



ESCAP/WMO
Typhoon Committee

ESCAP/WMO Typhoon Committee

Strategic Plan | 2017-2021



An integrated, regional approach to improve the
quality of life for Members' population through
mitigating typhoon-related impacts



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- 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 Sustainable Development Goals (SDGs) 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) and Priorities 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 Results Areas, Targets and



Priorities and thus is viewed as a crosscutting theme for this strategic plan.

- **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 activities in the areas of Meteorological, Hydrological, and Disaster Risk Reduction of Members within international framework to reduce the loss of lives and minimize social, economic, and environmental impacts by typhoon-related disasters, and to enhance beneficial typhoon-related effects.

The Typhoon Committee has identified two Targets and five 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 thus is viewed as a crosscutting theme for this strategic plan. The Committee must complete these KRAs to achieve its vision and mission through Priorities. The two Targets and five KRAs are:

- **Target 1:** Substantially reduce total mortality caused by typhoon-related disasters of the Members in the decade 2020 -2030 compared to the period 2005 – 2015.
- **Target 2:** Reduce direct economic loss caused by typhoon-related disasters in relation to the total gross domestic product (GDP) of the Members by 2030.

- **KRA 1:** Enhance capacity to monitor mortality and direct economic loss caused by typhoon-related disasters.
- **KRA 2:** Enhance capacity to generate and provide accurate, timely and understandable information using multi-hazard impact-based forecasts and risk-based warnings
- **KRA 3:** Improve typhoon-related flood control measures and

integrated water resource management.

- **KRA 4:** Strengthen typhoon-related disaster risk reduction activities in various sectors, including increased community-based resiliency with better response, communication, and information sharing capability.
- **KRA 5:** Enhance Typhoon Committee's Regional and International collaboration mechanism.

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 2017-2021

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. 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 through the effective use of the Sendai Framework for Disaster Risk Reduction 2015 to 2030, the Paris Agreement on Climate Change and Sustainable Development Goals (SDGs).

2. Vision and Mission

Typhoon Committee's Vision:

“To be the World’s preeminent inter-governmental, 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.”

“To integrate and enhance regional activities in the areas of Meteorological, Hydrological, and Disaster Risk Reduction of Members within international framework to reduce the loss of lives and minimize social, economic, and environmental impacts by typhoon-related disasters, 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 should 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 25.6 tropical cyclones (climatological average from 1981 to 2010). 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 Friday, February 24, 2017.

The purpose of this Strategic Plan is for the Typhoon Committee to identify Targets, Key Results Areas and Priorities 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, Targets and Priorities and thus is viewed as a crosscutting theme for this strategic plan. The Typhoon Committee intends to champion the goals of the Sendai Framework, concerning typhoon-related disasters, by setting its Targets in line with the Framework.

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. Targets and Key Results Areas (KRAs)

KRAs are defined as the critical, overarching, priority areas of special interest for the Typhoon Committee. The Committee must complete these KRAs for it to achieve its vision and mission through Priorities. The Committee has identified two Targets and five KRAs in addition to the one crosscutting theme (see section 3) and Priorities (see Appendix) 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 and KRAs to be pursued among the working groups (Priorities are given in the Appendix):

Targets

- Target 1: Substantially reduce total mortality caused by typhoon-related disasters of the Members in the decade 2020 -2030 compared to the period 2005 – 2015.
- Target 2: Reduce direct economic loss caused by typhoon-related disasters in relation to the total gross domestic product (GDP) of the Members by 2030.

KRAs

KRA 1: Enhance capacity to monitor mortality and direct economic loss caused by typhoon-related disasters.



KRA 2: Enhance capacity to generate and provide accurate, timely and understandable information using multi-hazard impact-based forecasts and risk-based warnings.



KRA 3: Improve typhoon-related flood control and integrated water resource management.



KRA 4: Strengthen typhoon-related disaster risk reduction activities in various sectors, including increased community-based resiliency with better response, communication, and information sharing capability.

KRA 5: Enhance Typhoon Committee's Regional and International collaboration mechanism.





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 Plans (AOPs) to be approved at the next Typhoon Committee Session. The AOPs will be developed in line with Priorities and contain detailed actions and success indicators to be conducted in that year. Through the completion of the AOPs, the Committee and its Members should accomplish all of the KRAs and Crosscutting Theme, and thus, the Targets contained in this plan. The AWG will prepare a proposed draft budget (TC Trust Funds) for each year. AOPs should be evaluated in terms of effectiveness, contribution to the Targets and relevant KRAs when preparing the budget.

8. Enhance Effectiveness, Efficiency and International Cooperation

To achieve its stated mission, the Typhoon Committee should pursue effectiveness and efficiency of its activities by monitoring and evaluating activities, including AOPs. Resource mobilizations for the Committee activities should be facilitated with assistance from other international organizations and funding agencies. Collaborative activities between the Typhoon Committee and the Panel on Tropical Cyclones should be further enhanced in accordance with the decision at the third joint session in 2015.



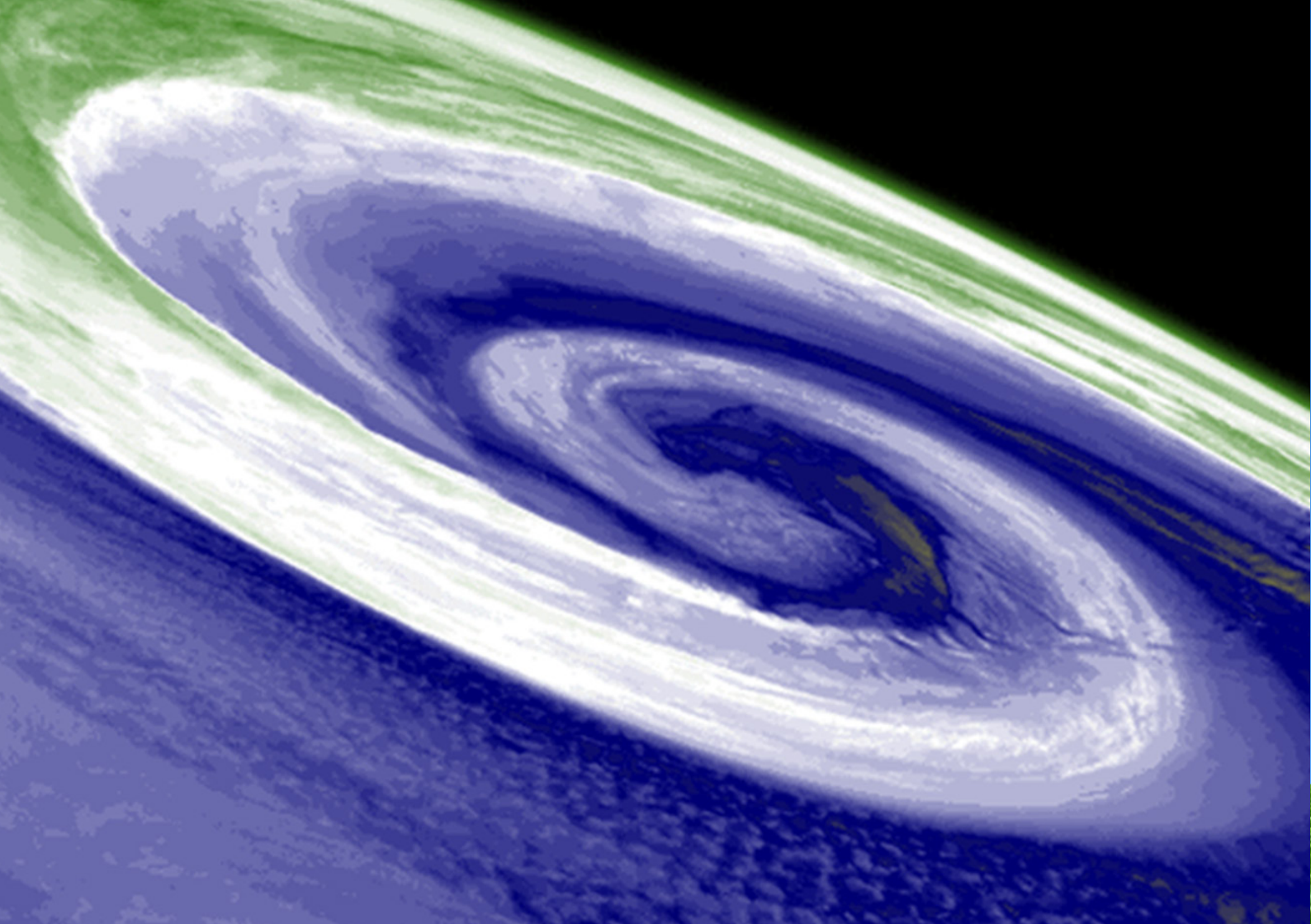
9. Conclusion

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 five identified KRAs and Crosscutting Theme, the Members have a plan to improve their capabilities during typhoon situations to protect their people's lives and to improve their quality of life through regional coordination and cooperation.

APPENDIX: KRAs Table

WG	Priorities	KRA				
		1	2	3	4	5
Integrated	Enhance activities to develop impact-based forecasts and risk-based warning.		X			
	Strengthen cross-cutting activities among working groups in the Committee.	X	X	X	X	X
	Enhance collaborative activities with other regional/international frameworks/organizations, including TC and PTC cooperation mechanism.					X
Meteorology	Enhance the capacity to monitor and forecast typhoon activities particularly in genesis, intensity and structure change.		X	X		X
	Develop and enhance typhoon analysis and forecast technique from short- to long-term.		X	X		X
	Enhance and provide typhoon forecast guidance based on NWP including ensembles and weather radar related products, such as QPE/QPF.		X	X		
	Promote communication among typhoon operational forecast and research communities in Typhoon Committee region.		X	X		
	Strengthen the cooperation with WGH and WGDRR to develop impact-based forecast and risk-based warning.		X	X		
	Enhance, in cooperation with TRCG, training activities in accordance with Typhoon Committee forecast competency, knowledge sharing, and exchange of latest development and new techniques.		X	X		
	Enhance RSMC capacity to provide regional guidance including storm surge, responding to Member's needs.		X	X		

WG	Priorities	KRA				
		1	2	3	4	5
Hydrology	Improve typhoon-related flood (including river flood, urban flood, mountainous flood; flash flood and storm surge, etc. the same below) monitoring data collection, quality control, transmission and processing.			X	X	
	Enhance capacity in typhoon-related flood risk management (including dam operation), integrated water resources management and flood-water utilization.		X	X	X	
	Enhance capacity in impact-based and community-based operational flood forecasting and early warning, including methodology research, hydrological modelling, and operation system development.		X	X	X	
	Enhance capacity in flood risk (hazard, inundation) information, mapping and its application.		X	X	X	
	Enhance capacity in assessment and dealing with the impacts of climate change, urbanization and other human activities on typhoon-related flood disaster vulnerability and water resources availability.		X	X	X	
	Enhance capacity in advanced technology (including satellite data, GIS, RS, QPE/QPF, ensemble, parallel computing) utilization in typhoon-related flood forecasting and early warning, and hydrological modeling.		X	X	X	
DRR	Provide reliable statistics of mortality and direct disaster economic loss caused by typhoon-related disasters for monitoring the targets of the Typhoon Committee.	X				
	Enhance Members' disaster reduction techniques and management strategies.			X	X	X
	Evaluate socio-economic benefits of disaster risk reduction for typhoon-related disasters.		X	X	X	X
	Promote international cooperation of DRR implementation project.		X	X	X	X
	Share experience/know-how of DRR activities including legal and policy framework, community-based DRR activities, methodology to collect disaster-related information.	X			X	X





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