Government of Malawi

DEPARTMENT OF METEOROLOGICAL SERVICES

SECOND ROUND 2007/08 AGRICULTURAL ESTIMATES

AGROMETEOROLOGICAL UPDATE

Released Blantyre 31 March 2008

SEASONAL SUMMARY

- The Department of Meteorological Services issued the 2007/08 Seasonal Forecast on 18 September 2007.
- At that time, a weak La Nina episode was developing over the Pacific Ocean. La Nina episode is normally associated with above average rainfall over a greater part of Southern Africa including Malawi.
- Based on the models, a greater part of Malawi was expected to experience normal to above normal total rainfall amounts with a possibility of flooding in flood prone-areas from January to March 2008
- The start of season was slightly delayed over some areas compared to last season's. Heavy rains and floods were experienced in January
- In February and early March unusual dry conditions were experienced. The south and some parts of lakeshore areas most affected.
- Sea Surface Temperature observations over the central and eastern Equatorial Pacific indicate persistence of La Niña episode up to Mid 2008
- During April to June 2008 Rainfall over Malawi is likely to be confined mostly to highlands and lakeshore areas
- Second Round 2007-08 growing season National Rain-fed Maize production estimates from Agrometeorological model is estimated at 2,728,701 Metric Tonnes

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2007/08 SEASONAL FORECAST

The Department of Meteorological Services released the 2007/08 Seasonal Forecast on 18 September 2007. The forecast was based on statistical models that use scientifically established relationship between rainfall over Southern Africa and Sea Surface Temperatures over oceans. At that time, a weak La Nina episode was developing over the Pacific Ocean. La Nina episode is normally associated with above average rainfall over a greater part of Southern Africa including Malawi. **Based on the models, a greater part of Malawi was expected to experience normal to above normal total rainfall amounts with a possibility of flooding in flood prone-areas between January and March.**

The forecast was presented to Ministry of Agriculture and Food Security and other key stakeholders.

IMPORTANCE OF A SEASONAL FORECAST

A seasonal forecast is required for planning agricultural activities and decision making in both the pre-season and during the growing season. For instance;

- timing delivery of farm inputs to various districts depends on knowledge of when the rains are likely to start,
- deciding area to plant depends on whether the season will be good or bad,
- choice of planting either early or late maturing crop varieties,
- Choice of agricultural extension messages depends on the seasonal forecast.

PROGRESS OF 2007/08 RAINFALL SEASON

Sufficient rains to support planting, germination and establishment of various crops started countrywide between first and second dekads of December 2007. Start of season this season was slightly delayed over some areas compared to last season's particularly in the centre and north. Significant rainfall continued to be experienced over the country up to January 2008 due to the persistence of the rain bearing systems over the country.Heavy rains and floods were experienced in January 2008 resulting in soil water logging conditions and cropped fields being washed away in some parts of the country. However, in February the south and some parts of lakeshore areas experienced unusual dry conditions. These dry conditions negatively affected crops that were planted between end of December and early January. The dry spell coincided with a flowering stage, a more vulnerable stage of crop development and therefore localised crop production deficits are expected this season.

Cumulative rainfall performance from October 2007 to 20 March, 2008 indicated that normal to above-normal rainfall amounts have been experienced. Most of the rainfall fell in January when some areas registered well over 600mm.. The graphs for cumulative rainfall indicated that in general the north has received less rain this season compared to last season while the centre and the south showed a mixed pattern of rainfall

performance with some areas receiving more rainfall amounts this season than last season. See Figures 1a- 1c below.

Fig 1a Rainfall Graphs for the South

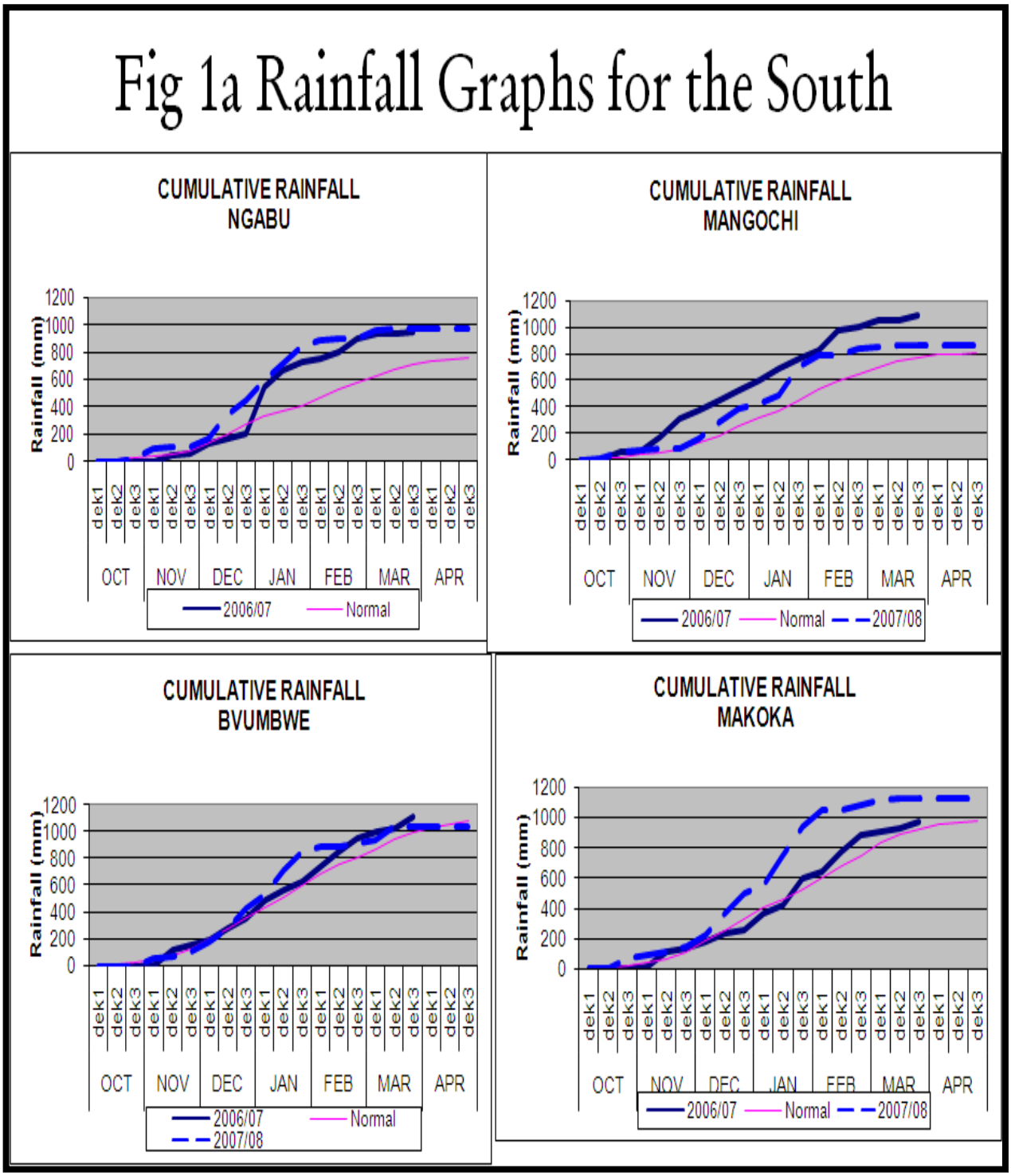
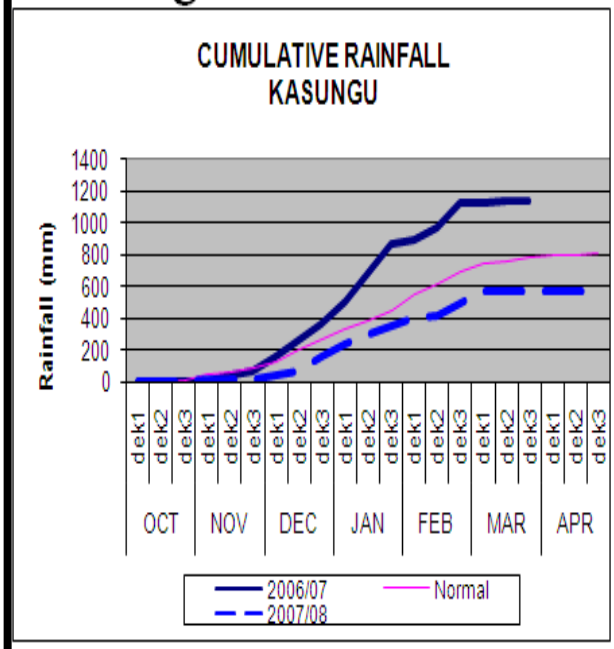
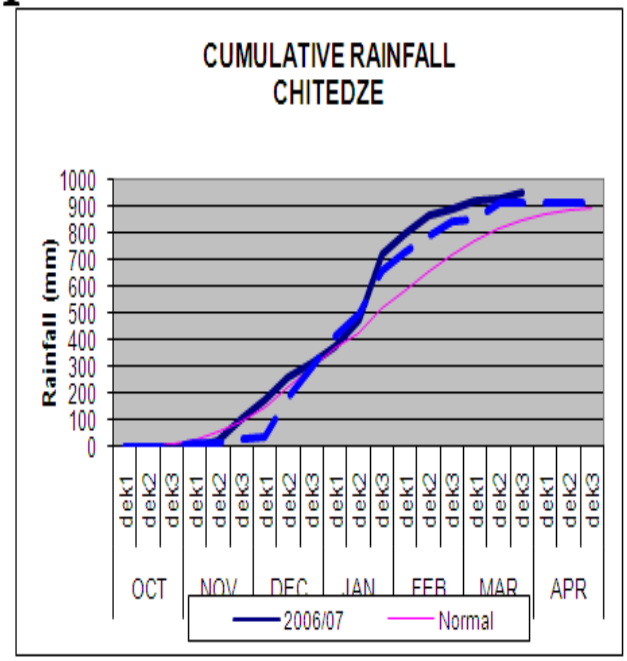
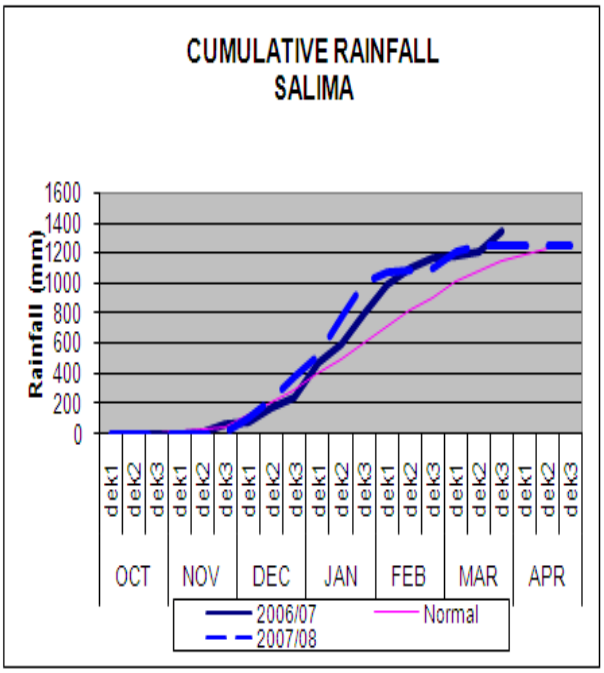


Fig 1b Rainfall Graphs for the Centre







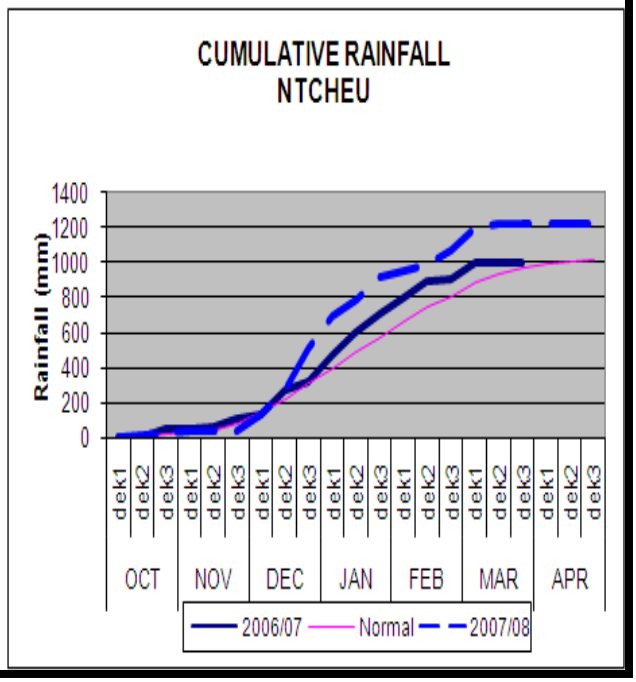
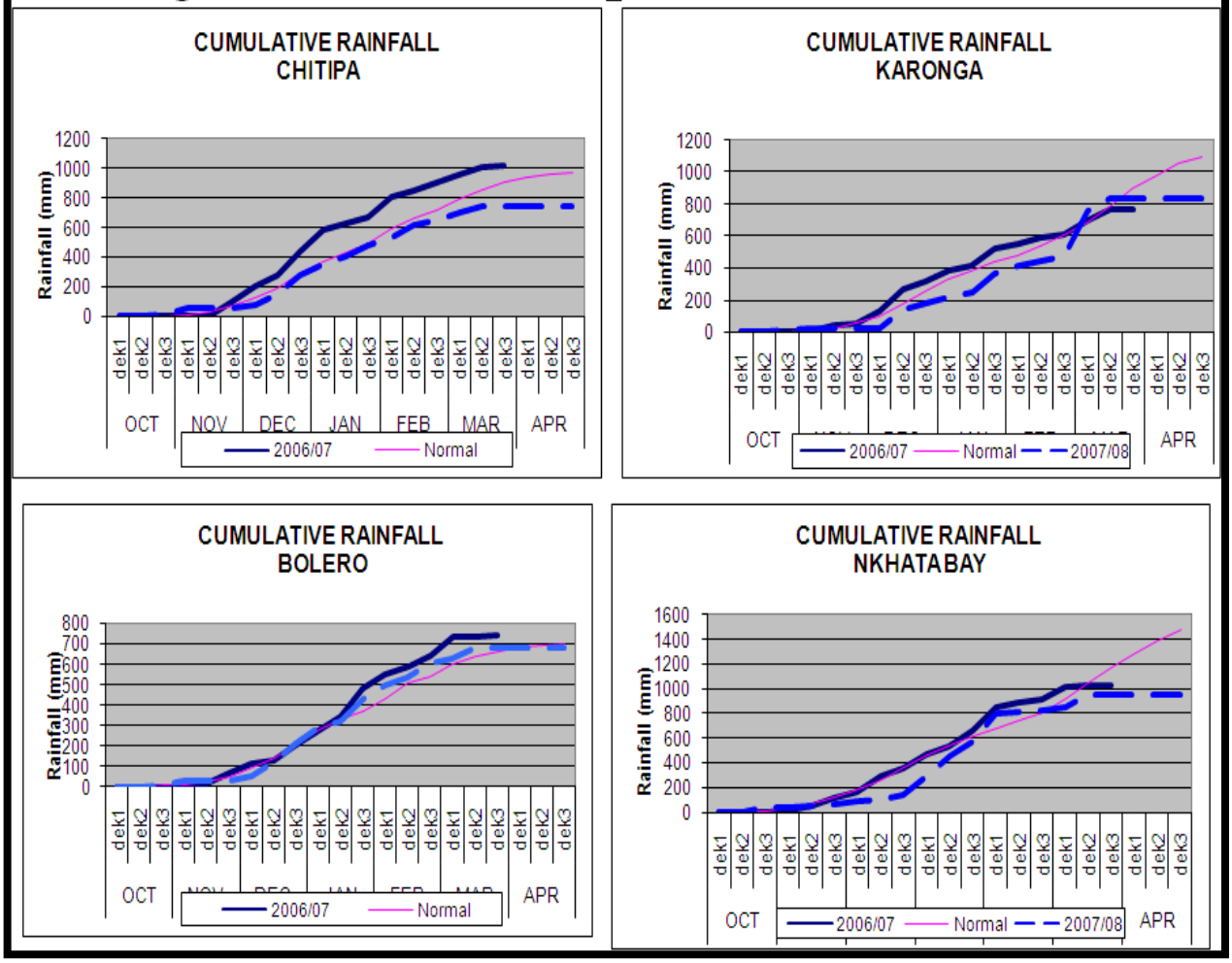


Fig 1c Rainfall Graphs for the North



OUTLOOK FOR APRIL TO JUNE 2008

Projections of sea-surface Temperatures (SSTs) across central and eastern equatorial indicate that La Niña episode will persist up to June 2008.During this period rainfall over Malawi will be influenced by periodic incursions of cool and moist southeasterly airflow. Therefore during April to June 2008 rainfall over Malawi is likely to be confined mostly to highlands and lakeshore areas

SUMMARY OF 2007/08 MAIZE YIELD ASSESSMENT BASED ON THE FAO CROP SPECIFIC WATER BALANCE MODEL

HIGHLIGHTS

- 2007/08 Local and Composite Maize production based on the model is estimated at 1**,435,701Metric Tonnes** (Table 1).
- 2007/08 Hybrid Maize production based on the model is estimated at **1,293,109 Metric Tonnes** (Table 2).
- Therefore, 2007/08 second round National Maize production is estimated at **2,728,810 Metric Tonnes.**

TABLE 1: 2007/08 SECOND ROUND LOCAL & COMPOSITE MAIZE PRODUCTION ESTIMATES

CROP: Local & Composite Maize
YIELD: **kg/ha** WRSI**: %** AREA: **Hectares** PRODUCTION: **Tonnes**
AREA BASED ON 2007/08 1ST ROUND CROP ESTIMATES

ADD	07/08 WRSI	07/08 YIELD	YIELD LOW	YIELD HIGH	07/08 AREA	07/08 PRODUCTION
SHIRE VALLEY	88	984	683	1285	34982	34425
BLANTYRE	89	1051	742	1360	180408	189606
MACHINGA	91	1057	766	1348	231635	244874
SALIMA	90	1481	1103	1860	40714	60313
LILONGWE	91	1325	1073	1578	244389	323867
KASUNGU	90	1447	1134	1759	210529	304534
MZUZU	95	2213	1808	2617	99429	220019
KARONGA	97	1769	1389	2150	32813	58062
NATIONAL	**91**	**1336**	**1029**	**1642**	**1074899**	**1,435,701**

TABLE 2: 2007/08 SECOND ROUND HYBRID MAIZE PRODUCTION ESTIMATES

CROP: Hybrid Maize
AREA BASED ON 2007/08 1ST ROUND CROP ESTIMATES

ADD	07/08 WRSI	07/08 YIELD	YIELD LOW	YIELD HIGH	07/08 AREA	07/08 PRODUCTION
SHIRE VALLEY	91	2172	1145	3200	14563	31637
BLANTYRE	93	2667	2035	3300	67471	179977
MACHINGA	96	3600	2431	4770	55149	198563
SALIMA	95	3254	2526	3982	19616	63837
LILONGWE	96	2870	2440	3299	91909	263761
KASUNGU	95	3232	2337	4127	110455	356967
MZUZU	98	3786	3315	4257	45969	174041
KARONGA	98	2349	852	3846	10356	24325
NATIONAL	**95**	**3112**	**2362**	**3863**	**415488**	**1,293,109**