

Third Joint Session
Panel on Tropical Cyclones | Typhoon Committee
(42nd Session of PTC and 47th Session of TC)
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FOR PARTICIPANTS ONLY
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ENGLISH ONLY

SYNERGIZED STANDARD OPERATING PROCEDURES FOR COASTAL MULTI-HAZARDS EARLY WARNING SYSTEM (SSOP)

CURRENT STATUS

(Item 6 of Provisional Agenda–Cross-cutting Projects and PTC/TC Cooperative Mechanism)

(Submitted by TCS)

Summary and Purpose of Document:

This document presents the current status of the SSOP Project, which has reached the final phase that consists of 6 consultant's missions on SSOP hands-on training in 3 PTC and 3 TC countries and completion of the drafting of the Manual on Synergized Standard Operating Procedures for Coastal Multi-Hazards Early Warning System.

Action Required:

The Committee is invited to

- (a) Take note of the progress of the project
- (b) To analyze the current draft of the Manual and suggest changes (version 3 December 2014- posted on <http://www.typhooncommittee.org/SSOP/indexSSOP.html>)
- (c) To approve the recommendations of TCS on SSOP project

APPENDIX: Current Status of SSOP project

APPENDIX

CURRENT STATUS OF SSOP PROJECT

1. BACKGROUND INFORMATION

The Typhoon Committee and the Panel on Tropical Cyclones recognized a strong need to create synergies in early warning systems among different types of coastal hazards. Based upon this identified need, the TC and the PTC formulated, in collaboration with other organizations, and submitted to ESCAP a project entitled “Synergized Standard Operating Procedures (SSOP) for Coastal Multi-Hazards Early Warning System” for funding through the Multi-Donor Trust Fund for Tsunami, Disaster and Climate Preparedness in Indian Ocean and South East Asia Countries. The Letter of Agreement between ESCAP and TCS was signed on 1 August 2012. The termination date of the project was foreseen to be 31 December 2014, however due to its complexity involving visits of experts to three pilot countries, difficulties in recruiting consultants for missions to six countries for collecting information and other six missions for training purposes, ESCAP has authorized extension of the deadline to 31 May 2015. Despite some delay in implementing the project in 2012, due to some TC Members considered necessary the approval of the Terms of Reference and other aspects by the 45th TC Session that was held in February 2013, the Project was successfully implemented in 2013 and 2014, and the TC at its 46th Session reported that its outcome and achievement could greatly benefit the Members. The WGs committed to continue contributing to its implementation. The 41st TC Session of PTC also encouraged the Members to collaborate with SSOP Project, in particular assisting the drafting of the Manual on SSOP.

2. MAIN STEPS OF THE PROJECT

- **KICK-OFF MEETING; APPROVAL OF ToR OF TASK FORCE, STEERING COMMITTEE; PROJECT MANAGER (October 2012-February 2013)**
 - SSOP Project Kick-off Meeting (Bangkok on 22-23 October 2012)
 - Approval of the terms of reference (ToR) of the Steering Committee, Task Force and Project Manager/ (Technical Advisor), and approval of the Implementation Plan by TC 45th Session (Hong Kong, China, 29 January-01 February 2013)
 - Selection of the Project Manager/ (Technical Advisor).
 - Establishment of contacts for collaboration with organizations implementing similar projects under the same ESCAP Trust Fund and others (ABU, ADPC, ADRC, GAATES, IOC-UNESCO, RIMES, WMO)
- **WORKSHOP ON THE PERFORMANCE STATUS OF COASTAL MULTI-HAZARD EWS IN BENEFICIARY COUNTRIES (May 2013)**

The Workshop was held on May 8-9, 2013 at the UN Conference Center in Bangkok, Thailand.

Main objectives:

- 1) To collect and exchange information on the performance status of coastal multi-hazard EWS in the 13 beneficiary countries of this, and

- 2) To share with the participants the experiences of experts on EWS from other agencies or organizations. The workshop was very successful - attended by 12 of the 13 beneficiary countries (Cambodia unable to attend but sent briefing).

The Workshop was a highly collaborative event with experts on EWS from ABU, ADPC, ADRC, GAATES, IOC-UNESCO, RIMES, WMO, and both the Japanese and USA meteorological services actively participating. Through presentations and many discussions, objectives of the workshop were met.

Main conclusions:

- 1) Identified strengths, needs and gaps associated with SOPs;
- 2) Required thematic and content for a successful Manual of Synergized Standard Operating Procedures (SSOP);
- 3) Opportunity for collaboration with various partners and other organizations.
- 4) The project has great potential.

Main Recommendation:

Workshops should be conducted in September-October 2013 in three pilot countries (Philippines, Bangladesh, and Pakistan) by a team of experts to identify strengths, gaps, needs, and recommendations for EWS SOPs and content of the Manual of Synergized SOPs for Coastal Multi-Hazards EWS.

- **WORKSHOPS IN THREE PILOT COUNTRIES (BANGLADESH, PAKISTAN AND PHILIPPINES) –October 2013**

Compilation of documents on SOPs

Prior to the visits to the Pilot Countries, the project manager compiled 5 documents for discussions:

- 1) A Guide to Writing Effective SOPs for EWS;
- 2) Checklist for Effective SOPs for EWS;
- 3) Information on Early Warning System Overview;
- 4) Early Warning System Checklist Items; and
- 5) General Basic Information on EWS for NHMS; Warnings; Communications and Relationships.

Workshops purposes:

- 1) To review existing SOPs for coastal multi-hazards EWS for hydro-meteorological, disaster management, media, elected official, and others from national to local levels;
- 2) To identify best practices, gaps and needs, and recommendations in both an agency's internal SOPs and also integrated SOPs among different agencies; and 3) develop action plan to build upon the best practices, fill the gaps and needs, and to review the recommendations to build institutional capacity.

- Three highly successful in-country pilot workshops were conducted: October 3-4, 2013 Manila, Philippines; October 6-7, 2013 Dhaka, Bangladesh; and October 10-11, 2013 Islamabad, Pakistan.
- The pilot workshops were conducted by a highly collaborative international, multi-agency team consisted of: Mr. Jim Weyman, Project Manager/Technical Advisor (Philippines and Bangladesh); Mr. Olavo Rasquinho, meteorological expert, TCS; Mr. Atiq Kainan Ahmed, disaster response expert, ADPC; Mr. Walter Welz, media Expert, ABU (Philippines and Bangladesh); Mr. Nadeem Ahmed, media expert, ABU (Pakistan); and Ahmed Said Al Barwani, hydrology expert, PTC. Mr. Weyman was unable to get a visa for Pakistan in time, but did participate on several different occasions, especially during the groups' presentations following the breakout sessions, via Skype from his home. The Departments of Meteorology of Bangladesh and Pakistan, and PAGASA (Philippines) collaborated actively in conducting the workshops which involved professionals on meteorology, hydrology, DRR, media and others that deal with early warning systems.
- Recurring themes for requirements for an effective EWS are:
 - 1) High level government commitment and support;
 - 2) Legal and legislature framework;
 - 3) Collaboration and coordination at all levels – national, regional, and local;
 - 4) Media involvement as a partner;
 - 5) Multi-hazard approach; and
 - 6) Fully implemented elements of a people-centered EWS.

Strengths, gaps, and needs associated with SOPs

Strengths, gaps, and needs associated with SOPs varied among three pilot countries visited, varied within and between agencies within countries, and varied at different levels of government.

Identified strengths fell into the following categories:

- 1) Favorable framework for creating/maintaining SOPs;
- 2) Excellent examples of existing SOPs; 3) systems to assist in detection, monitoring, forecasting, and warning services;
- 4) Systems/situations to assist in dissemination and communications;
- 5) Systems to assist in response/preparedness capacity; and
- 6) Supporting MOUs in place.

Identified needs and gaps fell into the following categories:

- 1) SOPs for specific areas;
- 2) Integrated, cross-cutting SOPs;
- 3) Testing and maintaining;
- 4) Awareness of value and need for SOPs; and
- 5) MOU related items.

Main recommendation:

SOP direction and guidance should come from the highest levels of government to mandate the need to disseminate, consult, and collaborate at all levels of government and mandate participation.

- **ESTABLISHMENT OF A WEB PAGE FOR SSOP PROJECT**

TCS created a Webpage at the ESCAP/WMO Typhoon Committee Website which includes the presentations given at the pilot workshops, the detailed reports of the Workshops and other related documents.

<http://www.typhooncommittee.org/SSOP/indexSSOP.html>

- **WMO/ESCAP PTC FIRST INTEGRATED WORKSHOP (November 2013)**

The WMO/ESCAP PTC first Integrated Workshop was held in Bangkok, Thailand, on 27-29 November 2013. The TC Secretary attended this workshop and made a presentation on SSOP status and discussions were held on the following steps of the project.

- **ESCAP/WMO TC 8TH INTEGRATED WORKSHOP(IWS)/2ND TRCG FORUM (December 2013)**

The ESCAP/WMO TC 8th Integrated Workshop (IWS) in conjunction with the 2nd Training Research Coordination Group (TRCG) Forum were held in Macao, China, on 2-6 December 2013. Project Manager/Technical Advisor and TC Secretary attended. Project Manager made a presentation on the project's objectives, expected outcomes, outputs, the status of the project (completed and planned activities). Discussions on the project were held with each working group (meteorology, hydrology, and disaster risk reduction) and with the TC Advisory Working Group. The attendees agreed that the focus of the 9th IWS would be on the results of the SSOP Project, tentatively titled "Synergized, Integrated, Collaborative Standard Operating Procedures Strategies to Improve Early Warning System for Coastal Multi-hazards."

- **ESCAP/WMO TC 46th Annual Session (February 2014)**

The TC 46th Annual Session was held in Bangkok, Thailand, 10-13 February 2014. The TC Secretary attended this session and made a presentation on the status of the project on behalf of the Project Manager.

- **REQUEST FOR PROJECT EXTENSION (February 2014)**

TCS submitted to ESCAP a request for a no cost extension until 31 December 2014 for the project on 27 February 2014. This extension was approved on 14 March 2014. A revised, updated Term of Reference/Work Plan and Budget was submitted with this request.

- **WMO/ESCAP PTC 41st Annual Session (March 2014)**

The WMO/ESCAP PTC 41st Annual Session was held in Dhaka, Bangladesh, 2-6 March 2014. The TC Secretary attended this session and made a presentation on the status of the project on behalf of the Project Manager.

- **INITIAL DRAFT OF THE MANUAL FRAMEWORK ON SSOP (February 2014)**

The project manager, Mr. James Weyman, completed the initial draft of the Manual Framework on SSOP for Coastal Multi-Hazards Early Warning System on 6 February 2014 which was distributed to the Task Force Members on 13 March 2014. In addition, the Manual Framework was also sent to partner agencies (ESCAP, other UN agencies, ADPC, GAATES, RIMES, IOC, and others) for comments. Only a few responses were received by 30 April 2014

- **PLANNING TRAINING WORKSHOPS (April to June 2014)**

The planning for the “Training Workshop on Synergized Standard Operating Procedures for Coastal Multi-Hazards Early Warning System” to be held on 9-11 June 2014, was initiated. Letters were sent to each of the 13 beneficiary countries asking for submission of names of people who will be attending the training. Each country could send up to 4 people from the various organizations involved in the EWS. It was suggested that one person from each of the following areas should attend: issuers, disaster managers, media, and decision-makers. An initial draft agenda for the training was sent on 13 April 2014 to TCS, PTCS, ESCAP, ADPC, ABU, GAATES, IOC-UNESCO, and Dr. Ono (Tohoku University in Japan) for comment. The agenda was revised several times based upon comments received before it was finalized. Lecturers were invited, included people from TCS, WMO, ADPC, ABU, Shanghai Typhoon Institute, Shanghai Meteorological Service, IOC-UNESCO, and IRIDES (Tohoku University).

- **SSOP QUESTIONNAIRE FOR TARGETED COUNTRIES (April 2014)**

The project manager prepared questionnaires on SOPs which were sent by TCS for Targeted Countries on 17 April 2014 and asked for replies by 10 May 2014. Also distributed with the questionnaire two sets of Terms of Reference (TORs) for the targeted countries, one set for the 6 countries with planned missions and one set for the other 7 countries.

- **PLANNING MISSIONS TO CAMBODIA, MALDIVES, MALAYSIA, MYANMAR, SRI LANKA, AND VIET NAM (April to September 2014)**

TCS contacted the potential interested Members of PTC and TC to be hosts of the missions of the 6 targeted countries: Cambodia, Maldives, Myanmar, Sri Lanka, Thailand and Viet Nam. Due to unavailability of Thailand another TC country was selected - Malaysia.

- **TRAINING WORKSHOP (June 2014)**

A Training Workshop on Synergized Standard Operating Procedures (SSOP) for Coastal Multi-hazards Early Warning System was conducted 09-11 June 2014 at the WMO Regional Training Centre (RTC) in Nanjing, China. The workshop was carried under Activity 2.1 - “Conduct training of users and issuers in the interpretation and preparation of EWS SOPs and products for decision-making, media, and communications”. The training consisted of lectures, presentations and training scenarios followed by very active discussions among participants, representatives of the beneficiary countries, and the lecturers/trainers. The Workshop was attended by 33 participants from the beneficiary countries. Cambodia was the only SSOP project beneficiary country that did not send any representatives due to last minute bureaucratic problems. On the third day of the training, an exercise was conducted based upon a

scenario of the approach of a tropical cyclone during three, two, one days before and when the cyclone hit the country. The participants were requested to analyze the situation, take decisions, and establish appropriate Standard Operating Procedures to the situation based upon the lectures of the previous two days. In the morning, the participants were divided into three groups, warning prepares, DRR and decision makers and media. In the afternoon, three new groups were formed with warning preparers, DRR and decision makers, and media intermingled among the groups. After each session, group results were presented in a plenary session and extended discussion occurred. The results of the exercise, the discussions in each group, and the plenary discussions were 5 conclusions and 21 recommendations. Some exemplars of the draft of the Manual were distributed by the participants, who were requested to give comments and suggestions.

- **MISSION to 3 PTC AND 3 TC MEMBERS – 1ST PHASE (August/September 2014)**

To complete Activity 1.3 two teams of consultants visited 3 targeted countries each in the PTC and TC regions:

PTC Countries:

Myanmar 4 - 5 August 2014;

Sri Lanka 7 - 8 August 2014; and

Maldives 10 -11 August 2014

TC Countries:

Malaysia 28-29 August 2014;

Cambodia 1-2 September 2014; and

Viet Nam 4- 5 September 2014.

Consultants who conducted the missions:

PTC Countries:

Dr. YesudhasEbenAruma Raj, Former Deputy Director General, Regional Meteorological Center, Chennai, India Meteorological Department;

Mr. Abdul Majid, Former Director of National Flood Forecasting Bureau, Pakistan; and

Mr. Ahmed Kamal, Member (Disaster Risk Reduction - DRR), National Disaster Management Authority, Prime Minister's Office, Pakistan.

TC Countries:

Dr. Tokiyoshi Toya, Former Regional Director for WMO RA II (Asia and the South-West Pacific);

Mr. Abdul Majid, Former Director of National Flood Forecasting Bureau, Pakistan; and

Mr. Amir Ali Khan, Assistant Professor, National Institute for Disaster Management, New Delhi, India.

The main purposes of the mission visits consisted of:

(a) To review existing coastal multi-hazards EWS SOPs of hydro-meteorological services, disaster management agencies, media, elected officials, and others from national to district to local levels;

(b) To identify good practices, gaps and needs, and recommendations for internal and cross-cutting SOPs; and

(c) To compile data, information, examples, and diagrams collected on SOPs good practices, gaps and needs, and recommendations for inclusion in the Manual on Synergized Standard Operating Procedures (SSOP) for Coastal Multi-Hazard Early Warning System which will meet the needs of the 13 beneficiary countries involved in the Project.

The consultants reported that all six countries had national policies with roles and responsibilities but they varied significantly on the implementation of these policies. Some had excellent SOPs identifying specific tasks to be completed and these had been coordinated with other agencies and with different levels of government. Some had varying degrees of SOPs necessary for implementation of the national policy. All of the missions collected SOP examples, pictures, flow charts, diagrams, and ideas on items for inclusion in the SSOP Manual.

- **WORKING MEETING ON COOPERATIVE MECHANISM BETWEEN PTC AND TC (October 2014)**

Under the Activity 2.2 it was conducted a Working Meeting on Cooperative Mechanism for Coastal Multi-Hazards Early Warning Information Sharing and Technical Transferring between PTC and TC occurred on 9 – 10 October 2014 in Bangkok, Thailand. The Meeting was attended by 22 participants which were mainly Chairpersons of the Working Groups on meteorology, hydrology and disaster risk reduction (DRR) of PTC and TC or their representatives; Heads of the Regional Specialized Meteorological Centers (RSMC) of Honolulu, New Delhi and Tokyo, or their representatives; Program Specialist in Early Warning Systems of Asian Disaster Preparedness Center (ADPC); the Acting Administrator of PAGASA, and representatives of the Secretariats of ESCAP, WMO, PTC and TC. The main goal of the workshop was to create the basis for building a cooperative mechanism that is expected to support regular consultation and technical transfer between the PTC and TC regions through the exchange information on PTC and TC activities identify priority areas on information sharing and technical transferring between PTC and TC. As result of the discussions held in the parallel sessions and on the basis of the information exchanged during the working Meeting, the participants identified 6 conclusions and 11 recommendations which are the basis for the working document to be submitted to the PTC/TC 3rd Joint Session (WRD/PTC-TC_3JS/6.4 - Cooperative Mechanism for Coastal Multi-hazard Early Warning Information Sharing and Technical Transferring between PTC and TC).

- **REVISION 2 OF THE SSOP MANUAL (October 2014)**

The revision 2 of the Manual on SSOP was completed by the project manager and sent to consultants and TCS for comments on October 28, 2014 with a request to not only provide general comments, but also specific comments with recommended changes or examples. Additional examples or other graphic/pictorial items to include in the Manual were requested. Comments were requested by 18 November 2014.

MISSIONSON TRAINING TO 3 PTC AND 3 PTC MEMBERS – 2ND PHASE (January/ Early February 2015)

To complete Activity 2.1 two teams of consultants visited 3 targeted countries each of PTC and TC regions:

PTC Countries:

Maldives 18-20 January 2015

Bangladesh 22-26 January 2015

Myanmar 28- 30 January 2015

TC Countries (not carried out when this document is being drafted):

Cambodia 19-21 January 2015

Lao PDR 23-27 January 2015

Philippines 29 January-2 February 2015

Consultants (PTC Countries):

Dr. YesudhasEbenAruma Raj- Former Deputy Director General, Regional Meteorological Center, Chennai, India Meteorological Department;

Mr. Abdul Majid- Former Director of National Flood Forecasting Bureau, Pakistan;

Mr. Ahmed Kamal- Member of Disaster Risk Reduction, National Disaster Management Authority, Prime Minister's Office, Pakistan.

Consultants (TC Countries):

Mr. James Thomas Davidson - former Regional Director, Australian Bureau of Meteorology, and very active in WMO Activities

Ken Kleeschulte - USA NOAA NWS, meteorologist at WFO Guam (Large experience in hydrology)

Mr. Amir Ali Khan - Assistant Professor, National Institute for Disaster Management, New Delhi, India.

The main objective of the three-day missions was to conduct working-level sessions focused on updating, modifying, developing, coordinating, and/or implementing specific SOPs with National Meteorological and Hydrological Service and disaster management offices. This objective was successfully achieved and were also conducted working level sessions, with representatives of media, decision-makers, local users, and others involved in the EWS, including national, district, and local representatives .

3. CURRENT ACTIONS

Reports on the Missions to the 6 Countries of PTC and TC Regions

The Reports of the on SSOP hands-on training missions to Bangladesh, Cambodia, Lao PDR, Maldives, Myanmar and Philippines will be delivered to the project manager by the consultants until 30 days after the completion of the missions. It is also expected some additional comments and suggestions collected during these missions can contribute to the updating of the draft of the Manual. The most recent version, dated 3 December 2014, was submitted for comments and suggestions to the SSOP task force, SSOP steering committee, SSOP focal points, consultants,

partners and other organizations, namely ABU, ADPC, ESCAP, GAATES, IOC, IRIDeS, PTC Secretariat, RIMES, UNDP and WMO,

4. EXTENSION OF PROJECT

Given the great difficulties in hiring experts, achieving consensus on dates for hands-on training missions to complete the Activity 2.1 (three-day training missions in six countries) and other logistic difficulties, an extension of the project until 31 May 2015 was authorized by ESCAP.

5. AUDITING

The auditing of the project is foreseen to be made by KPMG, one of the largest professional auditing companies. Contacts are now in progress.

6. EVALUATION OF THE PROJECT

TCS has a list of possible evaluators with wide experience in projects evaluation. Under the advice of the project manager one evaluator will be selected and the evaluation is expected to be complete on April 30, 2015.

7. ESTIMATED SCHEDULE FOR NEXT ACTIONS

After consulting the SSOP project manager, the foreseen schedule for the next activities is estimated as follows:

2 Feb 2015 - second consultant missions ends.

23 Feb 2015 - Due date for 2nd consultants mission reports.

4 Mar 2015 - Revision of Manual based upon consultant missions completed and sent out for review.

25 Mar 2015 - Comments received.

5 April 2015 - Revision of Manual completed by project manager and others.

6-9 April 2015 - Conversations between project manager, TCS and printing company on graphical aspects of the Manual (to add pictures, text boxes, and better diagrams).

13-16 April 2015 - One final review of the Manual to ensure all corrections are completed.

16 April 2015 - Send the final version of the Manual to evaluator for conducting the evaluation report.

17 April 2015 - Send the Manual to the publisher to prepare draft copy for review.

24 April 2015 - Send to project manager and others for final review.

28 April 2015 - Final version back to Publisher.

29 April-May 5 - Publication and distribution.

30 April 2015 - Receive the Evaluation Report.

May 6-7 2015 - To get final receipts.

11 - XX May - Audit and closure of project

20 May 2015 – Receipt of audit bill for settling the payment

12 Jun 2015 - Sending the audit report to ESCAP.

30 Jun 2015 - Submit the Final Report to ESCAP.

8. RECOMMENDATIONS

On the basis of the experience gained during the implementation of the SSOP project, and considering that the final phase is already in progress, TCS would like to request the 3rd PTC/TC Joint Session to:

- a. Encourage Members of PTC and TC, SSOP Focal Points, SSOP Task Force and Steering Committee to actively collaborate in the revision of the Manual on Synergized Standard Operating Procedures for Coastal Multi-Hazards Early Warning System.
- b. To request the Members, after the Manual is complete, to consider ways to make the best use of it.
- c. Encourage the Members to disclose the Manual by various agencies, organizations and other entities related to early warning systems.