PROSPECTS FOR THE 2008/2009 RAINFALL SEASON IN MALAWI

The twelfth Southern Africa Regional Climate Outlook Forum (SARCOF-12) was held in Pretoria, South Africa from 18 to 28 August 2008 to come up with a consensus climate forecast for the 2008/2009 rainfall season for the SADC region. Climate scientists from the National Meteorological Services within the SADC region, including Malawi, have prepared this consensus forecast using national inputs. Additional contributions were from the SADC Drought Monitoring Centre (DMC, Botswana), International Research Institute for Climate Prediction (IRI, USA), European Centre for Medium Range Weather Forecasting (ECMWF, UK) and Climate Prediction Centre (CPC, USA).

This forecast covers the rainfall season from October 2008 to March 2009 and is relevant only to seasonal time-scales and relatively large areas. It does not fully account for local and month to month variations in distribution of rainfall.

The forecast is based on statistical models that use scientifically established relationships between rainfall over Southern Africa and Sea Surface Temperatures over oceans. Currently the equatorial Pacific Ocean, which is highly correlated with rainfall over the SADC region, is in a neutral state and model projections point towards the likelihood of neutral El Nino Southern Oscillation (ENSO) conditions during the 2008/2009 rainfall season. Neutral conditions are usually associated with normal rainfall over a greater part of Southern Africa including Malawi.

The climate models indicate that during the period October to December 2008, the northern half of Malawi has 40% chance of rainfall total being normal, 35% chance of being below normal and 25% chance of being above normal while the Southern half has 40% chance of rainfall total being normal, 35% chance of being above normal and 25% chance of being below normal. During the period January to March 2009 Malawi as a whole has 40% chance of rainfall total being normal, 35% chance of being above normal and 25% chance of being below normal.

In summary, the models suggest that during 2008/2009 rainfall season, a greater part of Malawi will experience normal total rainfall amounts. However, just like in any ENSO-neutral season, extreme weather events like floods and prolonged dry spells may occur in some places.

This seasonal forecast is issued to users as a planning tool. For day to day operations, users are advised to make use of the short and medium range forecasts and the 10-day Rainfall and Agrometeorological bulletin.

For further information and interpretation of this seasonal forecast, users are advised to contact the Director of Meteorological Services, P.O. Box 1808, Blantyre; E-mail: metdept@metmalawi.com; Tel: (265) 1 822014; Fax: (265) 1 822215. Website: www.metmalawi.com. Users from the agricultural sector are advised to seek advice from the Ministry of Agriculture and Food Security when applying this forecast in making decisions to plant.
Below are the model output maps for October to December (OND) 2008 and for January to March (JFM) 2009 in the form of rainfall probabilities:

The numbers for each zone indicate the probabilities of rainfall in each of the three categories, below-normal, normal and above-normal. The top number indicates the probability of rainfall occurring in the above-normal category, the middle number is for normal and the bottom number is for below-normal. In case of Map A, OND, in Zone I there is a 25% probability of rainfall occurring in the above-normal category; a 40% probability in the normal category; and a 35% probability in the below-normal category; in Zone II there is a 35% probability of rainfall occurring in the above-normal category; a 40% probability in the normal category; and a 25% probability in the below-normal category. It is emphasized that the boundary between zone I and zone II in Map A should be considered as a transition area. In case of Map B, JFM, there is a 35% probability of rainfall occurring in the above-normal category; a 40% probability in the normal category; and 25% probability in the below-normal category over the whole country.