



1. Introduction



• The western North Pacific (WNP) basins are the most active region of tropical cyclone activity.



[,] Tropical cyclones (TCs) generally accompany supply enormous water resource to land area.

been emphasized.

>Hybrid statistical-dynamical approach (Our approach)



- management of regional water resource.

3. Model operation











• Prediction can be updated by every five days following with the CFSv2 release schedule.

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Month	Day		Month	Day
12	12		1	11
12	17		1	16
12	22		1	21
12	27		1	26
1	1]	1	31
1	6		2	5
Month	Day		Month	Day
4	11		5	11
4	16		5	16
4	21]	5	21
4	26		5	26
5	1		5	31
5	6		6	5
Month	Day		Month	Day
8	9		9	8
8	14		9	13
8	19		9	18
8	24		9	23
8	29		9	28
9	3		10	3

Issue time for JJASO prediction

Month	Day	Month
2	10	3
2	15	3
2	20	3
2	25	3
3	2	4
3	7	4
Month	Day	Month
6	10	7
6	15	7
6	20	7
6	25	7
6	30	7
7	5	8
Month	Day	Month
10	8	11
10	13	11
10	18	11
10	23	11
10	28	12
11	2	12

7

11

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Prediction of Seasonal Tropical Cyclone Track Density over the western North Pacific

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• Although short-term forecasting skill for TC activity has been notably improved in recent decades, catastrophic damages by intense TCs show that preparations for reducing TC damages need to be made at longer timescales (e.g., seasonal) than usual TC track forecasts (e.g., several days). Thus, the importance of developing seasonal TC forecasts, especially for intense ones, has



Here, this study presents basin-wide gridded TC-track-density dataset for June through October from a track-pattern-based dynamic-statistic model over the western North Pacific.

Seasonal forecasting of TC activity plays a critical role in

This dataset eventually contributes to reduce damage to floods and droughts by region and use water resources efficiently.

2. Seasonal TC prediction model



4. Performance validation



Day	
12	
17	
22	
27	
1	
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Day	
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15	
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30	
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Day	
12	
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22	
27	
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7	

- Stable performance will enable the model to be used



- By predicting the overall track density of a typhoon, regional typhoon activity in sub-basins such as the Korean Peninsula and South China Sea can also be predicted.
- A measure of typhoon impact (i.e., water resource) can be estimated by comparing observations and forecasts to normal years.

Acknowledgements

TOTAL

8

14 |

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29