



STUDY NOTE

**MEETING OF THE METEOROLOGY PANEL (METP)
WORKING GROUP MOG (WAFS)**

SEVENTH MEETING

Offenbach, Germany, 11 to 13 April 2018

**Agenda Item 3.3: Work required in support of WAFS Developments
3.3.2 Matters relating to the Significant Weather Provision**

NEXT GENERATION SIGWX DEPICTION OF TROPICAL CYCLONES
(Presented by the WAFS Provider States)

SUMMARY

In considering the implementation of multi time-step SIGWX charts the WAFSs have identified that automatically handling tropical cyclones information is difficult.

This paper proposes possible solutions to this issue for the deliberation of the METP-WG/MOG.

Action by the METP-WG/MOG is in paragraph 4.

1. INTRODUCTION

1.1 METP-WG/MOG/7 SN/22 and SN/23 describe changes to SIGWX forecast products that are required in order to implement the provision of SIGWX charts at multiple time-steps.

1.2 Whilst volcanic ash advisories and bulletins warning of radioactive release can be used to mark the location of the erupting volcano and the site of the radiological release in the SIGWX data sets, tropical cyclones are more difficult to handle as they move with time.

2. DISCUSSION

2.1 Information of on the forecast position of tropical cyclones can be processed for inclusion in SIGWX forecasts, however there is a fundamental problem in that the tropical cyclone advisories only contain information for T+6, T+12, T+18 and T+24 hours.

This leaves the problem of what to do at T+9, T+15, T+21 and all time-steps beyond T+24 to T+48. There are three options:

- a) Only include tropical cyclone information for T+6, T+12, T+18 and T+24 with T+0 position information provided at other times.
- b) Request that tropical cyclone advisory centres provide position information for the extra time-steps.
- c) Do not include any tropical cyclone position information in SIGWX forecasts. Instead the forecasts will simply state the names of active tropical cyclones and advise users to check for tropical advisories. SIGWX charts would show this information as a legend.

Examples of options a) and c) are shown in Appendix A.

2.2 The WAFs appreciate that whilst option b) to get the tropical cyclone advisory centres to provide this information is desirable, this is outside the scope of their current activities. Therefore this is not believed to be achievable by November 2022.

2.3 The WAFs preferred option is option c) as it would prompt users at all time-steps to check for official information. An example of how the legend could appear on a SIGWX chart is shown in Appendix A. The legend would show the tropical cyclone position applicable to the model run time of the charts (the T+0 time-step).

2.4 To accommodate this change, an adjustment to Annex 3 would be required for Amendment 80 (including the transfer of SIGWX information to the new PANS-MET). This change is proposed in METP-WG/MOG/7 SN/26.

3. CONCLUSION

3.1 In order for the WAFs to deliver the next generation of SIGWX a decision needs to be made regarding how best to alert SIGWX users to the presence of tropical cyclones.

3.2 The group is invited to consider the evidence presented in paragraphs 2.2 to 2.4 and formulate the following draft action:

Action 7/xx – Tropical Cyclone depiction in SIGWX forecast

That the METP-WG/MOG include in their working paper to METP/4 on the planned improvements to the provision of WAFS information, that tropical cyclone positions are not provided in SIGWX forecasts from November 2022. Instead a legend will list the names of current tropical cyclones, as extracted from the current tropical cyclone advisories.

4. ACTION BY THE METP-WG/MOG

4.1 The METP-WG/MOG is invited to:

- a) note the information contained in this paper
- b) agree on the draft action in 3.2.

APPENDIX A

Option a) The position of the tropical cyclone is marked on T+6, T+12, T+18 and T+24 charts.



At other time-steps the following legend would be shown:

<p>TROPICAL CYCLONES ADVISORIES IN FORCE AT XXUTC DD MMM YYYY:</p> <p>LINDA, 18S 160E</p> <p>CHECK LATEST TC ADVISORIES FOR FORECAST POSITION</p>

Where “XXUTC DD MMM YYYY” corresponds to the T+0 date/time that corresponds to the forecast.

Option c) The legend as shown below would be used at all time-steps:

<p>TROPICAL CYCLONES ADVISORIES IN FORCE AT XXUTC DD MMM YYYY:</p> <p>LINDA, 18S 160E</p> <p>CHECK LATEST TC ADVISORIES FOR FORECAST POSITION</p>

Where “XXUTC DD MMM YYYY” corresponds to the T+0 date/time that corresponds to the forecast.