind Contributions for 2022

Member Name: Hong Kong, China

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
WGM - Collaborative Discussion (CoDi) Forum on TC Analysis and Forecast (POP2)	0.10		Collaborated with NMC/CMA to continue trial and development, and to report progress of CoDi platform.
WGM - Verification of tropical cyclone operational forecast (POP4)	0.10		Extracted raw data of TC forecast tracks issued by the Hong Kong Observatory for verification
WGM - Radar nowcasting based on RaINS/SWIRLS (AOP4)	0.25		<ul style="list-style-type: none"> - Provided technical support on application of Community SWIRLS of the Hong Kong Observatory - Reviewed progress on development of RaINS / SWIRLS in Malaysian Meteorological Department (MET Malaysia) - Provided support on training and research development of nowcasting techniques in RaINS / SWIRLS
WGM - Contribution for the Experiment on Typhoon Intensity Change in Coastal Area (EXOTICCA-II) (AOP6)	0.50		<ul style="list-style-type: none"> - Provided support for aircraft observations collection and collaborative research projects - Preparation and attendance of the WMO workshop / project meetings to review the development of EXOTICCA-II and UPDRAFT
WGM - Workshop on typhoon forecasting techniques and WGM project progress review (PP1)	0.25		<ul style="list-style-type: none"> - Collaborated with MET Malaysia to develop training programme - Provided support to MET Malaysia and TCS to identify and arrange invitation of experts to deliver lectures
WGDRR - Making Education Videos related to DRR (AOP6)	0.50		<ul style="list-style-type: none"> - Provided support on adding English subtitles and voice over on one of the Hong Kong Observatory educational videos "Cool Met Stuff" on tropical cyclone-related threats for sharing with Typhoon Committee Members. The finalized video had been uploaded on Typhoon Committee website as a WG DRR educational video in Q4 2022
WGDRR - Seminar for TC Crowd-sourcing high density non-conventional weather data (AOP7)	0.50		<ul style="list-style-type: none"> - Arranged and hosted an online seminar on TC crowd-sourcing high density non-conventional weather data for Typhoon Committee members on 5 July 2022 - Delivered two talks on the Pilot Crowd Sourcing Scheme and the establishment of microclimate station network in Hong Kong during the seminar
TRCG - Typhoon Committee Research Fellowship	0.75		<ul style="list-style-type: none"> - Provided support on planning of the project and related logistic matters with TCS - Rendered support to the awarded fellow from TMD to conduct the research project remote and online review meetings in Q1 and Q2 /2022 - Reviewed research results and study report prepared by the fellow
Video Conference Support to AWG meetings, Integrated Workshop and Online Candidate Forum	0.50		Provided support on hosting the AWS meetings, 17th Integrated Workshop and Online Candidate Forum via video conference
Total :	3.45	-	

In-Kind Contributions for 2022

Member Name: Japan

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Maintaining the communication platform	1.00	1,300	Maintenance of the platform
Development of regional radar network	5.75	19,300.00	Making arrangements for a weather radar workshop hosted by Japan Coordinating the way forward to develop regional radar network Creating a sample regional radar composite map using new Members' domestic radar data Implementing experimental domestic radar composite data exchange
Enhancing Utilization of Himawari 8/9 Products	1.50	-	Joint development of Himawari-8/9 RDCA products Making arrangements for a technical meeting to be hosted by Japan
ESCAP/WMO Typhoon Committee RSMC-Tokyo attachment online training course	2.00	200.00	RSMC attachment training 2022 RSMC attachment training 2023 (Preparation) Invited lectures of Professors
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	8.00	-	Coordination, development and maintenance
Update of TOM	1.50	-	Coordination
Use of tropical cyclone ensemble forecast in the western North 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	0.30	-	Coordination with ICHARM regarding data provision on longer-range forecast
TCWGH	3.30	31,270.00	Interpreter, Translator, Operation (Meeting, Site Survey)
Flood Risk Watch Project for Life-saving of AOP#6 of WGH	0.50	4,737.00	Coordination with MLIT regarding data provision and documentation
Total :	31.85	60,007.00	

In-Kind Contributions for 2022

Member Name: Malaysia

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Virtual Workshop for the HQC system for AOP2	1.00000	500.00	Attendance of workshop and contribution in group discussion
Preparation and Submission of Consulting Contents Report for AOP2	1.00000	2,000.00	Collect, Collate, analysis and preparing report for AOP2
Preparation Meeting for AOP4: RaINS Training Attachment 01 June 2022	0.00140	-	First internal committee team meeting to organize the activity.
Preparation Meeting for AOP4: RaINS Training Attachment 14 July 2022	0.00280	-	Second internal committee team meeting to organize the activity
Opening and Closing Ceremony: EMCEE	0.00280	-	Professional EMCEE for hosting the opening and closing ceremony
Office space to host two (2) participants for 10 working days	0.33000	100.00	Office space for (2) is air-conditioned, with fast internet connection
Participants entertainment: Visit to Putrajaya, Capital of Malaysia	0.00420	60.00	Two (2) participants are given a tour to know Malaysia better
Hosting online opening and closing ceremony	0.00280	60.00	Inclusive of Paid Skype Account, and High Speed Internet. Hourly lecture rate of Ringgit Malaysia 120 per hour for 8 hours per day for 10 days
Lectures and Practical Sessions by MET Malaysia given to the two (2) participants	0.33000	2,150.00	
Setting up test cases and working examples of SWIRLS, RaINS, and Satellite Derived Reflectivity using MET Malaysia data	0.07000	1,000.00	Software setup and cost of MET Malaysia data and cost of extracting the data
Presentation of training outcome, discussion, and Q&A with MET Malaysia experts	0.00140	50.00	Presentation facility provided by MET Malaysia.
Miscellaneous work done by officials of MET Malaysia including transport, facilitating, and administration matters in relation to this course	0.33000	-	Man-hours of work done by MET Malaysia staff for facilitating this event.
Site work for AOP6 at Kuala Lumpur	2.00000	4,000.00	Site inspection, selection, installation work and checking for 5 persons.
Data processing, evaluation and reporting for AOP6	3.00000	6,000.00	Data query, screening, analysis and reporting for 2 persons.
Technical meeting, discussion and briefing for AOP6	2.50000	5,000.00	Four (4) time technical meeting and briefing which involved 6 persons.
Installations work new stick gauge for water level sensor APO6	-	1,500.00	Cost for purchasing, installation, checking and handover.
Total :	10.58	22,420.00	

In-Kind Contributions for 2022

Member Name: Philippines

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Workshop on Typhoon Forecasting Techniques (TFTW) <i>Participated in TFTW on 11-13 October 2022</i>	0.10	63.72	(1) Time spent for participating in the workshop. (2) Support for pre-departure expenses of 1 in-person participant
Updating of Typhoon Committee Operational Manual (TOM)	1.00	-	Contributed revisions to TOM
International Training Activities (WMO RTC-Beijing) <i>Participated in various synchronous and asynchronous online courses</i>	1.43		Time spent for participating in 5 training courses
International Training Activities (WMO RTC-Nanjing) <i>Participated in various synchronous and asynchronous online courses</i>	0.77	-	Time spent for participating in 2 training courses
Real-time Online Course on Capacity Building for Enhanced Weather Forecasting for Operational Meteorologist (KMA) <i>Participated in synchronous online course on 17-31 May 2022</i>	0.50		Time spent for participating in 1 training course
Total :	3.80	63.72	

In-Kind Contributions for 2022

Member Name: Republic of Korea

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
[KMA] Improvement of Summer Typhoon Prediction System	12.00	-	Operation and improvement for summer typhoon prediction system
[KMA] Enhancing GK2A Utilization for Tropical Cyclone	6.00	-	Applying Artificial Intelligence technology to GK2A Utilization for Tropical Cyclone
[NDMI] Hosting the 17th WGDRR Annual Meeting(VC)	1.50	2,800.00	Expenses for the lease of meeting room
[NDMI] Promote International Cooperation on DRR Project	55.30	668,235.00	Construction of Flash Flood Alert System(FFAS) and Automatic Rainfall Warning System(ARWS) in the Philippines
[NDMI] Knowledge Sharing / Capacity Building in DRR	1.75	5,495.00	Dispatch 7 Experts for Running Joint Workshop with NOAA, Guam
[HRFCO] Development of the hydrological data quality control system in TC members : Phase III	8.00	24,000.00	Modify the PC-version (stand-alone) computational system with computing engineers and improve the GUI for potential users
[HRFCO] Applicability determination of the System in four target Members	6.00	8,000.00	Determine the applications of the developed system and collect the consulting reports from target Members
[HRFCO] Finalization of the user manual for the System	4.00	6,000.00	Finalizing the context of the technical report with expenses for editing and narrative review by a native speaker
[HRFCO] Hosting the Virtual workshop for the hydrological data quality control in TC members	2.00	3,000.00	Expense in a virtual meeting platform and organize the workshop
Total :	96.55	717,530.00	

In-Kind Contributions for 2022

Member Name: Thailand

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
TMD supported 6 staff to serve as experts team in Development of regional radar network (AOP3)	12.00		
RID and ONWR Support to attend the 11th WGH Working Meeting	0.26	600.00	Daily Allowance, Logistics and Travel Expenses (exclude Air Ticket and Accommodation) for the 11th WGH Working meeting.
Total :	12.26	600.00	

* Thai Meteorological Department (TMD)

Royal Irrigation Department (RID)

Office of the National Water Resources (ONWR)

In-Kind Contributions for 2022

Member Name: USA

Activities Supported	Unit of Man-Months	Value Assigned (USD)	Comments
Joint Task Team (JTT) AP-TCRC meetings	0.03		Virtual Meetings, document reviews and emails.
TRCG online Meeting and other correspondence	0.05		Virtual Meetings, document reviews and emails. Coordination for Scott L. and Derek W. to lecture at MetMalaysia.
USA Member report	0.19		Proof and provide edits/comments to report.
SME to support Met Malaysia training	0.50	2,000.00	Travel Expenses
ROK/NDMI-USA/NWS-Republic of Palau workshop	0.12		Presentation development for the capacity building/knowledge sharing workshop.
Expert Team on MHEWS Technical Guidance	0.50		Virtual Meetings, document development and review, and emails.
SSOP-III proposal	0.14		Discussions, meetings, preparations, presentations
Total :	1.53	2,000.00	