

## **Report on Draft Agreement and Time-bound Pilot Project on Technical Cooperation between TC and AP-TCRC**

*(Submitted by Joint Task Team)*

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### **ACTION REQUIRED:**

The Committee is invited to:

- a) Take note of the progress of the Joint Task Team (JTT) in drafting the Agreement and the Time-bound Pilot Project on technical cooperation between the Typhoon Committee (TC) and the Asia-Pacific Typhoon Collaborative Research Center (AP-TCRC)
- b) Review and discuss the draft Agreement and the Time-bound Pilot Project on technical cooperation between TC and AP-TCRC
- c) Approve the recommendations of the JTT on the Agreement and the Time-bound Pilot Project on technical cooperation between TC and AP-TCRC

### **APPENDIXES:**

Appendix A - DRAFT TEXT FOR INCLUSION AT SESSION REPORT

Appendix B – DRAFT AGREEMENT ON TECHNICAL COOPERATION AND RESEARCH ACTIVITIES BETWEEN TC AND AP-TCRC

Appendix C – DRAFT PILOT PROJECT OF THE TECHNICAL COOPERATION AND RESEARCH ACTIVITIES BETWEEN TC AND AP-TCRC

**APPENDIX A:  
DRAFT TEXT FOR INCLUSION IN THE SESSION REPORT**

***Report on Draft Agreement and Time-bound Pilot Project on Technical Cooperation between TC and AP-TCRC***

1. *The Committee was informed of the progress of the Joint Task Team (JTT) in drafting the Agreement and the Time-bound Pilot Project on technical cooperation between the Typhoon Committee (TC) and the Asia-Pacific Typhoon Collaborative Research Center (AP-TCRC).*
2. *The Committee reviewed and discussed the draft Agreement and the Time-bound Pilot Project on technical cooperation between the TC and AP-TCRC in **Appendix ?? and Appendix ??** respectively.*

***Recommendations of JTT***

1. *Recognize and thank the effort of the JTT in drafting the Agreement and the Time-bound Pilot Project on technical cooperation between TC and AP-TCRC.*
2. *Appreciate the valuable comments and inputs of TC Members and AWG Members in refining the draft documents.*
3. *Endorse the draft Agreement on Technical Cooperation and Research Activities between TC and AP-TCRC.*
4. *Endorse the draft Pilot Project of the Technical Cooperation and Research Activities between TC and TCRC.*
5. *Include the following paragraph in the Session Report as a consensus of the TC Members :*

*The Committee was informed of the issue on whether the term “Agreement” or “MoU (Memorandum of Understanding)” should be used in the title of the document. It noted that MoU is a commonly used term for a non-legally binding agreement. The AWG Chair shared his view that the Host has conducted large amount of administrative work using the term “Agreement”, and the change of the title may have great impacts on the progress and schedule of the completion of TC53’s request. The Committee noted the advice of ESCAP, according its relevant experience, that the important matter to make a non-legally binding of this type of the document is not the title of the document but the content and the clauses itself. Considering that the idea of non-legally binding has been clearly stated in relevant Articles of the document, the Committee agreed that the title of the document does not affect its legal status, and this "Agreement" document is not legally different in nature from (not legally above/below) a MoU. It agreed to accept the use of "Agreement".*

6. *Any other text which will be included in the Session Report.*

**APPENDIX B:  
DRAFT AGREEMENT ON TECHNICAL COOPERATION AND  
RESEARCH ACTIVITIES BETWEEN TC AND AP-TCRC**

WHEREAS in view of the decision of the 53<sup>rd</sup> Session of the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) / World Meteorological Organization (WMO) Typhoon Committee (hereinafter “the Committee”) to support the establishment of the Asia-Pacific Typhoon Collaborative Research Center (hereinafter “the AP-TCRC”) in Shanghai, China contributing to the research activities on tropical cyclone;

WHEREAS the host of the AP-TCRC are the Shanghai Municipal Government of China and the China Meteorological Administration (hereinafter collectively “the Host”). The Host has offered to provide premises for the AP-TCRC (hereinafter “the Premises”), and to establish the Shanghai Typhoon Collaborative Research Fund (STCRF) described in Appendix A to be used by the AP-TCRC in meeting the cost of the operation, research activities and maintenance of the Premises;

The purpose of this document is to define the terms and conditions governing the collaboration between the Committee and the AP-TCRC (hereinafter “the Parties”) regarding the technical cooperation, and the expectations, scopes and responsibilities stemming therefrom for the Parties for supporting the AP-TCRC stipulated in the following Articles. This document is a record of understanding between the Parties and is not legally binding as stipulated in Article 5. The titles/headings in this document do not affect its interpretation.

***Article 1 – Cooperation Mechanism***

The cooperation between the Parties will follow the consideration stipulated in the Para. 104 of the Final Report of the 53<sup>rd</sup> Session of the Committee. The Committee will support the AP-TCRC through participation in the International Scientific Steering Committee (ISSC) in terms of the technical advice on the research activities of AP-TCRC. The

Committee will have no responsibility for the governance, management and funding mechanism of the AP-TCRC. The organizational structure of the AP-TCRC is given in Appendix B.

### ***Article 2 – International Scientific Steering Committee (ISSC)***

The AP-TCRC will establish the ISSC and invite distinguished tropical cyclone scientists as members. ISSC will also include representatives from the Committee including but not limited to the members of the Training and Research Coordination Group (TRCG) and the Working Groups of the Committee to provide technical advice on research activities of the AP-TCRC. The roles of ISSC are as follows:

- 2.1 Advise on the strategic plan on the long-term goals of the AP-TCRC;
- 2.2 Solicit, consolidate and integrate the needs and requirements from the Members of the Committee regarding the technical cooperation and research activities of AP-TCRC;
- 2.3 Advise on annual work plan and implementation strategy of the AP-TCRC;
- 2.4 Evaluate and advise on the achievements of cooperation projects of the AP-TCRC.

### ***Article 3 – Scope of Cooperation***

- 3.1 The Committee will provide scientific and technical advices through the ISSC to identify priorities of AP-TCRC from initial targets or potential research areas listed in Appendix C, and AP-TCRC will set up prioritized research project guide in consultation with the ISSC.
- 3.2 Based on the priorities identified, AP-TCRC will develop a proposal of a time-bound pilot project to be conducted under TRCG in collaboration with the Working Groups of the Committee. AP-TCRC will submit it through TRCG to the Session of the Committee for its approval .
- 3.3 The AP-TCRC will:
  - (a) organize technical training on the new operational technology and products, in collaboration with TRCG and the Working Groups of the Committee;
  - (b) organize academic exchanges to encourage scientists from the Members of the Committee to participate in the Pilot Project;
  - (c) organize tropical cyclone international forums or other related international

cooperation to promote the visibility of the Parties and related research collaborations with the Members of the Committee in the tropical cyclone communities.

The personnel and logistical supports arising from visits under the invitation of the AP-TCRC will be provided in accordance with AP-TCRC's rule listed in Appendix D.

#### ***Article 4 – Revision***

The Parties will periodically monitor and review the implementation of this document, and raise issues for mutual consideration, as appropriate.

#### ***Article 5 – Resolution of disputes***

This document is not intended to create and does not create any legally binding rights, liabilities or obligations under any law on the part of either Party or any other person. Any disagreement regarding the interpretation or application of this document will be resolved by consultation between the Parties.

#### ***Article 6 – Effective Date, Term and Termination***

6.1 This document will come into effect upon its signature.

6.2 This document will remain in effect for **an initial period of five (5) years** and will be extended automatically **for a subsequent period of five (5) years (successive periods of five (5) years)**. If either one of the Parties plans to revise the content of this document, it should be discussed and agreed by the Parties at least one (1) year before the maturity date.

6.3 This document may be terminated at any time by either the Committee or the AP-TCRC giving a notice to the other at least one (1) year of its intended date of termination.

IN WITNESS WHEREOF the undersigned duly authorized representatives of the ESCAP/WMO Typhoon Committee and the AP-TCRC have signed this document.

For and on behalf of the ESCAP/WMO  
Typhoon Committee

For and on behalf of the AP-TCRC

Signature : \_\_\_\_\_

Signature : \_\_\_\_\_

Name :

Name :

Title :

Title :

Place :

Place :

Date :

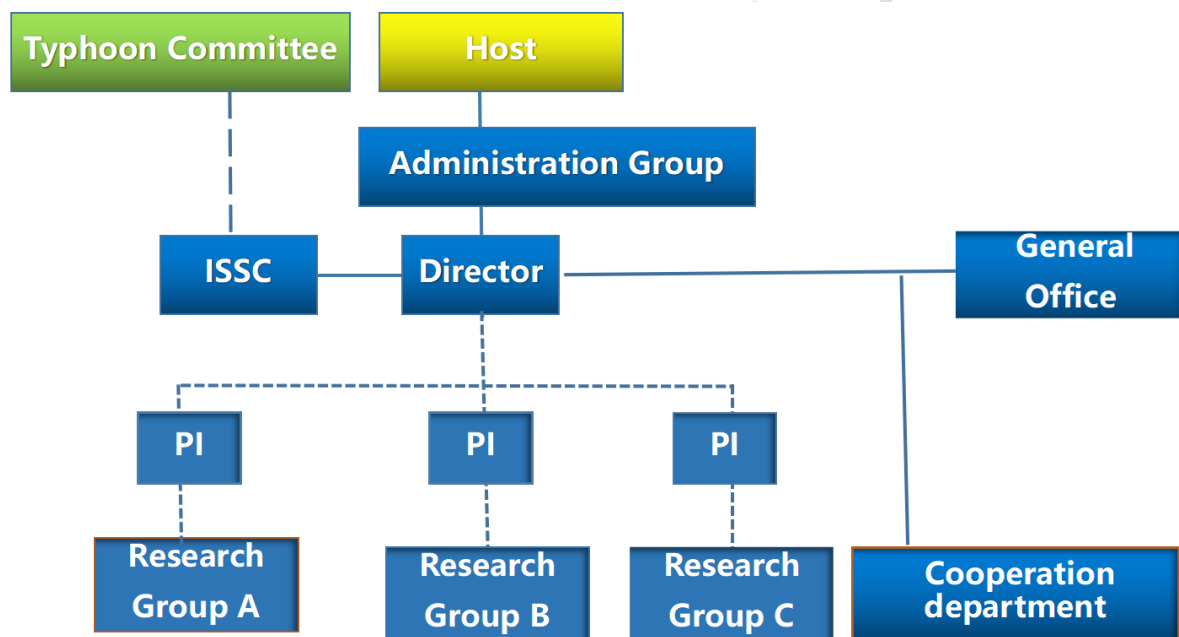
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**Appendix A – The Shanghai Typhoon Collaborative Research Fund (STCRF)**

The STCRF will be established by the Shanghai Municipal Government (ShMG) to support the research activities, cooperation projects and the operation of the AP-TCRC, including the collaborative projects and activities as stipulated in Article 3 and Appendix C. The ShMG will be responsible for the management of STCRF and financially support for the research and cooperation of AP-TCRC. The China Meteorological Administration (CMA) will provide other research support including high-performance computer, observation instruments and so on. The budget will be assessed by the Host.

**Appendix B – The organization structure of the AP-TCRC**



### ***Appendix C – Research areas of the technical cooperation***

1. International tropical cyclone experiment and observation study including new satellites and air flight observations.
2. Tropical cyclone numerical modelling and data assimilation.
3. Scientific understanding of tropical cyclone development (genesis, movement and intensity) and enhancement of forecasting techniques through case studies.
4. Forecasting tropical cyclone induced disasters such as flooding, storm surges and landslides.
5. New techniques in tropical cyclone research and applications (artificial intelligence / machine learning and Big Data technology).
6. The influence of climate change on tropical cyclone activities and the resulting impacts.

### ***Appendix D – AP-TCRC's rule regarding support to persons involved in AP-TCRC's activities***

The Host shall take all necessary measures to facilitate activities of the following international visitors to AP-TCRC in Shanghai, China:

- (a) Representatives of the Committee's Members, ESCAP and WMO participating in the work of the AP-TCRC under the invitation of the AP-TCRC;
- (b) Contract Employees of the AP-TCRC;
- (c) Other persons invited by the Committee and/or the AP-TCRC, in consultation with the Host.



**APPENDIX C:  
DRAFT PILOT PROJECT OF THE TECHNICAL COOPERATION AND  
RESEARCH ACTIVITIES BETWEEN TC AND AP-TCRC**

**A. Preamble**

This is to outline the design and implementation of a time-bound pilot project (hereinafter “the Pilot Project”) in pursuant to the Agreement on Technical Cooperation and Research Activities between the ESCAP/WMO Typhoon Committee (“the Committee”) and the Asia-Pacific Typhoon Collaborative Research Center (AP-TCRC) (hereinafter “the Agreement”).

**B. Hosting organization**

AP-TCRC will host and manage the Pilot Project under the Training and Research Coordination Group (TRCG) in collaboration with the Working Groups of the Committee.

**C. Theme of the Pilot Project**

- (i) The candidate theme of the Pilot Project is based on the prioritized training and research areas of TRCG and potential research topics described in (iii) below of this Section.
  
- (ii) Proposed theme of the Pilot Project:

*Advances in application of new observations and technologies for improving tropical cyclone prediction in various time scales and related disaster prevention activities.*

[KRAs 2,4,5 & 6 in the (draft) Typhoon Committee Strategic Plan (TCSP) for 2022-2026]

- (iii) Identified research topics under the theme of the Pilot Project:
  - (a) Advances in forecasting tropical cyclone induced hazards including flooding, storm surges and landslides.
  - (b) Understanding of rapid intensification mechanism of tropical cyclone and influence of climate change.
  - (c) Tropical cyclone numerical modelling using field experiment data.
  
- (iv) Research activities under the Pilot Project will be listed as TRCG projects in the Annual Operating Plan of the TRCG.

#### **D. Tentative Period of Pilot Project**

Five (5) years starting from mid-2022 tentatively, subject to approval of the Agreement, with about 3 research topics to be conducted including attachments to AP-TCRC. Evaluation and rolling review about the research activities will be conducted in annual basis, as well as at the end of 5-year period that they will be reported by AP-TCRC to TRCG.

#### **E. Anticipated Deliverables**

- (i) AP-TCRC's reports and presentations of the Pilot Project to TRCG that will be delivered in the Integrated Workshop (IWS) and Annual Session of the Committee about the progress, review of project outcomes and outlook of research directions and activities.
- (ii) Study reports and technical presentations about the research topics to be delivered at IWS and Annual Session of the Committee by China, and/or participants, experts and scientists of the Pilot Project with the nomination of Members concerned.
- (iii) Papers on research findings / outcomes published in the academic journals.
- (iv) Participation in international conference(s) funded by AP-TCRC.
- (v) Contribution to TRCG Roving Seminar and TRCG Forum.

#### **F. Evaluation and Review Process of the Pilot Project**

- (i) AP-TCRC should submit an annual report of the Pilot Project to TRCG, and collect comments / suggestions from the Committee's Members.
- (ii) AP-TCRC (the Director or his/her designate) should submit a final report of the Pilot Project, achievements and deliverables to TRCG, as well as proposal on future development or related research initiatives.