



agriculture

Department:  
Agriculture  
REPUBLIC OF SOUTH AFRICA

**National Agro-meteorological Committee (NAC) Advisory on the 2008  
Spring and Early Summer Season  
Statement from the Agricultural Disaster Risk Management  
12DoA2008**

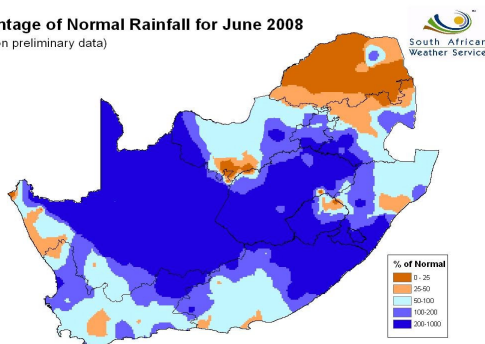
**22 August 2008**

In the light of the seasonal outlook as produced by the South African Weather Service (SAWS) and other centres, the following advisory guidelines are suggested. It is emphasized that these advisories are broad guidelines and should be interpreted considering the local aspects of the region such as soil types, cultural preferences and farming systems. Depending on the particular region, the prioritization of the guidelines will differ. The basic strategy to follow would be to minimize and diversify risk, optimize soil water availability and to manage the renewable resources (rain water and grazing) to uphold sound farming objectives. Long-term mitigation strategies should be considered by implementing techniques to enhance in-field water harvesting by reducing run-off and improving infiltration. Reduced tillage methods are very important in this regard, as is basin tillage, to capture rainwater in the drier areas. **The provinces should further simplify, downscale and package the information according to their language preference and if possible use local radio stations and farmers' days in disseminating the information.**

**I. CURRENT CONDITIONS**

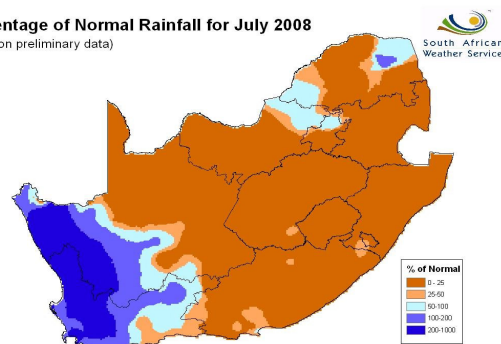
**Figure 1**

**Percentage of Normal Rainfall for June 2008**  
(based on preliminary data)

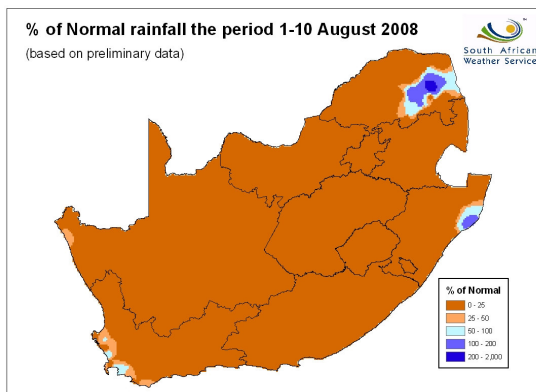


**Figure 2**

**Percentage of Normal Rainfall for July 2008**  
(based on preliminary data)

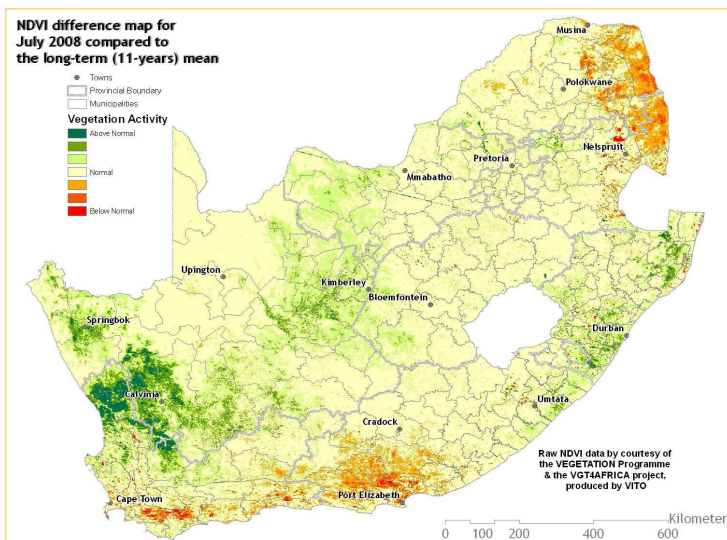


**Figure 3**



Wetter conditions were experienced during June (**Figure 1**) over the central and southeastern parts, while the rest of the country received near normal rainfall. The Limpopo province remained dry. In July most of the country experienced dry conditions, (**Figure 2**), excluding the winter rainfall areas. During the first dekad of August, (**Figure 3**), the country was dry except for some rainfall patches.

## NDVI difference map for July 2008 compared long-term mean



Vegetation conditions are normal to below normal throughout the country. Lower vegetation activity can be seen in the Limpopo, Western Cape and Eastern Cape Provinces.

## II. CONDITIONS IN THE PROVINCES DURING JULY 2008

### Eastern Cape

Rainfall over most of the province was below normal and Cacadu and Amathole District Municipalities showed much lower vegetation activity. As a result, livestock is not in good condition in those areas. Conditions in the OR Tambo and UKhahlamba District Municipalities are reasonable due to good rains received and water sources for stock showed some improvements.

### Free State

Dry and warmer conditions were experienced. Maize yields were lower than anticipated. Veld is generally poor in commonages and farmers are encouraged to provide additional fodder to sustain livestock.

**Gauteng**

Most areas are dry but still have sufficient water for agricultural usage. Livestock condition is generally fair in most areas and seems to be improving in Bronkhorstspuit. Grazing land was damaged by veld fires in Randfontein. Sheep mortalities were reported in West Rand due to an unknown disease and some investigations are still being conducted. Crops under dryland are in good condition.

**KwaZulu-Natal**

In general the rainfall was below normal but floods occurred in UGu causing damage to infrastructure. The summer crop yields were good but sugarcane shows signs of stress. Livestock of commercial farmers is in good condition. Level of dams is lower than last year this time.

**Limpopo**

Mainly dry conditions coupled with cool temperatures were experienced. Grazing conditions in communal areas are fair to poor. Livestock is generally in fair to good conditions in both communal and commercial areas. Veld fire damages have been reported in Mokopane, Thulamela and Musina Municipalities. Level of major dams is higher as compared to last year this time. However, Middel-Letaba Dam is decreasing.

**Mpumalanga**

Dry conditions were experienced. Veld fires destroyed grazing land and planted fields in some parts. Livestock mortalities were reported at Thubelihle. Farmers are busy preparing for the summer crops. The planted winter wheat is in good condition. Level of most dams is higher as compared to last year this time.

**North West**

Dry and cold conditions persisted. Although veld is in generally fair conditions, livestock is still in average to good condition. Water sources are drying up in some areas which will cause serious shortage for livestock. Maize farmers are busy harvesting.

**Northern Cape**

Dry conditions were experienced, except in the Calvinia. Veld conditions are normal in most areas except Kgalagadi region due to fires.

Caterpillar infestation was reported in some farms around Calvinia. Livestock is reported as being normal, except in Kgalagadi where mortalities were experienced. Brandsiekte outbreak was also reported in Kareeberg. Crops are in normal conditions and the wine farmers in the Siyanda region are busy pruning. Water sources are in normal condition.

**Western Cape**

Normal to above-normal rainfall over most parts was received. Floods were reported in the Vredendal and Citrusdal regions. Level of most dams is higher as compared to last year this time except Stompdrift Dam. Seedlings were damaged in the Sandveld area due to Cape Gerbils (*Tatera afra*). Slugs and Isopoda damaged Canola in Overberg. Livestock condition is poor due to persistent drought and poor veld conditions in the Central Karoo whereas West Coast remained reasonable to good. The water supply for livestock remained reasonable. Floods caused damage to soil and infrastructures in some areas.

### III. AGRICULTURAL MARKETS

#### Major grain commodities

According to FNB Agri-weekly, maize prices dropped due to the spill over weakness from international market. Weather is currently playing a critical role in price direction on international markets and changes from wet to extreme dry conditions will lift prices. White maize prices are expected to move sideways with further upward potential should the Rand continue to weaken. Wheat prices also eased modestly lower due to spill over weakness from the international market and are expected to move sideways with limited upward potential in the short term. However the recent bout of Rand weakness might provide some support if sustained.

#### Domestic prices per Safex (R/t)

	Futures prices as at 2008/08/01				
Commodity	2008/08	2008/09	2008/12	2009/03	2009/07
White maize	R1817.00/t	R1844.00/t	R1931.00/t	R2007.00/t	R2124.00/t
Yellow maize	R1822.00/t	R1862.00/t	R1941.00/t	R2025.00/t	R2130.00/t
Wheat	R3750.00/t	R3742.00/t	R3474.00/t	R3591.00/t	N/a
Sunflower	R4680.00/t	R4745.00/t	R4950.00/t	R5040.00/t	N/a
Soybeans	R4200.00/t	R4265.00/t	R4444.00/t	R4623.00/t	N/a

Sagis weekly bulletin: 05/08/2008

#### Livestock domestic markets

According to FNB Agri-weekly, red meat prices continued to weaken due to a slowdown in demand. Domestic porker as well as baconer prices also eased marginally lower due to a slowdown in demand and are expected to remain under pressure and decline during the mid-month period. Poultry prices remained unchanged across most product categories with the exception of IQF which was slightly firmer and are expected to remain confined to a sideways trend given the sluggish demand prospects.

Producer prices for selected livestock commodities 08 August 2008	Beef	Mutton	Pork	Poultry
Open market: Class A / Porker / Fresh whole birds(R/kg)	21.07	34.21	14.73	15.95
Open market: Class C / Baconer / Frozen whole birds(R/kg)	18.54	24.69	14.30	14.84
Contract: A2/A3* / Baconer/ IQF (*includes fifth quarter) (R/kg)	21.24	35.00	14.52	12.50
Import parity price (R/kg)	18.73	15.83	19.84	12.41
Weaner Calves / Feeder Lambs (R/kg)	11.35	16.63		

FNB Agri-weekly: 08/08/2008

**NB: Users are advised that these are just indicative prices therefore it is imperative that clients investigate their own individual basis value when marketing their product (livestock and grain)**

#### IV. SADC REGION

According to FEWS NET, current food security conditions are generally satisfactory except in those areas of the region where crop production was compromised by unfavourable crop growing conditions. In general, and excluding Zimbabwe, many of the region's households still have adequate food stocks from this season's harvest. Food security and vulnerability assessments undertaken recently have confirmed that the majority of households will have adequate food over this consumption season mainly on account of the average to above average harvests realized. At the regional level, the current food security conditions are comparable to last year at the same time when the region's food crop production was also largely favourable.

However, concerns remains in localized areas where the 2007/08 crop growing season was characterized by heavy rains that resulted in flooding, loss of crops, and disruption of livelihoods, followed by an end of season dry spell in February and March. Despite average to above average national harvests in Mozambique, Zambia and Malawi, localized areas have populations that are currently food insecure and require assistance.

#### Summary of the reports

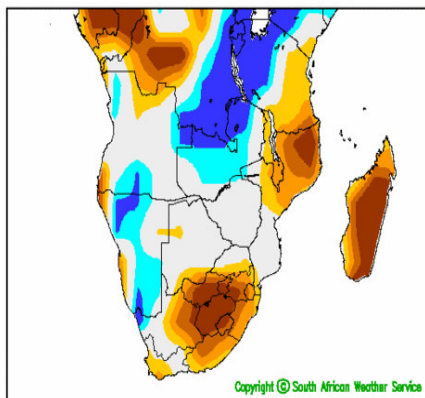
Most of the country remained dry except in the winter rainfall areas. Veld condition is reasonable to poor in most provinces with much lower vegetation activity in the Limpopo, Western Cape and Eastern Cape Provinces. However livestock is still good in areas where additional fodder is supplied. Livestock mortalities were reported in Mpumalanga and Gauteng due to drought and diseases respectively. Pests were reported in Northern and Western Cape. Veld fire damages were reported in Gauteng, Mpumalanga and Limpopo.

#### V. MONTHLY CLIMATE OUTLOOK

##### Extended-Range Forecast for the Period: 27 August- 15 September 2008

**SAWS OPERATIONAL ENSEMBLE PREDICTION SYSTEM**  
ECHAM4.5 GCM Probabilistic Extended-Range Forecasting Suite  
Most likely Category of Rainfall  
Forecast Period: 27 Aug 2008 – 15 Sep 2008

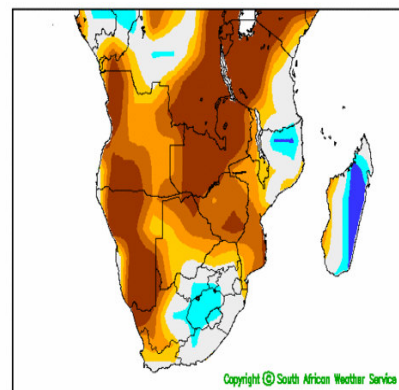
No Significance Test Applied  
Ensemble size 12  
Last Updated 17 Aug 2008



Above Normal Percentile  
0-10% 10-20% 20-40% 40-50% 50-60% 60-70% 70-100%

**SAWS OPERATIONAL ENSEMBLE PREDICTION SYSTEM**  
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Most likely Category of Rainfall  
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No Significance Test Applied  
Ensemble size 12  
Last Updated 17 Aug 2008



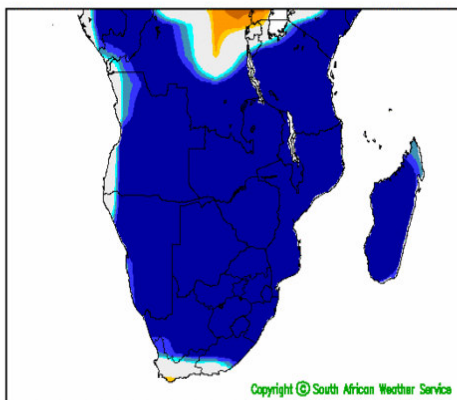
Below Normal Percentile  
0-10% 10-20% 20-40% 40-50% 50-60% 60-70% 70-100%

## SAWS OPERATIONAL ENSEMBLE PREDICTION SYSTEM

ECHAN4.5 GCM Probabilistic Extended-Range Forecasting Suite

Most likely Category of Maximum Temperature  
Forecast Period: 27 Aug 2008 – 15 Sep 2008

No Significance Test Applied  
Ensemble size 12  
Last Updated 17 Aug 2008



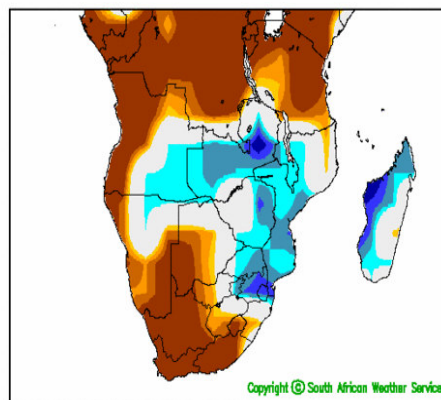
<--- Below Normal Percentile      Above Normal Percentile --->  
70-100% 60-70% 50-60% 40-50% OTHERS 40-50% 50-60% 60-70% 70-100%

## SAWS OPERATIONAL ENSEMBLE PREDICTION SYSTEM

ECHAN4.5 GCM Probabilistic Extended-Range Forecasting Suite

Most likely Category of Minimum Temperature  
Forecast Period: 27 Aug 2008 – 15 Sep 2008

No Significance Test Applied  
Ensemble size 12  
Last Updated 17 Aug 2008



<--- Below Normal Percentile      Above Normal Percentile --->  
70-100% 60-70% 50-60% 40-50% OTHERS 40-50% 50-60% 60-70% 70-100%

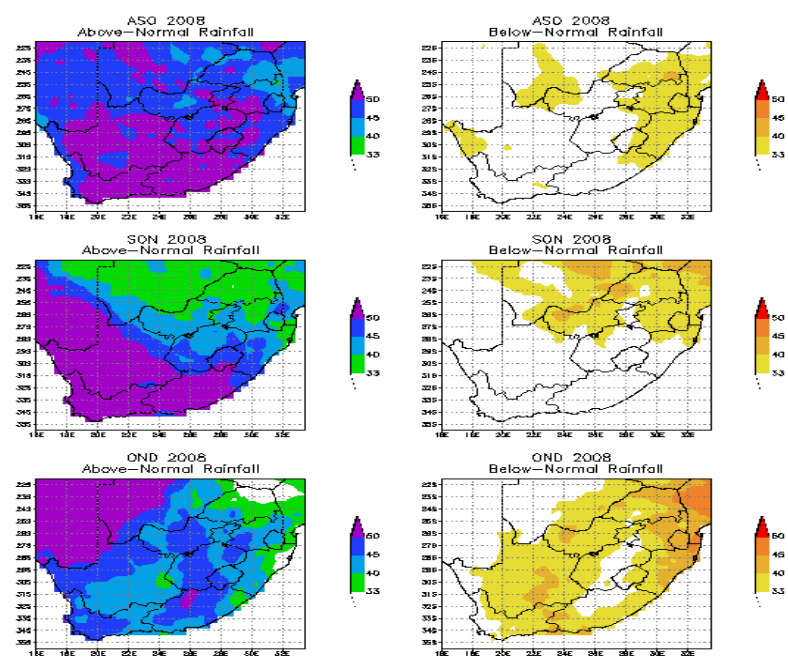
### DISCLAIMER:

The extended-range time scale is the most difficult and yet unexplored timescale for making skilful longer range weather forecasts for southern Africa. Since the forecasting system configuration is still in experimental phase, the forecasts are provided as is without warranty of any kind, either expressed or implied, as to its reliability for a particular purpose. The forecast may not be further disseminated, displayed, or publicized in any form without the prior permission of the LRFG at the SAWS.

The model during this time period suggests wet conditions for the central parts. Warmer minimum temperatures can be expected except over Limpopo and Mpumalanga where it will be cool. The maximums will be cooler over most parts.

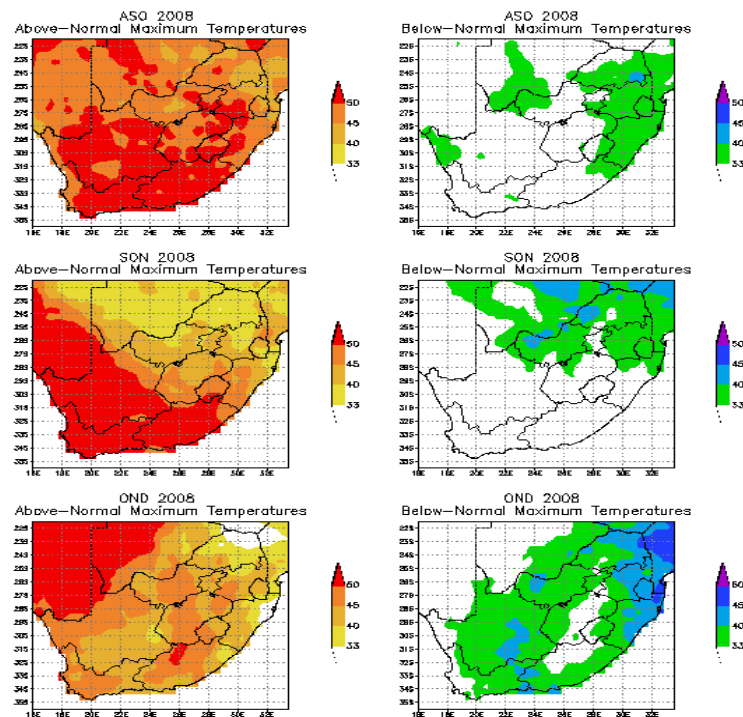
## Seasonal Rainfall and Temperature Forecast: August to December 2008

Figure 1-rainfall





**Figure 2- temperatures**



The new official forecast maps above have been provided by SAWS, derived from a number of general circulation models (GCMs). Comments are welcome.

**How to interpret the forecast maps:**  
(Figure 1-rainfall and Figure 2-temperatures):

- There are two sets of forecasts in this regard: the rainfall and maximum temperatures.
- Each set consists of maps showing the probabilities for above-normal (left panels) and below normal (right panels) conditions to occur.
- For each forecast map a probability percentage is given on a scale of 0-50% and above, for the rainfall or temperatures for the season, i.e.  
**ASO** - August **S**eptember **O**ctober  
**SON** - September **O**ctober **N**ovember  
**OND** - October **N**ovember **D**ecember
- The color bars on the right hand side of each map represent the forecast probability scale.
- The forecast probabilities indicate the **direction** of the forecast as well as the amount of **confidence** in the forecast.

For further clarification, using **ASO** season as an example, KwaZulu-Natal is expected to receive above normal rainfall, 45-50% probability, with patches of greater than 50% probability in the west. The below normal rainfall map suggests only a 33-40% probability of below normal rainfall conditions. Comparing the interpretations of both above normal and below normal, it then appears that the province will be favoured by

above normal rainfall conditions than below normal since the probability in percentage of above normal is higher than below normal.

Where the colour is white on the maps, it means the forecast is not usable because the models are not able to pickup any signal.

***Summary of the seasons:***

During spring, wet conditions (mainly 45-50% probability), can be expected mainly over KwaZulu-Natal, Mpumalanga and Limpopo extending further west to the Free State, and Northern Cape during the summer season (between 40-45% probability and 45-50% probability). Maximum temperatures will be warmer in the east in spring, while in the summer season most of the country will experience warmer conditions (40-45% probability).

Changes in the **atmosphere above the tropical Pacific Ocean** can be described by means of the **Southern Oscillation Index (SOI)**. Negative values of the SOI are indicative of an El Niño season while positive values are indicative of a La Niña season. If the SOI value is small the event tends to be weak and if the SOI value is high the event is expected to be a strong one.

For more information on seasonal forecasts or extended-range forecasts, email: [longrange@weathersa.co.za](mailto:longrange@weathersa.co.za).

**Disclaimer:** The SAWS accepts no responsibility for any application, use or interpretation of the information contained in this forecast and disclaims all liability for direct, indirect or consequential damages resulting from the use of this forecast.

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Based on the current dry conditions over most of the country, also in view of the seasonal forecast which is going for wet and warm conditions in the east during spring, spreading westward in the summer season, the following strategies are suggested:

**VI. SUGGESTED STRATEGIES:**

**A. Crop management:**

- Scout for pests and diseases regularly and control where necessary

**B. Stock farming very important:**

- Spread water points evenly through grazing areas
- First graze areas where vegetation already shed leaves
- Plant hardy trees/shrubs for browse
- Keep well adapted breeds of livestock
- Wean early and raise young animals intensively
- Market surplus stocks and always cull poor producers to save feed resources
- Maintain young best females
- Control stock numbers to prevent overgrazing and to save the veld for the coming winter season
- Control animal diseases and parasites.
- Feed pregnant and lactating animals better
- Evaluate carrying capacity of their available grazing and apply the appropriate stocking rates accordingly.



- Remove livestock from mountainous areas when very cold conditions are forecasted.

#### **C. Irrigation farming**

- Remove all weeds containing seeds, but keep other vegetative rests on the land because that will reduce evaporation.
- Check and repair all tools and machinery.
- Irrigate during cool conditions to avoid evapotranspiration.
- **Adhere to the water restrictions when issued**

#### **D. Grazing (Very important)**

- Determine the carrying capacity of different plant associations.
- Calculate the stocking rate of each, and then decide the best ratios of large and small animals.
- Avoid overstocking, control your stock to suit your camps and availability of feed.
- Force animals to use rangeland before providing other feed and postpone mating period during drought.
- Eradicate invader plants.

#### **E. Floods (Very important)**

Various methods are used to minimise the impacts of floods and among others consider the following:

- **Proper drainage system** - Drains which have been shallowed due to silts must be cleaned constantly. Clean drains ensure proper water irrigation.
- **Preserve forests-** Forest overlogging near the river banks can cause land erosion. This effect is similar to logging at the hillsides. Therefore, forests must be preserved to overcome floods. Forests are excellent natural barriers with which to absorb rain waters. They can also function as a sponge whereby they absorb the rain waters and then slowly release the waters to the rivers. They can filter earthly fluids into clean water. The forests can absorb 20% of the rain water. This water in turn is released into the atmosphere by condensation. This is the only way to reduce rain water.
- **Control human activities-** Flash floods occur especially in town areas because of waste and industrial waste dumping into the rivers and drains. The society must be made aware of this negative act and stopped from continuing it by holding green campaigns. Certain statutory bodies should be made responsible for the cleanliness of the rivers and preventing them from becoming dumping areas.
- Floods are unavoidable when it comes to rain. However, their impacts can be preventable and ways must be carried out to ensure that floods do not become a serious problem. People should also be made aware of this natural disaster. Wetlands often play a crucial role in flood control. However, loss of floodplains to agriculture and human habitation has reduced this capacity.
- The construction of levees and dams on rivers to improve flood control has often had the reverse effect.
- Flood-plain restoration and the removal of impeding structures partly solved the problem in many countries.

**F. Veld fires (Very important)**

The provinces are advised to ensure that the firebreaks are in place especially in the summer rainfall areas. This is the right time to erect firebreaks than to wait for the fire season. An owner of the land who is obliged to prepare and maintain a firebreak must ensure that, with due regard to the weather, climate, terrain and vegetation of the area, the following is taken care of in terms of installing the firebreaks (chapter 4 of National Veld and Forest Fire Act NO. 101 of 1998):

- It has to be wide enough and long enough to have a reasonable chance of preventing a veld fire from spreading to or from neighboring land
- It does not cause soil erosion and
- It is reasonably free of inflammable material capable of carrying a veld fire across it.

**Farming communities should establish fire protection associations to prevent and control veld fires as required by National Veld and Forest Fire Act (Act No. 101 of 1998).**

Dry conditions were experienced in most parts of the country. **As wet and warm conditions are expected in provinces in the east during the spring season, farmers in the winter rainfall areas are encouraged to put measures in place to minimise evaporative loss of moisture. Precautionary measures should also be in place for incidences of cold spells (frost) especially in the high lying areas.** Contingency plans should be in place for veld fires especially in the summer rainfall areas where the veld is still dry. Crops and livestock diseases associated with wet and warm conditions are likely and contingency measures should be maintained.

**The users are urged to continuously monitor, evaluate, report and attend to current Agricultural Risk and Disaster issues. Assistance will only be entertained if risk measures are practiced and good veld management maintained.**

Always implement risk measures and practice good veld management. Furthermore the advisory should be disseminated widely. Users are advised to be on the look-out and act on the extreme daily warnings as well as the advisory update next month. Information sharing groups are encouraged especially among farming communities for sustainable development.

**The Disaster Management Act (Act No. 57 of 2002) urges Provinces, individuals and farmers, to assess and prevent or reduce the risk of disasters using early warning information.**

The current advisory can be accessed from the following websites: [www.nda.agric.za](http://www.nda.agric.za) and [www.agis.agric.za](http://www.agis.agric.za) . **For more information contact: -**

<p>DoA, Directorate: Agricultural Disaster Management Private Bag X250 Pretoria 0001 Tel: 012 319 7955/56; Fax: 012 319 6711 Email: <a href="mailto:PA.DADRM@nda.agric.za">PA.DADRM@nda.agric.za</a></p>  <p><b>agriculture</b> Department of Agriculture REPUBLIC OF SOUTH AFRICA</p>	<p>ARC-Institute for Soil, Climate and Water Private Bag X79 Pretoria 0001 Tel: 012 310 2500 Fax: 012 323 1157 Email: <a href="mailto:info@iscw.agric.za">info@iscw.agric.za</a></p>  <p><b>LNR • ARC</b></p>
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