

ESCAP/WMO Typhoon Committee
Forty-night Session
28 February to 03 March 2018
Hanoi, Vietnam

FOR PARTICIPANTS ONLY
WRD/TC.49/X.X
14 December 2017
ENGLISH ONLY

**Report on Activities of Working Group on Disaster Risk Reduction (WGDRR) of
TC in 2017**

(Item X of Tentative Program for TC 50th Session)

(Submitted by WGDRR)

ACTION REQUIRED:

This Committee is invited to:

- a) Review the activities of TC WGDRR conducted in 2017
- b) Approve the recommendations and AOPs of WGDRR for 2017 and beyond

APPENDIXES:

- I. Draft Text For Inclusion at Session Report
- II. Report on activities of Working Group on WGDRR of TC in 2017

APPENDIX I

DRAFT TEXT FOR INCLUSION AT SESSION REPORT

X.X. Disaster Risk Reduction Component

- The Committee took note of the activities; relevant major progress and issues related to Working Group on Disaster Risk Reduction (WGDRR) as presented in WGDRR report 2017
- The Committee reviewed the activities of WGDRR in implementing the TC Strategic Plan and its Annual Operating Plans (AOPs) in relation to DRR component during the past year. Details of which are presented in Appendix II.
- The Committee was informed that 12th WGDRR Annual Workshop was successfully held in Ulsan, Republic of Korea from 30 May to 02 Jun 2017 with the theme of “Future Strategic Plan of WGDRR after Sendai Framework”, which was hosted and funded by National Disaster Management Institute (NDMI) and ESCAP, WMO and AWG Members were also invited to join the meeting.
- The Committee expressed its appreciation to National Disaster Management Institute (NDMI) for their kind contribution and continued support on WGDRR activities.
- The Committee expressed its appreciation to Dr. Shim Jaehyun from Republic Korea for his remarkable contribution as the Chair of WGDRR in the past year.
- The Committee expressed its appreciation to Ms. Genevieve Miller from USA for her contribution and effort in the past year
- The Committee expressed its sincerely appreciation to Ms. Cecilia, Leong Fong Peng from Macau for her contribution and effort serving as the Vice Chair of WGDRR for past many years as the Committee was informed that Ms. Cecilia Leong has officially resigned the role of Vice Chair as her job has changed.
- The Committee was informed that Dr. Yuntae Kim from Republic of Korea to be appointed as the Vice Chair replacing of Ms. Cecilia, Leong Fong Peng.
- The Committee was informed that the projects (AOPs) for 2018 recommended by WGDRR as follows:
 - AOP1: Expert Mission- the project aims to exchange information and experience sharing related to DRR such as policies and technologies among the Members in order to improve the capacities on DRR. It was planned to conduct the expert mission in Thailand in 2018, but it is yet to be confirmed by Thailand.
 - AOP2: Setting up early warning and alert systems – The project is fund by NDMI.

With installation of the EW and Alert Systems NDMI, it improves the capacities of resilience for typhoon related disaster for participating members. NDMI has planned to carry out the project in Laos and Vietnam in 2018.

- AOP3: iCowin project- HKO provides training workshop with the basic equipment for setting up the community weather station in the interested TC Members in order to raise public awareness on severe weather such as climate change..
- i. AOP4: WGDRR Annual Meeting- NDMI will continue to organize and fund the WGDRR annual workshop in order to facilitate follow-up of the WGDRR activities and information sharing related to DRR, as well as the communication among members.
- AOP5: Promote TC-PTC Cooperation: NDMI will invite PTC Member to join the 13th WGDRR annual workshop for information exchange and experience sharing related to disaster management and discussion about the cooperation between TC and PTC on DRR activities.
- AOP6: Participation in the PRIMO Conference- the Conference will be held in Honolulu in August 2018. WGDRR will take part in the conference in order to exchange information related to DRR, as well as introduce TC to the participants.
- AOP7: Benefit evaluation of typhoon disaster prevention and preparedness project- this project is led by Shanghai Typhoon Institute (STI), China that functions to establish a set evaluation index and provide an evaluation report that assists in decision-making basis for the optimization of typhoon disaster behavior. China will provide a fellowship program to the Members for this project in 2018. Miss Zhou Xiao and Chen Peiyan from STI, China will be the coordinator of the project.
- AOP8: Supporting SSOP II Project- The SSOP Project Phase II that is aimed at implementing the Synergized Standard Operating Procedures (SSOP) for Coastal Multi-Hazards Early Warning System. The execution of this project (phase II) will be mainly focused on the training on how to establish an appropriate standard operating procedure (SOP) based on the published SSOP Manual and on promoting the TC and PTC Members' capacity building on Multi-Hazards Risk early warning based on existing technical achievement for National Meteorological and Hydrological Services (NMHSs) in the 10 beneficiary countries. WGDRR will fully support this project's implementation.
- AOP9: Sharing information related to disaster risk management- In order to improve the capacities of Members' Disaster Management, WGDRR will continue to exchange information and experience related to DRR through the forum on TC website established by TCS and DRR annual meeting.
- AOP10: TC Report about Big Data and Social Media use for DRR- It was suggested to collect the report from Members about big data and social media use

for DRR then elaborate the publication for sharing with Members in order to improve the capacities of disaster management. The project will be led by STI, China and coordinated by Miss. Zhou Xiao and Chen Peiyan from STI, China.

- AOP11: Making education videos related to DRR- WGDRR planned to continually produce education videos related to disaster management and share it with the Members for the DRR educational material.

Conclusions of WGDRR

On the basis of 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:

- By the Member's efforts, it have made important progress in the implementation of the TC SP during 2017
- The 12th WGDRR annual workshop was successfully conducted in Ulsan, Republic of Korea from 30 May to 02 Jun 2017 with the theme of " Future Strategic Plan of WGDRR after Sendai Framework". During the Workshop, Working Group on DRR followed up on projects and shared information related to DRR among Members. AWG Member was also invited to attend the workshop., besides the DRR Members. NMDI, Republic of Korea showed that they will continue to organize the 13th WGDRR annual workshop and planned to invite AWG Member to join the workshop in 2018
- WGDRR will continue to conduct the projects that can improve capacities of disaster management for TC Members through exchange of information such as expert mission and information sharing or participation in important conference.
- WGDRR will continue planning the projects related to public education on DRR in coming future that can facilitate raising public awareness on typhoon related disasters such as setting up of community weather station and producing educational video etc.
- It was suggested to enhance the cooperation among the Members and another regional body such as PTC on DRR activities.
- Aside from the AOP items 1-6, the following are the new projects suggested by WGDRR, based on the discussion at the 12th IWS.
 - **WGDRR Annual Meeting-** NDMI will continue organize and fund the WGDRR annual workshop to enhance the DRR Members' communication such as follow-up of the progress of the project, Member's activities and information sharing.

- **Participation in the PRIMO Conference-** the Conference will be held in Honolulu in August 2018. WGDRR will take part in the conference in order to exchange information related to DRR, as well as introduce TC to the participants.
- **Promote TC and PTC Cooperation-** NDMI will invite PTC Member to join the 13th WGDRR annual workshop for exchange of information related to disaster management and seeking the cooperation between TC and PTC
- **TC Report about Big Data and Social Media use for DRR-** To improve the big data and social media use in DRR. It was suggested to collect the information on how to effectively use big data and social media on DRR among TC Members. After the successful collection, a publication will be made to share with the Members. The project will be led by STI, China.
- For implementation of the proposed projects in 2018, WGDRR proposed the requests of totally US\$ 32,000 allocated TCTF as the following items:
 - i) To allocate US\$ 6,000 budget of TCTF in 2018 for supporting the Expert Mission.
 - ii) To allocate US\$ 5,000 budget of TCTF in 2018 for supporting the training workshop for the iCowin project that will be held in HKO.
 - iii) To allocate US\$ 8,000 budget of TCTF in 2018 for supporting the participation in PRIMO Conference in Honolulu.
 - iv) To allocate US\$ 6,000 budget of TCTF in 2018 for supporting the research fellowship, which will be held in STI, CHINA, related to benefit evaluation of Typhoon disaster prevention and preparedness.
 - v) To allocate US\$ 4,000 budget of TCTF in 2018 for making a publication after collecting the report about big data and social media use for DRR.
 - vi) To allocate US\$ 3,000 budget of TCTF in 2018 for supporting to make educational video related to DRR

6. Recommendation of WGDRR

On the basics of the conclusion of discussion and deliberations, the WGDRR made the following recommendations:

- a) To appoint Dr. Yuntae Kim from Republic of Korea as the WGDRR's Vice Chair to replace Cecilia, Leong Fong Peng from Macau, China.
- b) To request NDMI to conduct the Expert Mission that is aimed at improving the capacities of disaster management through knowledge exchange and experience

sharing among TC Members. It was suggested to conduct the expert mission in Thailand in 2018. (Yet to be confirmed by Thailand)

- c) To request HKO continue to conduct the training workshop for iCowin project for interested Members in 2018 and encourage the Members to join the project.
- d) To encourage the benefited TC Members to participate in the activities of the SSOP Project II.
- e) To request NDMI, Republic of Korea and NOAA, USA organize the participation of TC WGDRR in PRIMO Conference.
- f) To request STI, China continually conduct the research fellowship for the Project of benefited evaluation of typhoon disaster prevention and preparedness to the interested TC Members.
- g) To request STI, China coordinate the collection of big data and social media use for DRR from the Members.
- h) To request NDMI continually make a video related to public education on DRR.
- i) To request NDMI, Republic of Korea to hold the 13th WGDRR Annual Workshop in 2018.
- j) To request NDMI continually to support and carry out the establishment of the early warning and alert system in Lao PDR and Vietnam and encourage the Members to join the project in the future.
- k) To encourage the Members to share information related to DRR via the forum of TC website.
- l) To request the Committee to approve the proposed projects and related budget in 2018.

APPENDIX II

Report on activities of Working Group on Disaster Risk Reduction (WGDRR) of TC in 2017

1. Introduction

In 2017, Working Group on Disaster Risk Reduction (WGDRR) implemented a series of projects and conducted the DRR annual meeting to share the information related to DRR according to the plan derived from 49th TC Session. This report was drafted based on the outcome of WGDRR parallel meeting at 12th IWS, which was held on 30 October 2017 in Jeju, Republic of Korea.

The report will show the main progress and achievement on DRR component due to the great cooperation and effort from the Members in the past year. It will also cover the status of implementation of the projects 2017 and the plan of 2018 for WGDRR including the AOPs and budget allocation for TCTF.

2. Members

<i>Chair</i>	Mr. Shim, Jahyun (Republic of Korea)
<i>Vice Chairs</i>	Ms. Genevieve Miller (USA) Ms. Leong, Fong Peng
<i>Members</i>	No name provided by (Cambodia) Mr. Wang Yawei (China) Mr. Kim Choi (DPR Korea) Ms. Sandy M.K. Song (Hong Kong) Mr. Junji Moriwaki, Ms. Natsuko Sekiguchi, Ms. Setsuko Saya, Mr. Yoshifumi Komada (Japan) Mr. Bounteum Sysophanthavong (Lao PDR) Mr. Ho Su Hon (Macao) Ms. Dat'Zaitun Ab Samad (Malaysia) Ms. Lenie D. alegre (Philippines) Mr. Chihun Lee (Republic of Korea) Mr. Cheong Wee Kiong (Singapore) Mr. Chainarong Vasanasomsith (Thailand) Mrs. Dam Thi Hoa (Vietnam)

3. The major progresses of activities on DRR component of Members in 2016

By the coordination of TCS and support from all Members, WGDRR successfully implemented the action plan in 2017, which was endorsed at 49th TC Session. The status of the progress of the project and activities of WGDRR as follows;

3.1 AOP1: Expert Mission

- The project is aimed at improving the Member's capacities of disaster management especially typhoon related disaster through exchange of information such as policies, technologies and experiences etc. among the Members.
- In 2017, the expert mission was conducted in Honolulu, USA on 16-20 October. During the Expert Mission, The expert team from TC WGDRR made an introduction of Typhoon Committee and National Disaster Management Institute to the DRR related agents in Hawaii and shared the information related to disaster management such as the topic of Development of Regional Safety Index in Korea, Urban Flood Analysis Model, Disaster Situation Analysis Center, Disaster Information Analysis & Decision Support through Using Satellite Image and Technical Development to Forecast Disaster Damage in Coastal area- Storm Surge and High-tech Equipment for Disaster Scientific Investigation. On the Hawaii side, they introduced the Federal Emergency Management Agency (FEMA) such as their mission and hurricane liaison team, disaster management and mechanism, etc. Meanwhile, through the NOAA's thoughtful arrangement, the Expert Mission team also held field surveys at Hawaii Volcanoes Observatory, Pacific Tsunami Museum, National Weather Service Data Collection Office Hilo, Civil Defense Agency and NOAA Inouye Regional Center and National Disaster Preparedness Training Center, as well as FEMA Pacific Area Office and Central Pacific Hurricane Center to discuss and share the experiences of the relative hazards and emergency management response. As result, besides good information and experience sharing that can give reference to TC Members to improve the capacities of disaster management, it also built up a bridge between TC and Hawaii disaster management agencies for future potential cooperation. Dr. Yuntae Kim, the Director of Disaster Prevention Research Division of NDMI delegated the Expert Mission team with 6 experts from NDMI, Republic of Korea and TCS expert. The Mission was well organized by Tanabe, Raymond Masaharu Tanabe, Director of Pacific Region Headquarter.

3.2 AOP2: Promote International cooperation DRR Project (i) Installation of Early Warning and Alert System in interested Member countries. (ii) iCoWin project

- (i) The project contributed by NDMI is to aim to enhance the resilience of typhoon related disaster through installation of early warning and alert system in TC Members.
- In 2017, NDMI dispatched their experts to install the relevant systems in Laos and Vietnam in (Month ??)
- (ii) The objective led by Hong Kong Observatory (HKO) is to promote the establishment of community weather stations among TC Members for raising public awareness on climate change and extreme weather. HKO conducts a training workshop and provides a set of equipment funded by TCTF for TC Members' participation.

- There were two participants among the Members; respectively Guam, USA and Laos have successfully attended the workshop on 01-03 November in 2017

3.3 AOP3: Benefit Evaluation of Typhoon Disaster Prevention and Preparation Project

- The Project led by STI, China is aiming to objectively and fully understand the prevention and preparation work, and analyze the current advantages and disadvantages of defensive behavior, thus to provide a scientific basis for improving the defense capability.
- Improvements: (1) the project analyzed the impact of landfall point on the benefit evaluation model. Results show that a less developed region is more sensitive to the accuracy of TC track and intensity forecast. (2) The project also conducted a questionnaire among TC Members in order to evaluate the benefit of typhoon forecast and service. (3) A participant from Malaysia Meteorological Department joined the research fellowship at STI, China on 4-17 September 2017. The participant put up an idea that Direct Economic Loss model could be adopted in Malaysia to parameterize the impact of flood event over east coast of peninsular Malaysia during the winter monsoon season.

3.4 AOP4: Supporting SSOP Project Phrase II

- The project Phrase II of SSOP is aimed to promote the capacity on the establishment of appropriate SOP at national level to coastal multi-hazards through extending the achievement of SSOP I in PTC and TC region by conducting training course and workshops on mechanics of preparing and implementing SSOP for coastal multi-hazards early warning in beneficiary countries.
- The project phrase II is composed of three activities. The activity 1 (Workshop) has been successfully held on 24-26 October 2017 in WMO Regional Training Center (RTC) Nanjing, China. There were over 30 participants from TC and PTC Members. Some participants from DRR related agents who attended the Workshop actively joined the discussion and provided some useful comments for implementation of SSOP during the workshop. WGDRR will continue to fully support the implementation of the project.

3.5 AOP5: Sharing Information related to DRR

- The project's idea is to improve the capacities of disaster management among TC Members by collecting and exchanging information related to DRR from Members.
- TCS has developed a forum on TC website in order to achieve the implementation of information collection. TCS reported the Members that it has set up a password for each member to access the forum. Members were encouraged to share their information such as law related DRR on the forum.

3.6 AOP6: Making Educational Video Related to DRR

- The objective of the project is to promote disaster management among TC Members through producing a video.
- NDMI has produced the video according to the plan and showed it to Members during the meeting. The video will be posted on TC website and welcome Members to use it on disaster related education.

4. Review of budget for the projects of WGDRR in 2017.

Project item	Project name	Budget
AOP1	Expert Mission in Honolulu (<i>TCS attended, China expert was not able to attend the mission finally due to the visa application, the spending included the air ticket and DSA for TCS participant</i>)	USD 6,000
AOP2	Promote international cooperation DRR project (<i>Installation of Early Warning and Alert system in Member countries and iCowin Project (Laos and Guam, USA attended the iCo training workshop. The spending included the air ticket, DSA and set of equipment for the participants. The original plan is offering three members joining the project, but only two requested finally.)</i>)	USD 7,500 (For iCowin)
AOP3	Benefit evaluation of typhoon disaster prevention and preparedness project (<i>The participant from Malaysia attend the fellowship in STI. The Spending included the air ticket and DSA by lump sum. Originally, it planned to offer two members to join the fellowship, but finally only one member requested to join</i>)	USD 5,000
AOP4	SSOP Project (Phrase II)	Funded by ESCAP
AOP5	Sharing information related to disaster risk management	No need
AOP6	Making an Educational Videos related to DRR (<i>NDMI made a video related to the disaster management. The spending was used on translation of video produced by NDMI from Korean to English</i>)	USD 3,000
	Total amount	USD 21,500

5. Conclusions of WGDRR

On the basis of 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:

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- WGDRR will continue planning the projects related to public education on DRR in coming future that can facilitate raising public awareness on typhoon related disasters such as setting up of community weather station and producing educational video etc.
- It was suggested to enhance the cooperation among the Members and another regional body such as PTC on DRR activities.
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 - **Promote TC and PTC Cooperation-** NDMI will invite PTC Member to join the 13th WGDRR annual workshop for exchange of information related to disaster management and seeking the cooperation between TC and PTC

- **TC Report about Big Data and Social Media use for DRR-** To improve the big data and social media use in DRR. It was suggested to collect the information on how to effectively use big data and social media on DRR among TC Members. After the successful collection, a publication will be made to share with the Members. The project will be led by STI, China.
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 - ix) To allocate US\$ 8,000 budget of TCTF in 2018 for supporting the participation in PRIMO Conference in Honolulu.
 - x) To allocate US\$ 6,000 budget of TCTF in 2018 for supporting the research fellowship, which will be held in STI, CHINA, related to benefit evaluation of Typhoon disaster prevention and preparedness.
 - xi) To allocate US\$ 4,000 budget of TCTF in 2018 for making a publication after collecting the report about big data and social media use for DRR.
 - xii) To allocate US\$ 3,000 budget of TCTF in 2018 for supporting to make educational video related to DRR

6. Recommendation of WGDRR

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- m) To appoint Dr. Yuntae Kim from Republic of Korea as the WGDRR's Vice Chair to replace Cecilia, Leong Fong Peng from Macau, China.
- n) To request NDMI to conduct the Expert Mission that is aimed at improving the capacities of disaster management through knowledge exchange and experience sharing among TC Members. It was suggested to conduct the expert mission in Thailand in 2018. (Yet to be confirmed by Thailand)
- o) To request HKO continue to conduct the training workshop for iCowin project for interested Members in 2018 and encourage the Members to join the project.
- p) To encourage the benefited TC Members to participate in the activities of the SSOP Project II.

- q) To request NDMI, Republic of Korea and NOAA, USA organize the participation of TC WGDRR in PRIMO Conference.
- r) To request STI, China continually conduct the research fellowship for the Project of benefited evaluation of typhoon disaster prevention and preparedness to the interested TC Members.
- s) To request STI, China coordinate the collection of big data and social media use for DRR from the Members.
- t) To request NDMI continually make a video related to public education on DRR.
- u) To request NDMI, Republic of Korea to hold the 13th WGDRR Annual Workshop in 2018.
- v) To request NDMI continually to support and carry out the establishment of the early warning and alert system in Lao PDR and Vietnam and encourage the Members to join the project in the future.
- w) To encourage the Members to share information related to DRR on the forum of TC.
- x) To request the Committee to approve the proposed projects and related budget

Annex - Implementation Status Successor Indicators of WGDRR AOPs 2017