

Lesotho Meteorological Services

SWFDP & SARFFGS MEETING

Report by
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Products and Services

Lesotho Meteorological Services(LMS) through its weather forecasting office prepares and issues:

- Public Forecasts
- **Warnings of extreme weather events**
- Aviation Forecasts and services
- Seasonal Forecasts and updates
- Weekly briefs
- Ten-day Agrometeorological bulletins (Oct-April)
- Emergency Water Release bulletins (Oct – Dec depending on the onset of good rains and need for water release)

Flash flood forecast and severe weather warnings

Flash flood forecast

From Severe weather warning point of view we normally issue a warning if anticipated rainfall > 50mm. But we don't explicitly mention that it is likely to cause some localized flooding unless the duration is more than a day. Flash floods associated with deep CB's are a challenge to predict (nowcasting) and I guess if they do happen we are caught off-guard. But we do not have a product specifically prepared and targeted to the Water Affairs authorities at the moment. It is disseminated to the public as one of the warnings.

Severe Weather Warnings

- **Strong winds:** this is the most common and destructive phenomena yet challenging to forecast as almost all the models (regional & Global) are not able to pick up due to topography.
- **Snowfall and cold spells**
- **Rainfall > 50 mm**
- **Early frost and late frost** (also very challenging to predict) yet contributes significantly to the expected yield and therefore a threat to national food security.
- **Severe thunderstorms and hailstorms** (need some good forecasting skills and good guidance tools and are also very challenging to forecast).
- **High Temperature (>38 Deg)** this is seldom attainable but fairly easy to forecast.
- **Drought**

Guidance products

Weather forecast and warnings are produced based on the guidance products from RSMC Pretoria. A forecaster on duty is responsible for producing warnings but the supervisor is charged with issuing the warnings by means of a telephone to the Disaster Management and Radio stations (live broadcast) first thing in the morning (0800 local time). This will be followed by a normal (1130 local time) dissemination through the internet to radio stations, TV and media. Intended/targeted recipients are rural communities who are most vulnerable because river floodings, snowfall followed by cold temperatures are very prone in those areas.

Disaster Management Authority (DMA) plays a major role in disseminating information to rural communities as they have put in place mechanisms that ensure that the warnings reach well ahead of time. They have District Disaster Management Teams (DDMTs) at district level and then Village Disaster Management Teams (VDMTs) at village level who will now inform the local authorities such as the chiefs of the villages who will see to it that his/her people get the message well ahead of time in most cases. The information is used for mitigation and preparedness.

Weaknesses and Gaps

- In Lesotho a formal National Early Warning System (NEWS is being established and implemented as we speak. This will enable proper coordination.
- Rough terrain hampers proper dissemination of warnings as communication gets cut especially with inclement weather.
- Most models don't pick up strong winds and deep CBs (Deep convection)

New Products:

Warnings will have more impact if we move/advance from the current status as providers of forecasts and early warnings to being providers of Impact-based forecasts and risk-informed warnings. Why because a warning can even mention the risk involved in a warning while a forecast can mention an impact of such a forecast.

Rea Leboha (Thank you)