

REPORT on Activities of Working Group on Disaster Risk Reduction (WGDRR) of TC in 2024

(For TC 19th IWS)
(Drafted and Submitted by WGDRR)

ACTION REQUIRED:

The Working Group is invited to:

- A. Review the activities of TC WGDRR conducted in 2024
- B. Approve the recommendations and AOPs with the related budget of WGDRR in 2025

APPENDIX:

- I. Draft text for Inclusion at Session Report
- II. Progress Report on activities of Working Group on WGDRR in 2024

ANNEX

- I. Implementation Status Success Indicators of WGDRR Annual Operating Plans in 2024
- II. Implementation Status Success Indicators of WGDRR Annual Operating Plans in 2025.

APPENDIX

I. Draft text for inclusion at Session Report

1. Disaster Risk Reduction Component

During the 19th Working Group DRR meeting in Seoul, Republic of Korea on June 25-28, 2024, the Working Group reviewed its activities and its Annual Operating Plans (AOPs) for 2024. Please refer to Appendix I for details.

The theme of the meeting was “Towards EW4All: Bridging Gaps for Effective Disaster Risk Reduction”. WGDRR Vice Chair Dr. CHOI Woojung, the head of Disaster Prevention Research Division made an opening address on behalf of WGDRR Chair Dr. OH Keumho. and welcome all members of the meeting. Dr. LEE Chihun delivered a congratulatory address on behalf of Vice Minister for Disaster and Safety Management MOIS, Republic of Korea. Dr Abdullah, Muhammad Helmi, Chair of Typhoon Committee, Met Malaysia, Dr Duan Yihong, Secretary of Typhoon Committee Secretariat and Dr Lee Tsz Cheung, Chair of AWG all presented congratulatory address for the meeting.

Around 42 participants from members and representatives from ESCAP, WMO, TCS, DRR members (China, Hong Kong China, Japan, Lao PDR, Macao China, Malaysia, Philippines, Republic of Korea, Thailand, USA(Guam), Vietnam) and AWG members.

The Working Group passed the following AOPs 2024

1) Review of the 2024 AOPs & Budget Status

- a. AOP1. Capacity Building / Knowledge Sharing (NDMI)
 - i. A cross-cutting program between WGH and WGDRR, was successfully held in Japan from September 24 to 26, 2024. The program was co-organized with the International Centre for Water Hazard Risk Management (ICHARM), Japan Meteorological Agency, and Tohoku University. Participants included representatives from NDMI, Macao China, Vietnam, and TCS.
- b. AOP2. Setting up Early Warning and Alert System (NDMI)
 - i. NDMI has launched the project for strengthening capabilities of disaster risk reduction with the Philippines since 2013. The project is proceeding in 2024 in Olongapo and La Paz after conducting the prefeasibility study.
 - ii. NDMI conducted a field survey in April 2023 and inspected the Early Warning and Alert System and conducted educational program in October.
- c. AOP3. WGDRR Annual Meeting
 - i. NDMI hosted the face-to-face WGDRR Annual Meeting in Seoul Republic of Korea on June 25 to 28, 2024. The meeting topic was “Towards EW4All: Bridging Gaps for Effective Disaster Risk Reduction”. Participants from members, and representatives from ESCAP, WMO, TCS and AWG, participated in the meeting.

- d. AOP4. Benefit Evaluation of Typhoon Disaster Prevention and Preparedness (STI)
 - i. A special fund of USD6,000 from Typhoon Committee Trust Fund (TCTF) will be used to support 1-2 participants to work in Shanghai Typhoon Institute for a duration of two to six weeks (tentatively Nov - Dec 2024). One representative from Malaysia applied for this program and will work in STI from November 21 to December 20, 2024.
- e. AOP5. Sharing Information related to DRR
 - i. To improve the capacities of Member's Disaster Management, WGDR will continue to exchange information and experience related to DRR through the forum on TC website.
 - ii. Members are required to register the Glide so that DRR information can be shared among the members.
- f. AOP6. Making Education Videos related to DRR (HKO)
 - i. A video named "Typhoon Hazards: Strong Winds, Heavy Rain, High Seas" was translated into English with voiceover and subtitles as the coming education video related to DRR. The video is now available in the Typhoon Committee website for members to download for use on public education on DRR.

2. Conclusion of WGDRR

Based on the information provided by the Members, the reports presented by project coordinator/leader and findings of the parallel session on WGDRR, the following conclusions were reached:

- a. AOP1 Capacity Building / Knowledge Sharing, NDMI plans to participate in the PRiMO (Pacific Risk Management 'Ohana) conference, which is tentatively scheduled for March 17 to 20, 2025, in Hawaii. Consultation from Lisa in TCS Finance will be needed for this budget increase. For more information, please visit the PRiMO website: <https://www.coast.noaa.gov/primo/conference>
- b. The AOP2 project focuses on installing early warning systems for typhoon disasters in the Philippines. It includes a self-assessment of the project's effectiveness from 2023 to 2024, using OECD DAC criteria: relevance, efficiency, effectiveness, impact, sustainability, and coherence. Suggestions for improvement include creating utilization plans, conducting stakeholder surveys, and offering community training programs. There is no plan of EWS installation in 2025.
- c. AOP 3 WGDRR Annual Meeting. NDMI will continue to host the 20th WGDRR meeting in 2025.
- d. AOP 4 Benefit Evaluation of Typhoon Disaster Prevention and Preparedness Project. Shanghai Typhoon Institute fellowship program is expected to continue in 2025 and will be hosted by STI/CMA and co-organized by AP-TCRC. 1 participant from Malaysia will be expected to work in STI from November 21 to December 20, 2024.
- e. AOP 5 Sharing Information related to DRR. All members are required to register the Glide. WGDRR will continue to exchange information and experience related to DRR through the forum on TC Website.
- f. At the 19th WGDRR annual meeting, Hong Kong Observatory expressed that they could continue contributing educational videos related to DRR for TC DRR public education use. The project will continue to be led by HKO.

- 1) For implementation of the proposed projects in 2025, WGDRR proposed the request of **USD 24,500** to be allocated TCTF for the following items:
 - (a) To allocate **USD 12,500** budget of TCTF in 2025 for Capacity Building/Knowledge Sharing in DRR
 - (b) To allocate **USD 3,000** budget of TCTF in 2025 for WGDRR 20th Annual Meeting
 - (c) To allocate **USD 6,000** budget of TCTF in 2025 for STI Benefit Evaluation of Typhoon Project
 - (d) To allocate **USD 3,000** budget of TCTF in 2025 for Making Education Video related to DRR

3. **Recommendations for Implementation in 2024**

Based on the conclusion, the WGDRR made the following recommendations:

- 1) To request NDMI to organize the team to the selected member for the project of capacity building and knowledge sharing in DRR.
- 2) To request NDMI to continue supporting the development and improvement of the early warning and alert systems related to typhoon disaster in the participating members.
- 3) To request NDMI, to continue supporting and hosting the WGDRR Annual Meeting in 2025 in ROK.
- 4) To request STI, China to continue conducting the research of the project of benefit evaluation of typhoon disaster prevention and preparedness.
- 5) To encourage the Members to share information related to DRR on the established forum of TC Website and are required to register the Glide.
- 6) To request the HKO to continue providing WGDRR with a video related to typhoon disaster or severe weather and translate it into English version (voiceover and subtitle) for Members use on DRR public education.
- 7) To request the cooperation of the Synergized Standard Operating Procedures for Coastal Multi-Hazard Early Warning System Phase 3 concept SSOP III with WGDRR.
- 8) To request the Typhoon Committee to approve the proposed projects and related budget in 2025.

II. Progress Report on activities of Working Group on WGDRR in 2024

1. Introduction

The Working Group of Disaster Risk and Reduction (WGDRR) continued to implement a series of projects according to the plan outline from the 56th TC Session.

2. Components of the WGDRR

WGDRR Member (Focal points)

<i>Chair</i>	Dr. Oh Keumho (Republic of Korea)
<i>Vice Chairs</i>	Mr. Marcus Aydlett (USA) Dr. Woojung Choi (Republic of Korea)
<i>Focal Points</i>	National Committee for Disaster Management (Cambodia) Ms. Dong Lin (China) Mr. CHOE Kyong Sik (DPR Korea) Mr. K K Hon (Hong Kong, China) Ms. OOHASHI Makiko (Japan) Mr. UMETSU Togo/Ms. FUKUSUMI Naho (Japan) Ms. Akhom Thammalangsy (Lao PDR) Mr. Fan Ka Wa (Macao, China) Ms. Siti Mariam Abu (Malaysia) Mr. CESAR M. IDIO, CESO V (Philippines) Dr. Chihun Lee (Republic of Korea) Mr. Cheong Wee Kiong (Singapore) Mr. Saharat Wongsakulwiwat (Thailand) Mrs. Nguyen Thi Xuan Hong (Vietnam)

3. Organization of the 19th Working Group Disaster Risk and Reduction Meeting “Towards EW4All: Bridging Gaps for Effective Disaster Risk Reduction”, Seoul, Republic of Korea

Meeting Date: June 25-28, 2024

Host: National Disaster Management Research Institute, Republic of Korea.

1. Around 42 participants from members and representatives from ESCAP, WMO, TCS, DRR members (China, Hong Kong China, Japan, Lao PDR, Macao China, Malaysia, Philippines, Republic of Korea, Thailand, USA(Guam), Vietnam) and AWG members.

2. A silent tribute for the disaster victims in the world. WGDRR Vice Chair Dr. CHOI Woojung, the head of Disaster Prevention Research Division made an opening address on behalf of WGDRR Chair Dr. OH Keumho. and welcome all members of the meeting. Dr. LEE Chihun delivered a congratulatory address on behalf of Vice Minister for Disaster and Safety Management MOIS, Republic of Korea. Dr Abdullah, Muhammad Helmi, Chair of Typhoon Committee, Met Malaysia, Dr Duan Yihong, Secretary of Typhoon Committee Secretariat and Dr Lee Tsz Cheung, Chair of AWG all presented congratulatory address for the meeting.

3. Several experts from members share their presentations on disaster risk and reduction areas.
 1. Tropical Cyclone Impact Assessment - Challenges and Opportunities by LEE, Tsz-cheung / HKO.
 2. Urban inundation response technology using deep learning and sensor data by CHO, Jaewoong / NDMI.
 3. Everything Everywhere All at Once: Achieving Early Warnings for All by AYDLETT, Marcus / NOAA).
 4. UN EW4All initiative and progress on regional implementation by YU, Jun / WMO.
 5. Role of IBF in EW4All by (HONG, Soomi / ESCAP.
 6. Equity and Early Warnings 4 All by TANABE, Raymond / NOAA
 7. Experimental Ocean Observation to Enhance Support for Typhoon Analysis by WON, Seonghee / KMA.

- II. Participated members presented their member report accordingly.
 1. Member Report by Ms Dong Lin, China
 2. Member Report by Dr Sze-Ning Chong, Hong Kong, China
 3. Member Report by Mr. Potutan Gerald, Japan
 4. Member Report by Ms. Akhom Thamalangsy, Lao PDR
 5. Member Report by Mr. Iat Meng Lei, Macao China
 6. Member Report by Ms Ain Syafiqah binti Abd. Haris, Malaysia
 7. Member Report by Mr. Melve Warren Lucas, Philippines
 8. Member Report by Dr Chihun Lee, Republic of Korea
 9. Member Report by Mr Attapol Chitrbhandh, Thailand
 10. Member Report by Mr. Marcus Aydlett, USA
 11. Member Report by Mr. Hoang Anh Nguyen, Vietnam

III. Review of the 2024 AOPs & Budget Status

1. AOP1. Capacity Building / Knowledge Sharing (NDMI)
 - i. The AOP1 workshop on Knowledge Sharing and Capacity Building in Disaster Risk Reduction (DRR) was successfully held from September 24 to 26, 2024. This workshop was organized by the National Disaster Management Research Institute (NDMI), co-organized by the International Centre for Water Hazard Risk Management (ICHARM), Japan Meteorological Agency, and Tohoku University. Participants included representatives from NDMI, Macao, China, Vietnam, and TCS.

2. AOP2. Setting up Early Warning and Alert System (NDMI)
 - i. NDMI has been strengthening disaster risk reduction capabilities in the Philippines since 2013. In 2024, the project is underway in Olongapo and La Paz following a prefeasibility study. A field survey was conducted in April, and an inspection of the Early Warning and Alert System, along with an educational program, was completed in October.
3. AOP3. WGDRR Annual Meeting
 - i. NDMI held the 19th annual meeting on June 25-28, 2024, in Seoul, Republic of Korea to facilitate follow-up of the WGDRR activities and information sharing related to DRR. The theme of the 19th Annual Meeting is “Towards EW4All : Bridging Gaps for Effective Disaster Risk Reduction”. Participants included: representatives from ESCAP, WMO, TCS, DRR members China, Hong Kong, China, Japan, Lao PDR, Macao, China, Malaysia, Philippines, Republic of Korea, Thailand, USA(Guam), Vietnam) and the AWG members.
4. AOP4. Benefit Evaluation of Typhoon Disaster Prevention and Preparedness Project (STI).
 - i. A special fund of USD 6,000 from the Typhoon Committee Trust Fund (TCTF) will support 1-2 participants to work at the Shanghai Typhoon Institute (STI) for two to six months (tentatively Nov-Dec 2024). One representative from Malaysia applied the program and will work in STI during November 21 to December 20, 2024.
 - ii. The project's objectives are to:
 - A. Collect and share data on tropical cyclone damage, prevention strategies, and reduction measures.
 - B. Develop benefit evaluation questionnaires.
 - C. Create techniques for risk and damage assessment related to tropical cyclones.
5. AOP5. Sharing Information related to DRR.
 - i. To enhance disaster management capacities, WGDR will continue sharing information and experiences on the TC website forum. Members are required to register with Glide to enable sharing of disaster risk reduction information.
6. AOP6. Making Education Videos related to DRR (HKO)
 - ii. A video named “Typhoon Hazards: Strong Winds, Heavy Rain, High Seas” was translated into English with voiceover and subtitles as the education video related to DRR. The video is now available in the Typhoon Committee website for members to download for use in DRR public education.

IV. Review of 2024 Budget Status.

1. The expenditure for 2024 WGDRR AOP1 to AOP6 will be USD19,186.52. We will have a balance of USD5,313.48.

Project No	Name of Project	Proposed Budget (USD)	Expenditure (USD)
AOP1	Capacity Building/Knowledge Sharing in DRR	\$12,500	\$7,770.68
AOP2	Installation of Early Warning System related to typhoon disasters	Funded by NDMI	--
AOP3	WGDRR Annual Meeting	\$3,000	\$2,728.87
AOP4	Benefit Evaluation of Typhoon Disaster Prevention and Preparedness	\$6,000	\$6,000
AOP5	Sharing Information related to DRR	No need	--
AOP6	Making video related to DRR	\$3,000	\$2,686.97
Subtotal		\$24,500	\$19,186.52
Balance		\$5,313.48	

4. WGDRR AOP 2025 and Budget

I. 2025 Budget

KRA	No	Name of Project	Proposed Budget (USD)
KRA5 KRA7	AOP1	Capacity Building/Knowledge Sharing in DRR (NDMI)	\$12,500
KRA2 KRA3	AOP2	Installation of Early Warning System related to typhoon disasters (NDMI)	Funded by NDMI
KRA4 KRA5	AOP3	WGDRR Annual Meeting	\$3,000
KRA2 KRA4 KRA6	AOP4	Benefit Evaluation of Typhoon Disaster Prevention and Preparedness (STI)	\$6,000
KRA5 KRA7	AOP5	Sharing Information related to DRR	No need
KRA7	AOP6	Making video related to DRR (HKO)	\$3,000
		Total	USD24,500

II. Other business

1. Replacement of Vice Chair: Dr. Woojung Choi to Dr. Chihun Lee

- i. The Chair of WGDRR Dr. OH Keumho and other members attending the meeting expressed gratitude for Dr. Woojung Choi long-term contributions to the work of WGDRR, and deeply appreciated his efforts. The members attending unanimously agreed that Dr. Chihun Lee would replace Dr. Woojung Choi as the Vice-Chair of WGDRR.

ANNEX

I. Implementation for WGD RR AOPs in 2024 with the success indicators

SP's KRA and SG	NO	Objective	Action	Other WGs Involved	TCS Responsibility	Quarter Completed	Project leader/Other Organizations Involved	Success Indicators	Funding Required USD	Funding Sources	Completed YES/NO
KRA5 KRA7	1	Capacity Building /Knowledge Sharing	The AOP1 workshop was successfully, organized by NDMI and co-hosted by ICHARM, the Japan Meteorological Agency, and Tohoku University.	Invite other WGs to join	Coordination and participation	Third	NDMI And participating members	Conducted the Mission in the selected member state	USD 7,770.68	NDMI and TCTF	Yes
KRA2 KRA3	2	Installation of warning systems related to typhoon disaster	The project is ongoing in Olongapo and La Paz, following a prefeasibility study, with a field survey		Coordination	Fourth	NDMI	NDMI assigned experts to Philippines to install and maintain the systems	Unspecified	NDMI	Yes

SP's KRA and SG	NO	Objective	Action	Other WGs Involved	TCS Responsibility	Quarter Completed	Project leader/Other Organizations Involved	Success Indicators	Funding Required USD	Funding Sources	Completed YES/NO
			completed in April and an upcoming inspection of the Early Warning and Alert System and educational program in October.								
KRA4 KRA5	3	Organizing the WGDRR Annual Meeting	To organize the annual meeting to follow up on the working group's activities and information exchange	AWG Members	Coordination and participation	Second	NDMI and TC DRR Members	The meeting was held in ROK	USD 2,728.87	NDMI and TCTF	Yes
KRA1 KRA6	4	Benefit Evaluation of Typhoon Disaster Prevention and Preparedness	To promote the research concerning benefit evaluation of typhoon disaster		Coordination and participation	Fourth	STI, China	Conducted a research fellowship for TC Member in STI, China. One representative from Malaysia	USD6,000		Yes

SP's KRA and SG	NO	Objective	Action	Other WGs Involved	TCS Responsibility	Quarter Completed	Project leader/Other Organizations Involved	Success Indicators	Funding Required USD	Funding Sources	Completed YES/NO
			prevention and preparedness.					joined this program.			
KRA4 KRA5	5	Sharing information related to disaster risk management	To share information such as policies or mechanism related to DRR among TC Members via the forum established on TC Website		Establishment of the forum on TC website for facilitating the information sharing	Time to time	NDMI and TCS	Members shared the information on the forum	No need		Yes
KRA5 KRA7	6	Making educational video related to DRR	To produce a video related to DRR education for raising public awareness.		Coordination	Second	HKO	Prepare a video with English subtitle and voiceover and shared with TC Members	USD 2,686.97	TCTF	Yes

- KRA 1: Enhance capacity to monitor mortality and direct economic loss caused by typhoon-related disasters.
- KRA 2: Enhance capacity to generate and provide accurate, timely and understandable information using multi-hazard impact-based forecasts and risk-based warnings.
- KRA 3: Improve typhoon-related flood control and integrated water resource management.
- KRA 4: Strengthen typhoon-related disaster risk reduction activities in various sectors, including increased community-based resiliency with better response, communication, and information sharing capability.

- KRA 5: Enhance Typhoon Committee's Regional and International collaboration mechanism.
- KRA 6: Create a framework for cooperative scientific research on tropical cyclone and related disciplines, particularly in relation to climate change, and include support for translating research outcomes to services by developing relevant experiments, research projects, conducting field surveys, and publishing and promoting research findings.
- KRA 7: Enhance the resilience of vulnerable communities, especially coastal communities, to tropical cyclone impacts.

ANNEX

II. WGDRR AOPs in 2025 with the success indicators

SP's KRA and SG	NO	Objective	Action	Other WGs Involved	TCS Responsibility	Quarter Completed	Project leader/Other Organizations Involved	Success Indicators	Funding Required	Funding Sources	Completed YES/NO
KRA5 KRA7	1	Capacity Building /Knowledge Sharing	To organize an expert team to participate in the PRiMO) conference for DRR information and capacity building exchange	Invite other WGs to join	Coordination and participation	Second	NDMI And participating members	Conducted the Mission in the selected member state	USD12,500	NDMI and TCTF	
KRA2 KAR3	2	Installation of warning systems related to typhoon disaster	To develop and improve the installed EW and Alert Systems in the members' state to improve the capacities of resilience for typhoon related disaster		Coordination	Fourth	NDMI	NDMI assigned experts to Philippines to install and maintain the systems	Unspecified	NDMI	
KRA4 KRA5	3	Organizing the WGDRR Annual Meeting	To organize the annual meeting to follow up on the working group's activities and information exchange	AWG Members	Coordination and participation	Second	NDMI and TC DRR Members	The meeting will be held in ROK	USD3,000	NDMI and TCTF	

SP's KRA and SG	NO	Objective	Action	Other WGs Involved	TCS Responsibility	Quarter Completed	Project leader/Other Organizations Involved	Success Indicators	Funding Required	Funding Sources	Completed YES/NO
KRA1 KRA6	4	Benefit Evaluation of Typhoon Disaster Prevention and Preparedness	To promote the research concerning benefit evaluation of typhoon disaster prevention and preparedness.		Coordination	Third	STI, China	Shared the research result with members	USD6,000	TCTF	
KRA4 KRA5	5	Sharing information related to disaster risk management	To share information such as policies or mechanism related to DRR among TC Members via the forum established on TC Website		Establishment of the forum on TC website for facilitating the information sharing	Fourth	NDMI and TCS	Members shared the information on the forum	No need		
KRA5 KRA7	6	Making educational video related to DRR	To produce a video related to DRR education for raising public awareness.		Coordination	Third/ Fourth	HKO	Prepare a video with English subtitle and voiceover and shared with TC Members	USD3,000	TCTF	

- KRA 1: Enhance capacity to monitor mortality and direct economic loss caused by typhoon-related disasters.
- KRA 2: Enhance capacity to generate and provide accurate, timely and understandable information using multi-hazard impact-based forecasts and risk-based warnings.
- KRA 3: Improve typhoon-related flood control and integrated water resource management.
- KRA 4: Strengthen typhoon-related disaster risk reduction activities in various sectors, including increased community-based resiliency with better response, communication, and information sharing capability.
- KRA 5: Enhance Typhoon Committee's Regional and International collaboration mechanism.

- KRA 6: Create a framework for cooperative scientific research on tropical cyclone and related disciplines, particularly in relation to climate change, and include support for translating research outcomes to services by developing relevant experiments, research projects, conducting field surveys, and publishing and promoting research findings.
- KRA 7: Enhance the resilience of vulnerable communities, especially coastal communities, to tropical cyclone impacts.