

**ESCAP/WMO Typhoon Committee**

FOR PARTICIPANTS ONLY

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21-24 February 2017

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Yokohama

ENGLISH ONLY

Japan

## **STRATEGIC PLAN 2017-2021**

*(Submitted by Strategic Plan Focal Points)*

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### **ACTION REQUIRED:**

The Committee is invited to discuss and approve proposals for the new Strategic Plan 2017-2021

### **APPENDICES:**

- A) DRAFT TEXT FOR INCLUSION AT SESSION REPORT
- B) STRATEGIC PLAN 2017-2021 (WITH STRATEGIC GOALS)

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

13, Strategic Plan 2017-2021

1. *The Committee was informed of the proposal and amendments for the new Strategic Plan 2017-2021 submitted by the Focal Points designed for the Strategic Plan*
2. *The Committee approve the Strategic Plan for 2017-2021...*

## APPENDIX B:

### Executive Summary

- Countries in Asia and the Pacific are more prone to natural disasters than those in other parts of the world. Because of this, there is an urgent need to continue developing effective, end-to-end early warning systems that lead to an effective response by emergency managers and people at risk. It is clear that the Millennium Development Goals cannot be attained in the region if the development gains already achieved are not protected from the risks and impacts of disasters. For less developed countries, in addition to the tragic personal loss of life and property, natural disasters, especially typhoons, severely threaten and impact their sustainability, capacity building, debt repayments, poverty reduction and even the basic necessities of life - clean drinking water, food, and shelter.
- Founded in 1968 under the original auspices of the United Nations Economic Commission for Asia and Far East, the Typhoon Committee (TC) has evolved into a collaboration of 14 Members involving both the Economic and Social Commission of Asia and the Pacific (ESCAP) and the World Meteorological Organization (WMO). Since then, The Typhoon Committee has been repeatedly recognized as an outstanding regional body who has integrated the actions and plans of the meteorological, hydrological, and disaster risk reduction (DRR) components to produce meaningful results. The Committee currently has fourteen Members: Cambodia; China; Democratic People's Republic of Korea; Hong Kong, China; Japan; Lao People's Democratic Republic; Macao, China; Malaysia; Philippines, Republic of Korea, Singapore; Thailand; United States of America and Viet Nam.
- The development of the Strategic Plan has been based on various international and regional frameworks, protocols, and action and strategic plans pertaining to tropical cyclone activities within the region. The purpose of this Strategic Plan is for the Typhoon Committee to identify regional Targets, Key Results Areas (KRAs), Strategic Goals, and associated activities which the Committee wants to achieve in 2017- 2021 to save lives, mitigate damage, and decrease social and economic effects from typhoon-related events. The impact of climate change is thought to influence all of the key result areas and strategic goals and thus is viewed as a crosscutting theme for this strategic plan. (Hong Kong - Propose to remove the strategic goals. Also propose to re-align, streamline or consolidate the associated activities according to the KRA re-arrangement and then to request WG Chairs to critically review the revised activities in light of the prevailing AOPs being undertaken. To make it simpler, both for planning, monitoring and reporting purposes)
- Typhoon Committee's Vision: The Typhoon Committee is the world's preeminent intergovernmental, regional organization for improving the quality of life of the Members' populations through integrated cooperation to mitigate impacts and risks of typhoon-related disasters and to enhance beneficial typhoon-related effects.

- Typhoon Committee's Mission: To integrate and enhance regional (Meteorological, Hydrological, and Disaster Risk Reduction) activities of Members within international frameworks to reduce the loss of lives and minimize social, economic, and environmental impacts by typhoon-related disasters.

The Typhoon Committee has identified six Key Results Areas (KRAs) for special emphasis in the next five years (2017-2021). These KRAs are defined as the critical, overarching, priority areas of special interest for the Typhoon Committee. In addition, the Typhoon Committee believes the impacts of climate change will influence all of the KRAs and Strategic Goals and thus is viewed as a crosscutting theme for this strategic plan. The Committee must complete the Strategic Goals associated with these KRAs to achieve its vision and mission through regional, integrated actions. The six KRAs are:

- KRA 1: Assessment of the socio-economic impacts of Typhoon Committee activities.
- KRA 2: Enhanced beneficial typhoon-related effects for the betterment of quality of life.
- KRA 3: Improved Typhoon-related Disaster Risk Management in Various Sectors.
- KRA 4: Strengthened Resilience of Communities to Typhoon-related Disaster.
- KRA 5: Improved capacity to generate and provide accurate, timely and understandable information on typhoon-related threats.
- KRA 6: Enhanced Typhoon Committee's Effectiveness, Efficiency and International Collaboration.

It should be noted that the Typhoon Committee along with its working groups are making major contributions in accomplishing these KRAs, but there are many other factors and influences which are not under the direct control of the Typhoon Committee. Therefore the Committee will need the assistance and support of other international organizations and funding sources.

The most important functions and responsibilities of Members' governments are to protect the lives of their citizens and to improve their quality of life. Through this Strategic Plan, the Typhoon Committee's 14 Members are meeting these important government functions and responsibilities through regional cooperation and collaboration. Since 1968 the Typhoon Committee has shown how successful it has been in the area of typhoon-related matters in improving the protection of people's lives and in improving their quality of life. Building on this legacy of the past, the Strategic Plan provides the roadmap into the future.



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## Strategic Plan

### 1. Introduction

Countries in Asia and the Pacific are more prone to natural disasters than those in other parts of the world, with people in the region four times more likely to be affected by natural catastrophe than those in Africa and 25 times more vulnerable than Europeans or North Americans. During the period of 1980 to 2009, while the region generated only one quarter of the world’s GDP, it accounted for a staggering 85 per cent of deaths and 38 per cent of global economic losses. In addition during 1980 to 2009, 45 percent of all worldwide disaster events occurred in Asia and the Pacific<sup>1</sup>. In 2008, disasters across the

region accounted for almost 99 per cent of the world's reported victims, and from 2000-2007 more than 78 per cent of the world's reported victims of natural disasters were found in Asia.

The two most common types of disaster in the Asia/Pacific area are floods and storms - many associated with typhoon- related impacts. From 1980 to 2009, 2444 flooding and storm events occurred and produced 513,150 deaths; affected 3340 million people; and caused USD467 billion of damage.

With climate change, it is generally accepted that more frequent or intense occurrences of high-impact anomalous weather are likely as the atmosphere attempts to counteract or adjust to the resulting effects. As such, sustainable disaster mitigation efforts against typhoon related impacts, including too much or lack of typhoon-induced rainfall will need to address issues across the whole spectrum of climate and weather systems.

The United Nations is warning that tens of millions of people around the world are at risk of becoming new types of refugees seeking refuge from hunger, droughts, floods, and exhausted soils because of environmental breakdowns in their parts of the world.

For more developed countries, typhoon related impacts cause major social and economic disruptions through loss of lives and property. For less developed countries, in addition to the tragic personal loss of life and property, natural disasters, especially typhoons, severely threaten and impact their sustainability, capacity building, debt repayments, and even the basic necessities of life – clean drinking water, food, and shelter. The Typhoon Committee, through its regional cooperation and collaboration has since 1968, been working to help the people of the region through accomplishments and actions to reduce the loss of life and property due to typhoon-related effects.

## **2. Vision and Mission**

Typhoon Committee's Vision:

To be the World's preeminent intergovernmental, regional organization for improving the quality of life of the Members' populations through integrated cooperation to mitigate impacts and risks of typhoon-related disasters and to enhance beneficial typhoon-related effects.

Typhoon Committee's Mission:

To integrate and enhance regional activities in the areas of meteorological, hydrological, and disaster Risk Reduction of Members within international frameworks, including the Sendai Framework for Disaster Risk Reduction 2015 to 2030, to reduce the loss of lives and minimize social, economic, and

environmental impacts by typhoon-related disasters, as well as more frequent typhoon-related extreme weather associated with climate change, and to enhance beneficial typhoon-related effects.

### **3. Climate Change Impact Crosscutting Theme**

To achieve its mission, the ESCAP/WMO Typhoon Committee believes climate change must be viewed as one of the major challenges of our time. In 2013, the United Nations Intergovernmental Panel on Climate Change (IPCC) clearly indicated in its Fifth Assessment Report that the warming in the climate system is unequivocal. In addition, it stated the increases in the atmospheric greenhouse gas concentration due to human activities are very likely responsible for most of the observed global warming since the middle of the 20th century. Climate change impacts the mean state of climate, but more importantly, it also has implications to the frequency and intensity of extreme events. Over the years, various studies have reported changes in the frequency of occurrence and intensity of extreme weather events around the world in the 20th century, including an increase of drought conditions, extreme high temperatures, heavy precipitation events, and coastal inundation.

The Western North Pacific is the most active tropical cyclone basin in the world with an annual average of about 30 tropical cyclones. Against the background of climate change and a continuous increase in economic damage and disruption by tropical cyclones, the Typhoon Committee has a growing concern on the possible impacts of climate change on tropical cyclone activities and related effects in the region. The Committee considers it a high priority to understand the possible effects brought about by climate change, such as changes in tropical cyclone frequency and intensity and the associated extreme rainfall and coastal inundation impacts from both scientific and socio-economic viewpoints and to share relevant information among Members. Sustainable disaster mitigation efforts against tropical cyclone related impacts, including too much or too little typhoon-induced rainfall, will be needed to address issues across the whole spectrum of climate and weather systems.

### **4. Development of the Strategic Plan**

The Typhoon Committee at its 37th Session held in Shanghai, China and at its 38th Session held in Hanoi, Vietnam decided to restructure the Committee's Regional Cooperation Programme Implementation Plan (RCPIP) to better reflect Key Results Areas and the required Strategic Goals and Activities needed to achieve these Key Results Areas.



In September 2006, a historical “International Workshop on Integrating Activities of Meteorology, Hydrology, and Disaster Risk Reduction Components of the Typhoon Committee into the related International Framework for Disaster Risk Management for Better Impacts and Visibility” was held in Macao, China.

For the first time, the Typhoon Committee’s Working Groups on Meteorology, Hydrology, and Disaster Risk Reduction along with the Advisory Working Group (AWG) met jointly to define high priority regional actions required to reduce the loss of life and social and economic impacts from tropical cyclones. An initial Strategic Plan was drafted based on the inputs from the working groups. After incorporating comments from Members, the Typhoon Committee at its 39th Session held in Manila, Philippines in December 2006 approved the “Typhoon Committee Strategic Plan, 2007 – 2011, an Integrated, Regional approach to Improve the Quality of Life for Members’ Population through Mitigating Typhoon-Related Impacts”.

The Typhoon Committee at its 48th Session, held in Honolulu, Hawaii, requested the AWG and the working groups to review the Strategic Plan and present a draft with a climate impact crosscutting theme and reference to the Sendai Framework for Disaster Risk Reduction 2015 to 2030 for its consideration at the 49th Session in Yokohama City, Japan.

The finalized version of the Strategic Plan 2017-2021 was approved on \_\_\_\_\_.

The purpose of this Strategic Plan is for the Typhoon Committee to identify Targets , Key Results Areas, Strategic Goals, and activities which the Committee wants to achieve in 2017-2021 and to continue to produce meaningful results for saving lives and mitigation of damage from typhoon-related events. The impact of climate change is thought to influence all of the key result areas and strategic goals and thus is viewed as a crosscutting theme for this strategic plan. The Typhoon Committee intends to champion the goals of the Sendai Framework for Disaster Risk Reduction 2015 to 2030, concerning typhoon-related disasters, by incorporating the Framework’s Expected Targets into this Strategic Plan.

## **5. Scope of the Typhoon Committee’s Strategic Plan**

- The results will be achieved through the Members’ regional and integrated activities with support and monitoring of the TCS, World Meteorological Organization (WMO), and the UN Economic and Social Commission for Asia and the Pacific (ESCAP).
- The critical part of this plan is the required regional cooperation and collaboration among Members and the integration of the Meteorological, Hydrological, and Disaster Risk Reduction components.

- This strategic plan directly supports the functions of the Committee as described in the Statute of the Typhoon Committee:
  1. Review regularly the progress made in the various fields of typhoon damage prevention;
  2. Recommend to the participating Governments concerned plans and measures for the improvement of meteorological and hydrological facilities needed for typhoon damage prevention;
  3. Recommend to the participating Governments concerned plans and measures for the improvement of community preparedness and disaster prevention;
  4. Promote the establishment of programmes and facilities for training personnel from countries of the region in typhoon forecasting and warning, hydrology and flood control within the region and arrange for training outside the region, as necessary; and
  5. Promote, prepare and submit to participating Governments and other interested organizations plans for coordination of research programmes and activities concerning typhoons.

## **6. Key Results Areas (KRAs) and Strategic Goals (SG)**

KRAs are defined as the critical, overarching, priority areas of special interest for the Typhoon Committee. The Committee must complete the strategic goals associated with these KRAs for it to achieve its vision and mission through regional, integrated actions. The Committee has identified seven KRAs and one crosscutting theme, as well as an 2 Targets for special emphasis in the next five years.

It should be noted that the Typhoon Committee along with its working groups can make major contributions in these KRAs, but there are many other factors and influences which are not under the direct control of the Typhoon Committee. Therefore, the Committee will need the assistance and support of other international organizations and funding sources. The followings are the Targets, KRAs, Strategic Goals (SGs), to be pursued among the working groups (detailed integrated associated activities and associated activities specific to the respective working groups are given in the Appendix):

## Targets

To substantially reduce the number of affected people and deaths by typhoon-related disasters in the ten years of 2010 – 2020 (using the ten years of 2000 – 2009 as the base line).

To substantially reduce the socio-economic impacts of typhoon-related disasters per GDP per capita, aiming to lower the average global figure per 100,000 in the ten years of 2011- 2020 (using the ten years of 2000 - 2009 as the base line).

- KRA 1: Assessment of the socio-economic impacts of Typhoon Committee activities.

Strategic Goal 1: To establish methodology for assessment of the Typhoon Committee activities.

- KRA 2: Enhanced beneficial typhoon-related effects for the betterment of quality of life.

Strategic Goal 2a: To identify and explore the beneficial use of resources such as rainfall brought by typhoon.

Strategic Goal 2b: To study and promote the increasing use of typhoon-related beneficial effects among the Members.

- KRA 3: Improved Typhoon-related Disaster Risk Management in Various Sectors.

Strategic Goal 3a: To provide reliable typhoon-related disaster information for effective decision making in risk management in various sectors.

Strategic Goal 3b: To strengthen capacity of the Members in typhoon-related disaster risk management in various sectors.

Strategic Goal 3c: To enhance international and regional cooperation and assistance in the field of disaster risk reduction.

- KRA 4: Strengthened Resilience of Communities to Typhoon-related Disaster.

Strategic Goal 4a: To promote and enhance culture of community-based disaster risk management among the Members.

Strategic Goal 4b: To promote education, training and public awareness of typhoon-related disasters among the Members.

- KRA 5: Improved capacity to generate and provide accurate, timely and understandable information on typhoon-related threats.

Strategic Goal 5a: To facilitate RSMC capability to respond to the needs of the Members in forecasting and capacity building.

Strategic Goal 5b: To improve capacity of Members to provide timely and accurate user-oriented and friendly tropical cyclone products and information.

Strategic Goal 5c: To enhance capacity of Members' typhoon- related observation, monitoring, forecasting and warning.

- KRA 6: Enhanced Typhoon Committee's Effectiveness, Efficiency and International Collaboration.

Strategic Goal 6a: To strengthen the capacity of Typhoon Committee to effectively discharge its responsibilities and functions described in this Strategic Plan and completed its stated mission in accordance with the Typhoon Committee's Statute.

Strategic Goal 6b: To mobilize available resources and engage collaborators for the implementation of the strategic goals.

## **7. Annual Operating Plan and Budget**

Each year during the 5 year period of this Strategic Plan, the AWG with input from the working groups and TCS will prepare a proposed draft Annual Operating Plan (AOP) to be approved at the next Typhoon Committee Session. The AOP will contain detailed actions and success indicators to be conducted in that year as steps towards meeting the KRAs, Strategic Goals, Targets and Crosscutting Theme. Thus, through the completion of the five AOPs, the Committee and its Members should accomplish all of the KRA Strategic Goals and Activities contained in this plan. The AWG will prepare a proposed draft budget (TC Trust Funds) for each year based upon the priority actions contained in the AOP and the successes achieved in the previous year's AOP. Activities and objectives which are successfully accomplishing Strategic Plan objectives and AOP actions and are producing positive results in accomplishing the vision and mission of the Typhoon Committee will be given due consideration when preparing the budget.

## **8. Conclusion**

The most important functions and responsibilities of Members' Governments are to protect their people's lives and to improve their people's quality of life. World-wide, the Asia/Pacific region is the most heavily impacted by natural disasters such as typhoons. Regional coordination and collaboration is essential to reduce these tragic losses and resulting socio- economic impacts. Therefore through this Strategic Plan, the Typhoon Committee's 14 Members are building on the great legacies of the past and laying a path to meet the challenges of the future. With a focus on accomplishments in the seven identified KRAs and Crosscutting Theme, the Members have a plan to improve their abilities during typhoon situations to protect their people's lives and to improve their quality of life through regional coordination and cooperation.

Key Results Areas (KRAs)	Strategic Goals	Associated activities			
		Integrated	Meteorology	Hydrology	DRR
KRA 1: Assessment of the socio-economic impacts of Typhoon Committee activities.	Strategic Goal 1: To establish methodology for assessment of the Typhoon Committee activities.	<p>Collect, study, and catalog typhoon– related social and economic impacts.</p> <p>Standardize Members’ methodology to assess social and economic impacts/issues of typhoon-related disasters.</p>		<p>Develop assessment system of socio-economic impact of flood management</p> <p>Analyze social and economic impacts of flood</p>	<p>Evaluate relationship between socio-economic impacts and intensity of the tropical cyclones.</p> <p>Assess socio-economic impacts of typhoon-related disasters.</p> <p>Provide reliable statistics of impacts of typhoon-related disasters for monitoring the progress achieved by the Typhoon Committee.</p>

Key Results Areas (KRAs)	Strategic Goals	Associated activities			
		Integrated	Meteorology	Hydrology	DRR
KRA 2: Enhanced beneficial typhoon-related effects for the betterment of quality of life.	Strategic Goal 2a: To study and promote the increasing use of typhoon-related beneficial effects among the Members.	<p>Collect and distribute Members' studies on typhoon-related beneficial effects.</p> <p>Promote such sharing of experience via the Typhoon Committee's web site and the media.</p>	<p>Improve typhoon-related wind and precipitation forecast accuracy.</p>	<p>Improve dam operation for flood control and water resource management considering rainfall induced by typhoon.</p>	<p>Identify Members' key agencies and sectors working on beneficial effects of typhoons</p>

Key Results Areas (KRAs)	Strategic Goals	Associated activities			
		Integrated	Meteorology	Hydrology	DRR
KRA 3: Improved Typhoon-related Disaster Risk Management in Various Sectors.	Strategic Goal 3a: To provide reliable typhoon-related disaster information for effective decision making in risk management in various sectors.	<p>Identify the primary causes of typhoon-related loss of life and identify location (which Members and where in the Members' area), gender, social status, and any other additional information available</p> <p>Study and understand the impact of climate change on tropical cyclone activity and related effects in the region</p>	<p>Improve the methods to calculate the QPE, QPF and to estimate the PMP and PMF.</p> <p>Prepare the typhoon hit or landfalling probability maps.</p> <p>Prepare the tropical cyclone precipitation maps</p> <p>Assess the possible effects of climate change on tropical cyclone</p>	<p>Prepare urban inundation maps and water-related Hazard maps.</p> <p>PMP/PMF review and study considering climate change.</p> <p>Establish scenario building for typhoon-related hydrological disaster reduction</p> <p>Improve satellite data utilization in typhoon-related disaster management and hydrological modeling.</p> <p>Improve the capacity of damage assessment related to typhoons</p> <p>Prepare safety zones</p> <p>Develop Hazard Mapping for flood and sediment-related disasters</p>	<p>Develop, establish, promote, coordinate and facilitate development of database on various sectors for a regional-wide disaster information system which would be accessible to all Members' decision makers, disaster services, communities, and others designated by the Members.</p> <p>Establish and distribute an inventory of Members' existing disaster reduction techniques and management strategies.</p>



	<p>Strategic Goal 3b: To strengthen capacity of the Members in typhoon-related disaster risk management in various sectors.</p>	<p>Develop, maintain and strengthen multi-hazard, multi-sectoral forecasting and early warning systems</p> <p>Promote country-level implementation of the SSOP guidelines</p> <p>Promote the application of impact-based forecasts and warnings</p>	<p>Promote and facilitate sharing of knowledge and know-how on multi-hazard early warning</p>	<p>Improve the management of urban flood risk.</p> <p>Establish and improve the application of QPE/QPF and storm surge warning services</p> <p>Develop comprehensive countermeasure for extraordinary flood disaster</p>	<p>Identify priority areas for capacity building on disaster risk management of interested Members as may be required</p>
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	<p>Strategic Goal 3c: To enhance international and regional cooperation and assistance in the field of disaster risk reduction.</p>	<p>Strengthen cooperation and collaboration of disaster early warning systems among Members using the latest technology.</p> <p>Develop contacts and actions among Members of TC and PTC in view of implementing and synergizing Standard Operating Procedures for coastal multi-hazard early warning system</p> <p>Strengthen cooperation and collaboration with the Panel on Tropical Cyclones and other regional and international platforms.</p>		<p>Survey and analyze flood disaster in TC Members</p> <p>Encourage hydrological data sharing</p>	<p>Establish and distribute an inventory of Members' existing disaster reduction techniques and management strategies.</p> <p>Identify Members whose risk management is efficiently structured and then promote visits of DRR experts from other Members.</p> <p>Provide expert missions to enhance Member's disaster reduction techniques and management strategies</p>
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Key Results Areas (KRAs)	Strategic Goals	Associated activities			
		Integrated	Meteorology	Hydrology	DRR

<p>KRA 4: Strengthened Resilience of Communities to Typhoon-related Disaster.</p>	<p>Strategic Goal 4a: To promote and enhance culture of community-based disaster risk management among the Members.</p>	<p>Develop and support urban flood risk management pilot projects in the Typhoon Committee's area.</p> <p>Increase the number of women regionally in meteorology, hydrology, disaster risk reduction, and related sciences in support of the Millennium Development Goals.</p>	<p>Provide understandable and useful tropical cyclone impact information and materials to the public for disaster preparedness as a typhoon approaches the impact areas. .</p>	<p>Establish and sustain community-based flood forecasting and warning systems.</p> <p>Develop landslide and sedimentation flows forecasting and warnings.</p> <p>Improve flood early warning dissemination to the community.</p>	<p>Identify Members' key agencies and sectors working on disaster preparedness and protection of vulnerable communities against typhoon-related disasters and encourage establishment of linkages, networking, and exchange of information among them</p> <p>Develop and provide an effective framework for integrating early warning systems for vulnerable communities into development process</p> <p>Facilitate exchange of experiences on community based risk management to support a regional-wide disaster information system.</p> <p>Assist as requested, Members' development policy and strategic planning process to include integration of community based risk management.</p>
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	<p>Strategic Goal 4b: To promote education, training and public awareness of typhoon-related disasters among the Members.</p>	<p>Promote lectures in primary, secondary and high schools in order to sensitize students to typhoon-related social and economic impacts and to encourage them to choose earth sciences as a future field of study and work.</p> <p>Identify and distribute material (including photographs) on typhoons and related hazards and make available to Members' teachers and professors.</p> <p>Promote media and public campaigns to enhance awareness of tropical cyclone impacts and on preparedness activities the public should take to protect their lives and mitigate losses to property.</p> <p>Develop and implement a multi-hazard information web site to raise the level of public awareness of natural hazards and their impacts. Encourage users' participation in the development.</p> <p>Develop a library of outreach/education material based upon users' needs for Members to use during their outreach/ educational activities.</p>	<p>Provide on-the-job training on typhoon forecasting systems.</p>	<p>Provide on-the-job training on flood forecasting systems.</p> <p>Implement techniques on urban flood inundation mapping, hazard mapping and flood disaster assessment</p> <p>Implement techniques on sediment-related disaster forecasting and warning.</p>	<p>Provide training and outreach activities to and face-to-face meetings with the people at the last kilometer/mile and the local first responders.</p> <p>Promote information to communities about flood-proof techniques to prevent damage to their homes.</p> <p>Provide information to communities on land use planning to ensure that the areas prone to flooding should not be used for housing.</p>
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Key Results Areas (KRAs)	Strategic Goals	Associated activities			
		Integrated	Meteorology	Hydrology	DRR
KRA 5: Improved capacity to generate and provide accurate, timely and understandable information on typhoon-related threats.	Strategic Goal 5a: To facilitate RSMC capability to respond to the needs of the Members in forecasting and capacity building.		<p>Enhance tropical cyclone operational capacity particularly for tropical cyclone intensity and genesis forecasts.</p> <p>Identify regional tropical cyclone forecasting guidance requirements to develop and improve typhoon-related operational products.</p> <p>Provide verification results of RSMC operational forecasting products.</p> <p>Provide TC forecast training in accordance with TC forecast competency.</p>		

	<p>Strategic Goal 5b: To enhance capacity of Members to provide multi-hazard impact-based forecasts and risk-based warnings.</p>		<p>Post Member's typhoon model verification data, where available on a web site</p> <p>Improve less developed Members' typhoon information processing system.</p> <p>Use typhoon related indices to improve the accuracy of typhoon forecast products and services</p>	<p>Improve hydrological products which meet users' requirements.</p> <p>Establishment of on flash flood warning system including debris flow and landslides.</p> <p>Establishment and improvement of flood forecasting and alert systems.</p> <p>Evaluation and improvement of operational flood forecasting system</p>	
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	<p>Strategic Goal 5c: To enhance capacity of Members' typhoon-related observation, monitoring, forecasting and warning.</p>	<p>Improve hydrological products which meet users' requirements.</p> <p>Establishment of on flash flood warning system including debris flow and landslides</p> <p>Establishment and improvement of flood forecasting and alert systems.</p> <p>Evaluation and improvement of operational flood forecasting system</p>	<p>Participate in THORPEX-ASIA and organize other observational programmes and experimental studies.</p> <p>Improve and facilitate exchange of regional in situ and remote sensing observations including weather radar for monitoring typhoons.</p> <p>Assist relevant Members in receiving required satellite data and in applying these data.</p> <p>Identify requirements and improve less developed Members' typhoon forecast system, especially the utility of ensemble products.</p>		
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Key Results Areas (KRAs)	Strategic Goals	Associated activities			
		Integrated	Meteorology	Hydrology	DRR
KRA 6: Enhanced Typhoon Committee's Effectiveness, Efficiency and International Collaboration.	Strategic Goal 6a: To strengthen the capacity of Typhoon Committee to effectively discharge its responsibilities and functions described in this Strategic Plan and completed its stated mission in accordance with the Typhoon Committee's Statute.	<p>Promote the participation in typhoon-related internal meetings and conferences and prepare written reports on proceedings to share with other members.</p> <p>Enhance the effectiveness and efficiency of the TCS.</p> <p>Enhance the communication and cooperation among TC Members.</p> <p>Enhance the effectiveness and efficiency of the Working Groups.</p> <p>Enhance the cooperation among the Working Groups focal points</p> <p>Enhance the cooperation and linkage with ESCAP, WMO and other regional and international organizations</p>			Provide policy guidance to the global agenda related to disaster risk reduction and sustainable development, including the Sendai Framework and Agenda 2030 to emphasize the importance of implementation of tropical cyclone disaster risk reduction



	<p>Strategic Goal 6b: To mobilize available resources and engage collaborators for the implementation of the strategic goals.</p>	<p>Facilitate resource mobilization for projects among Members with assistance from national, regional and international organizations and TCS.</p> <p>Collect, collate, and make available to Members successful cases of project funding for their reference.</p> <p>Enhance the cooperation and linkage with ESCAP, WMO and other regional as well as international organizations and initiatives</p> <p>Strengthen cooperation and collaboration with the Panel on Tropical Cyclones and other regional and international platforms</p>			
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**Targets:**

To substantially reduce the number of affected people and deaths by typhoon-related disasters in the ten years of 2012 – 2021 (using the ten years of 2000 – 2009 as the base line).

To substantially reduce the socio-economic impacts of typhoon-related disasters per GDP per capita, aiming to lower the average global figure per 100,000 in the ten years of 2012- 2021 (using the ten years of 2000 - 2009 as the base line).