

ESCAP/WMO Typhoon Committee

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Yokohama,
Japan

FOR PARTICIPANTS ONLY
WRD/TC.49/8.3
14 December 2016

ENGLISH ONLY

**Report on Activities of Working Group on Disaster Risk Reduction (WGDRR)
of TC in 2016**

(submitted by WGDRR)

Action Proposed

This Committee is invited to:

Review the activities of TC WGDRR conducted in 2016

Approve the recommendations and AOPs of WGDRR for 2016 and beyond

APPENDICES :

- I. Draft Text For Inclusion at Session Report
- II. Report on activities of Working Group on WGDRR of TC in 2016

APPENDIX A
DRAFT TEXT FOR INCLUSION IN THE SESSION REPORT

8.3. 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 2016.
- The Committee took note of the outcome of Parallel Session of WGDRR at the 11th IWS that was held in Cebu, Philippines from 24 to 27 October 2016, details of which are presented in the **Appendix III**, which are included the progress of implementation of Annual Operating Projects of (AOPs) 2016 of WGDRR.
- The Committee was informed that 11th WGDRR Annual Workshop was successfully held in Ulsan, Republic of Korea from 24 to 27 May 2016 with the theme of “Promoting Knowledge Sharing”, which was hosted and funded by National Disaster Management Institute (NDMI) and AWG Members were invited to join the meeting. Details can be found in the **Appendix IV**.
- 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 Jahyun from Republic Korea for his remarkable contribution as the Chair of WGDRR in the past year and his acceptance for the recommendation by DRR Members to continue to serve as the Chair of WGDRR for the next term of two years.
- The Committee expressed its appreciation to Dr. Oh, Keumho from Republic of Korea for his contribution and effort in the past year
- The Committee expressed its appreciation to Ms. Leong Fong Peng for her contribution and effort serving as the Vice Chair of WGDRR in the past year and her commitment to continually serve as the Vice Chair for the next term of two years by the recommendation from WGDRR Members.
- The Committee was informed that the projects (AOPs) for 2017 recommended

by WGDRR as follows:

- AOP1: Expert Mission- the project aims to exchange and share information related to DRR policies and technologies among the Members in order to improve the capacities on DRR.
- AOP2: Promote international cooperation DRR project- (a) Setting up early warning and alert systems related to typhoon disaster in the participating members and such project is contributed by NDMI. (b) iCowin project- HKO provides training workshop with the basic equipment for setting up the community weather station in the participating member countries to engage the public in severe weather issues.
- AOP3: 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 fellowship program to the Members for this project in 2017.
- AOP4: 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 (phrase 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.
- AOP5: Sharing information related to disaster risk management- In order to improve the capacities for Members' Disaster Management, WGDRR proposed a project to exchange information and experience regarding the use of IT in disaster management among Members in 2017.
- AOP6: Making the education videos related to DRR- WGDRR planned to produce education videos related to disaster management and share with the Members.

Conclusions of WGDRR

- On the basis of the information provided by the Members, the reports presented by project leaders and findings of the parallel session on WGDRR, the following conclusions were reached:
- In 2016, NDMI is working for upgrading the functions of TCDIS and the design of TCDIS website. The upgrade of TCDIS includes new function that users could get the site information from the existing CCTV. Also, it includes auto-reporting function. This function could provide the report, which consists of the results of similar typhoon research. NDMI will discontinue the work related to the update of TCDIS and will share the ID and password to member countries so that they can upload their damage data and operate TCDIS by themselves.
- The expert mission was successfully conducted in China to share the updated information on the operation of TCDIS and exchange information regarding new technology and policy related to the field of DRR among NDMI, NCDRR, and CMA. The concept of expert mission will be changed as Knowledge Sharing including DRR technologies and policies among member countries. In 2017, Expert Mission was planned to conduct in Hawaii and Member countries agreed with the invitation of one member country's expert to join the 2017 expert mission.
- The project to promote the international cooperation for disaster risk management, which is led by NDMI, will be continued in 2017 for Lao PDR and Vietnam. In September, NDMI dispatched the experts to Lao PDR for installing the Automatic Rainfall Warning System (ARWS) and Flash Flood Alert System (FFAS) in Vang Vieng Pprovince in Lao PDR. NDMI will also install FFAS and ARWS in Vietnam at the end of this year. The project will be continued in 2017 for Lao PDR and Vietnam and NDMI encourage the participation of other member countries in this project.
- Regarding the iCowin project that aims to raise public awareness of weather hazards and climate change through installation of community weather station: the system has been installed in Mindanao Island in the Philippines and Guam (2012) and in Vietnam (2015) respectively. Though the training workshops in HK were successfully implemented, some Members did not successfully implement the project. There were various reasons, including those which were related to local data communications constraints that would need assistance

from local instrument experts even though advice could be provided by HKO.(e.g. Lao PDR sent representative to attend the training and got the equipment from HK in 2014 but the installation has not been started. HK suggested that Lao PDR could send instrument experts to HK to learn about the installation and data communication issues.). In 2016, Malaysia had expressed interest in participating in this project but no confirmation was received by Hong Kong until now, HKO suggested the training workshop for Malaysia to be postponed to 2017. In addition, for the cost effectiveness, HKO also suggested conducting the training with at least 2 Members' participation. During the parallel meeting, Lao PDR, USA and Malaysia indicated their intention to join the project in 2017. It will be confirmed in the upcoming session with the interested members.

- SWIget Project (led by HKO): The project is considered successfully completed as many Members have joint. It will continue to operate and be available on the World Meteorological Organization Severe Weather Information Centre (SWIC) website for download by users. As such, HKO suggested removing regular reporting of this project from WGDRR AOPs After the discussion, WGDRR agreed with Hong Kong's suggestion to remove the project from AOPs next year.
- Benefit evaluation of Typhoon Disaster Prevention and Preparedness: These improvements are: (1) To collect intensity forecast data of CMA from 2002 to 2003 and renew the analysis of the relationship between direct economic loss and track or intensity forecast errors based on cases during 2002 – 2013. (2) To study the impact of track and intensity forecast on damage assessment based on data from China; (3) the benefit evaluated from track and intensity forecast based on data from China has finished and a paper in Chinese was published this year. During the WGDRR expert mission this year in Beijing, China in September 2016, NDMI had requested China to provide a list to Members regarding the data collection required for this project. In the parallel meeting, some Members indicated their interest in this project and asked whether China could provide the English version of this system. In this regard, China had agreed to send the English version of the system for t Members' reference and TCS will follow up with the coordination.
- SSOP (phrase II) project: TCS is waiting for the response from ESCAP regarding the approval for SSOP II revised proposal. If the proposal has been

approved and finalized, WGDRR will fully support the implementation of the project.

- Regarding the 2016 WGDRR AOP 6 of sharing information (e.g. legal framework, policy framework through member countries), what sort of information and how to share it were discussed. Member countries agreed with sharing information of disaster law and disaster management framework. In addition, it was suggested to use the TC website for Members to upload their disaster law and disaster framework information. After 11th IWS, TCS has developed a forum as requested by Working Group in November 2016 and has informed the DRR Members that the forum is available for sharing the relevant information.
- It was suggested to share the information of smart disaster management system including social media or IT solutions. Also, members will share the successful examples after improving DRR regulation or policies. These information would be shared in 2017 WGDRR annual meeting in Korea.
- Regarding the research of benefit evaluation of Typhoon Disaster Prevention and Preparedness, STI agreed with the operation of the fellowship program for co-research between STI and member countries.
- Regarding sharing information, NDMI suggested the sharing of existing educational materials related to DRR. In 2017, NDMI will modify and translate its two existing video-materials to English.

Recommendation of WGDRR

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

To allocate US\$ 21,500 budget of TCTF in 2017 for i) supporting the participation of TCS and one member country in Expert Mission; ii) supporting the community based weather station pilot project to provide a training workshop in HK or dispatch experts to interested members by HK to install the weather stations and to provide technical documentation on installation, maintenance and data processing and display; iii) supporting the fellowship program for co-research work between Shanghai Typhoon Institute and member countries about benefit evaluation of Typhoon disaster prevention and preparedness; iv) supporting

modifying and translating NDMI's existing educational materials(video) to English.

- To remove the update of TCDIS project from WGDRR AOPs
- To request NDMI to conduct the Expert Mission that aims to exchange knowledge and information related to DRR (technologies and policies) among member countries. Tentatively, WGDRR decided to conduct the Expert Mission in Hawaii in 2017 and invite one member country's DRR expert to join.
- To request HKO to conduct training workshop for the iCowin Project. Lao PDR, Malaysia and USA had expressed their interest to participate in the project.
- To request NDMI to continue to conduct the installation project of early warning and alert system related to typhoon disaster in Lao PDR and Vietnam.
- To request STI, China to conduct a fellowship program on the project of benefit evaluation of Typhoon Disaster Prevention and Preparedness for Members, which was tentatively planned for two Members' participation.
- To remove the SWiget Project from WGDRR AOPs.
- To request the Members to share the information related to disaster risk management. WGDRR will continue to collect the information regarding the use of IT technologies in Disaster Management, such as social media or apps in order to improve Members' DRR policies. It was suggested the discussion topic of WGDRR annual meeting 2017 could be related to this subject.
- To encourage Members to fully support and contribute to SSOP Project Phase II.
- To request NDMI of Republic of Korea to continue to host the 12th WGDRR annual meeting with the funding support in Republic of Korea.
- To request NDMI to make a video related to DRR education sharing with the Members.
- To reappoint Dr. Shim, Jahyun (ROK) as the Chair of WGDRR and Ms. Leong,

Fong Peng as the Vice-chair of WGDRR.

- To appoint Ms. Miller, Genevieve.(USA) as Vice-Chair of WGDRR replacing the current Vice-Chair, Mr. Oh, Keumho (ROK) .

APPENDIX II

Report on activities of Working Group on Disaster Risk Reduction (WGDRR) of TC in 2016

1. Introduction

In 2016, 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 48th TC Session. This report was drafted based on the outcome of WGDRR parallel meeting at 11th IWS, which was held on 24-27 October 2016 in Cebu, Philippines.

The report will show the main progress and achievement on DRR component due to the the great cooperation and effort from the Members in the past year. It will also cover the status of implementation of the projects 2016 and the plan of 2017 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> | Mr. Oh, Keumho 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) Ms. Genevieve Miller (USA) 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 2016, which was endorsed at 48th TC Session. The status of the progress of the project and activities of WGDRR as bellows;

The 11th WGDRR Annual Meeting: The 11th WGDRR Annual workshop with the theme of “Disaster Management Experience Sharing” was fruitfully held on 24-27 May 2016 in Ulsan, Republic of Korea with the kind contribution from National Disaster Management Institute (NDMI). This meeting was the first time to be held in Ulsan, as NDMI moved their headquarters from Seoul to Ulsan. Additionally, it was the first time that an invitation was extended to AWG Members to join the Annual Workshop with the generous offering from NDMI. Taking this opportunity, AWG Members held a meeting to discuss the issues related to TC’s development and gave their insightful comments to WGDRR. Around 30 participants attended the Workshop from 8

member countries, as well as AWG and TCS Members.

TCDIS: In 2016, NDMI is working for upgrading the functions of TCDIS and the design of TCDIS website. The upgrade of TCDIS includes new function that users could get the site information from the existing CCTV. Also, it includes auto-reporting function. This function could provide the report, which consists of the results of similar typhoon research.

Expert Mission: The expert mission was successfully conducted in China to share the updated information on the operation of TCDIS and exchange information regarding the new technology and policy related to the field of DRR among NDMI, NCDRR, and CMA.

Installation of Early Warning and Alert System in Member Countries: dispatched the experts to Lao PDR for installing the Automatic Rainfall Warning System (ARWS) and Flash Flood Alert System (FFAS) in Vang Vieng Province in Lao PDR. NDMI will also install FFAS and ARWS in Vietnam at the end of this year. The project will be continued in 2017 for Lao PDR and Vietnam and NDMI encourage the participation of other member countries in this project.

iCowin Project: Regarding the iCowin project that aims to raise public awareness of weather hazards and climate change through installation of community weather station: the system has been installed in Mindanao Island in the Philippines and Guam (2012) and in Vietnam (2015) respectively. Though the training workshops in HK were successfully implemented, some Members did not successfully implement the project. There were various reasons, including those which were related to local data communications constraints that would need assistance from local instrument experts even though advice could be provided by HKO. (e.g. Lao PDR sent representative to attend training and got the equipment from HK in 2014 but the installation has not been started. HK suggested that Lao PDR could send instrument experts to HK to learn about the installation and data communication issues.). In 2016, Malaysia had expressed interest in participating in this project but no confirmation was received by Hong Kong until now, HKO suggested the training workshop for Malaysia to be postponed to 2017.

SWiget Project: (led by HKO): The project is considered successful as many members have joint. It will continue to operate and be available on the World Meteorological Organization Severe Weather Information Centre (SWIC) website for download by users. As such, HKO suggested removing regular reporting of this

project from WGDRR AOPs. After the discussion, WGDRR agreed with Hong Kong's

suggestion to remove the project from AOPs next year.

Benefit evaluation of Typhoon Disaster Prevention and Preparedness: These improvements are: (1) To collect intensity forecast data of CMA from 2002 to 2003 and renew the analysis of the relationship between direct economic loss and track or intensity forecast errors based on cases during 2002 – 2013. (2) To study the impact of track and intensity forecast on damage assessment based on data from China; (3) the benefit evaluated from track and intensity forecast based on data from China has finished and a paper in Chinese was published this year. During the WGDRR expert mission this year in Beijing, China in September 2016, NDMI had requested China to provide a list to Members regarding the data collection required for this project. Meanwhile, during the parallel meeting at 11th IWS, some Members indicated their interest in this project and asked whether China could provide the English version of this system. In this regard, China had agreed to send the English version of the system for Members' reference and TCS will follow up with the coordination.

SSOP Project (Phrase II): The funding for SSOP Project phrase II is yet to be approved by ESCAP, but the Members expressed that they will fully support the project.

Sharing information related to DRR: (e.g. legal framework, policy framework through member countries), what sort of information and how to share it were discussed. Member countries agreed with sharing information of disaster law and disaster management framework. To share the information, it was suggested to use the TC website and members could upload their disaster law and disaster framework on TC website. After 11th IWS, TCS has developed a forum as request in November 2016 and informed the DRR Members that the forum is available for sharing the information.

4. Proposed Project and budget on WGDRR in 2017

| Number | Name of Project | Proposed Budget |
|---------------|--|---------------------------|
| AOP1 | Expert Mission | USD 6,000 |
| AOP2 | Promote international cooperation DRR project Installation of Early Warning and Alert system in Member countries iCowin Project | USD 7,500 (for iCowin) |
| AOP3 | Benefit evaluation of typhoon disaster prevention and preparedness project | USD 5,000 |
| AOP4 | SSOP Project (Phrase II) | From NSCAP |
| AOP5 | Sharing information related to disaster risk management | No need |
| AOP6 | Making Educational Videos | USD 3,000 |
| | Total | USD 21,500 |

5. Conclusion

On the basis of the information provided by the Members, the reports presented by project leaders and findings of the parallel session on WGDRR, the following conclusions were reached:

NDMI will discontinue the work related to the update of TCDIS and will share the ID and Password for member countries so that they can upload their damage data and operate TCDIS by themselves.

In 2017, expert mission will be conducted in Hawaii and member countries agreed with the invitation of one member country's expert to join the 2017 expert mission

The project to promote the international cooperation for disaster risk management, which is led by NDMI, will be continued in 2017 for Lao PDR. Meanwhile, NDMI encourage the participation of other member countries in this project.

Regarding the iCowin project that aims to raise public awareness of weather hazards

and climate change through installation of community weather station, HKO suggested conducting the training for at least 2 Members' participation. During the parallel meeting, Lao PDR, USA and Malaysia indicated their intention to join the project in 2017. It will be confirmed in the upcoming session with the interested members.

SWIget Project (led by HKO): HKO suggested removing regular reporting of this project from WGDRR AOPs. After the discussion, WGDRR agreed with Hong Kong's suggestion to remove the project from AOPs next year.

Benefit Evaluation of Typhoon Disaster Prevention and Preparedness: China will provide the English version of this research. In addition, STI will conduct a fellowship program to the Members on how to apply the Benefit Evaluation research.

SSOP (phrase II) project: TCS is waiting for the response from ESCAP regarding the approval of SSOP II revised proposal. If the proposal has been approved and finalized, WGDRR will fully support the implementation of the project.

It was suggested to share the information of smart disaster management system including social media or IT solutions. Also, members will share the successful examples after improving DRR regulation or policies. These information would be shared in 2017 WGDRR annual meeting in Korea.

It was suggested NDMI to share its existing educational materials related to DRR. In 2017, NDMI will modify and translate the videos to English by subtitle or/and dubbing.

6. Recommendation of WGDRR

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

To allocate US\$ 21,500 budget of TCTF in 2017 for i) supporting the participation of TCS and one member country in Expert Mission; ii) supporting the community based weather station pilot project to provide a training workshop in HK or dispatch experts to interested members by HK to install the weather stations and to provide technical documentation on installation, maintenance and data processing and display; iii) supporting the fellowship program for co-research work between Shanghai Typhoon Institute and member countries about benefit evaluation of Typhoon disaster

prevention and preparedness; iv) supporting modifying and translating NDMI's existing educational materials(video) to English .

To remove the update of TCDIS project from AOPs

To request NDMI to conduct the Expert Mission that aims to exchange knowledge and information related to DRR (technologies and policies) among member countries. Tentatively, it was decided that WGDRR would conduct the Expert Mission in Hawaii in 2017 and invite one member country's DRR expert to join.

To request HKO to conduct the training workshop for the iCowin Project. Lao PDR, Malaysia and USA had expressed interest in participating in the iCowin project.

To request NDMI to continue to conduct the installation project of early warning and alert system related to typhoon disaster in Lao PDR and Vietnam.

To request STI, China to conduct a fellowship program on the project of benefit evaluation of Typhoon Disaster Prevention and Preparedness for Members which was tentatively planned for two Members' participation due to the budget constraint.

To remove the Project of SWIget from WGDRR AOPS.

To request Members to share the information related to disaster risk management. WGDRR will continue to collect the information regarding Disaster Management with the use of IT technologies such as social media or apps in order to improve Members' DRR policies. It was suggested the discussion topic of WGDRR annual meeting 2017 could be related to this subject.

To encourage Members to fully support and contribute to SSOP Project Phrase II.

To request NDMI of Republic of Korea to continue to host the 12th WGDRR annual meeting with funding support in Republic of Korea.

To request NDMI to make a video related to DRR education sharing with the Members.

To reappoint Dr. Shim, Jahyun (ROK) as the Chair of WGDRR and Ms. Leong, Fong Peng as the Vice-Chair of WGDRR.

To appoint Ms. Miller, Genevieve (USA) as Vice-Chair of WGDRR replacing the current

Vice-chair of WGDRR, Dr. Oh, Keumho (ROK).