3rd QUATERLY REPORT OF THE REGIONAL SUBPROJECT
PERIOD: (June 2007 to August 2007)
RSMC-PRETORIA

1. HIGHLIGHTS OVER THE PERIOD

During the month of June to the last week in August expected seasonally dry conditions were experienced and, except for occasional cases where heavy rain was forecast for Mozambique (mainly coastal regions) and Tanzania, no forecasts of heavy rain were issued in the guidance forecast during this period. The Inter Tropical Convergence Zone was during this period well north of the Equator and was positioned towards the end of August still close to the equator over Africa.

The southern parts of Southern Africa (mainly South Africa and Lesotho) experienced winter storms with snow which is normal for this period.

An anti-cyclonic flow south-east of Madagascar and a near equatorial trough over the north-western Indian Ocean caused continues strong south-easterly winds from the middle of July up to the end of August north-east of Madagascar, affecting the northern tip of Madagascar on most days and also reaching the extreme northern coast of Mozambique and the Tanzania coast on some days.

2. OVERVIEW OF PRODUCTS

a. Limited Area Modelling (LAM)

The 12 km resolution Unified Model run by SAWS (UM SA12) has run successfully over the SADC domain during this period. The UM SA12 performed quite well during the period successfully identifying various potential severe weather situations, particularly over the far southern parts that are usually influenced in this time by baroclinic systems and snow episodes. Output of the model is made available through the RSMC-Pretoria website.

b. RSMC Website

The RSMC-Pretoria website has been the principle means of communication for the project between RSMC-Pretoria and the five NMHSs involved in the project. All guidance products are distributed on this website.

All guidance products are archived under a related webpage www.weathersa.co.za/RSMCarchive . Unfortunately some of the products were not archived from 10 to 26 May for an unknown reason. All guidance maps were still available.

c. Preparation of RSMC-Pretoria guidance

RSMC Guidance products for the next five days are prepared daily by the forecasters of the National Forecast Centre and disseminated according to the set deadlines. Products from the global centres (deterministic models and ensemble products) play a critical role in the analysis process.

d. **Usefulness of SWFDP NWP/EPS Products received from each global centre**

Again it was found that the range of products is extremely valuable to aid the forecasters during their analysis of the current and expected weather situation. The variety of model products from different centres aid the forecasters in decision making particularly in situations where they differ from each other on the weather expected. Particularly the ensemble prediction products played an important role in identifying the winter storms over South Africa well in advance and thereby alerting the forecasters early of potential severe winter storms approaching. This helped in issuing advisories days in advance to disaster management structures.

3. PROJECT EVALUATION AGAINST SWFDP GOALS

SWFDP GOAL	**PROGRESS AGAINST GOALS**
To improve the ability of NMCs to forecast severe weather events	NMCs are receiving guidance products daily broadening their decision making tools.
To improve the lead time of alerting these events	Guidance products for five days in advance are disseminated daily, alerting NMCs to potential severe weather as predicted by the models and ensembles.
To improve the interaction of NMCs with Disaster Management and Civil Protection authorities before, during and after severe weather events	No feedback received from NMCs in this regard.
To identify gaps and areas for improvements	Some gaps that have already been identified are: • There is a need for improving nowcasting tools in a similar way as been done for forecasting tools in this project. • There is still room for improving collaboration with emergency management authorities • Verification of products through the forecast chain (i.e. guidance forecasts, warnings issued and response by emergency authorities) is still a challenge.

To improve the skill of products from Global Centres through feedback from NMCs	Little feedback is received from NMCs..

4. LESSONS LEARNED

a. Future role of SWFDP products in winter forecasts

Winter storms with snow and heavy rain affects mainly the southern parts of the sub-continent. The success in providing advisories and early warnings on potential snowstorms, heavy rain and gales proved that these parameters can be predicted well in advance for countries like South Africa and Lesotho, and warnings of cold outbreaks and even heavy rain associated with winter weather for other countries like Namibia, Botswana, Zimbabwe, Mozambique and Swaziland.

In an operational roll-out of the SWFDp project beyond November 2007 these parameters should be considered for inclusion in the guidance products.

5. SUMMARY (general comments, challenges, etc, details in Annex 1)

This was weather-wise a very quite period for the five countries involved in the SWFDP, and few significant events were issued on the guidance products issued by RSMC-Pretoria. However, the guidance forecasters found excellent support from the global products and the UM SA12 model to issue local advisories and warnings of winter weather five days in advance. Two additional Senior Forecasters are receiving on the job training and will also support this project early in 2008.