agriculture,
forestry & fisheries

Department:
Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

National Agro-meteorological Committee (NAC) Advisory on the 2018 winter and spring seasons
Statement from Climate Change and Disaster Management
12 DAFF 2018

03 September 2018

In the light of the seasonal outlook as produced by the South African Weather Service (SAWS), 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 media and farmers' days to disseminate the information. Users are advised to be on the look-out and act on the daily extreme weather warnings as well as the monthly advisory.**

I. CURRENT CONDITIONS

Figure 1

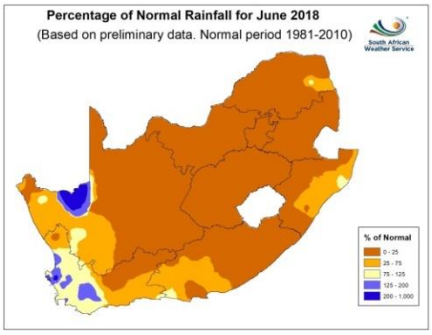


Figure 2

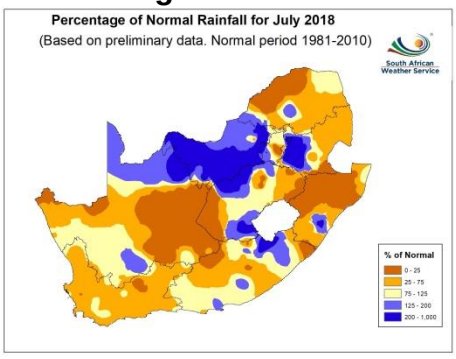


Figure 3

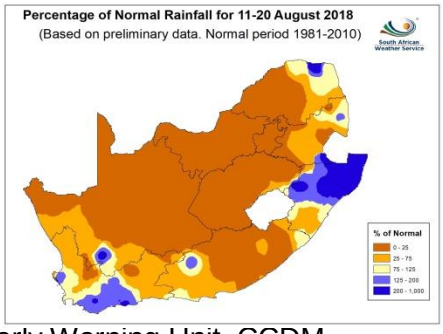
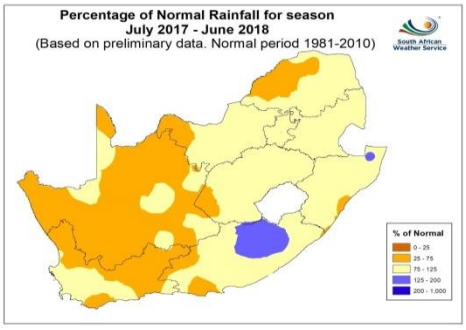
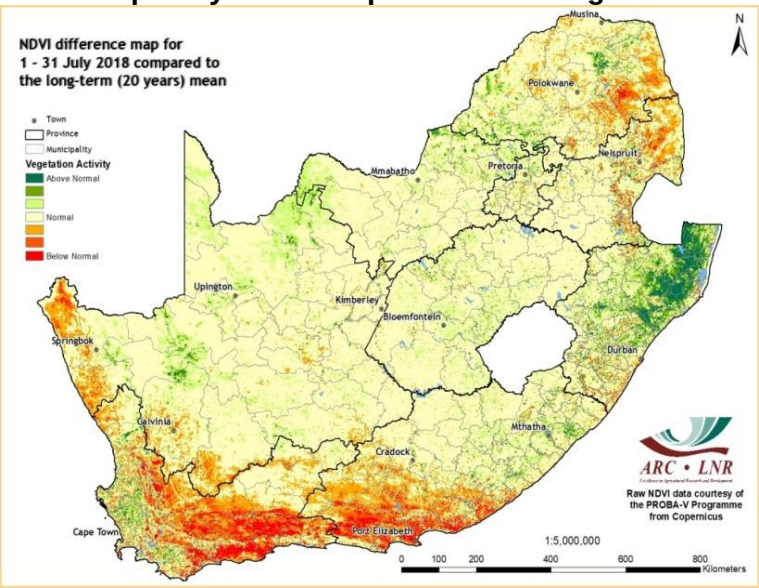


Figure 4



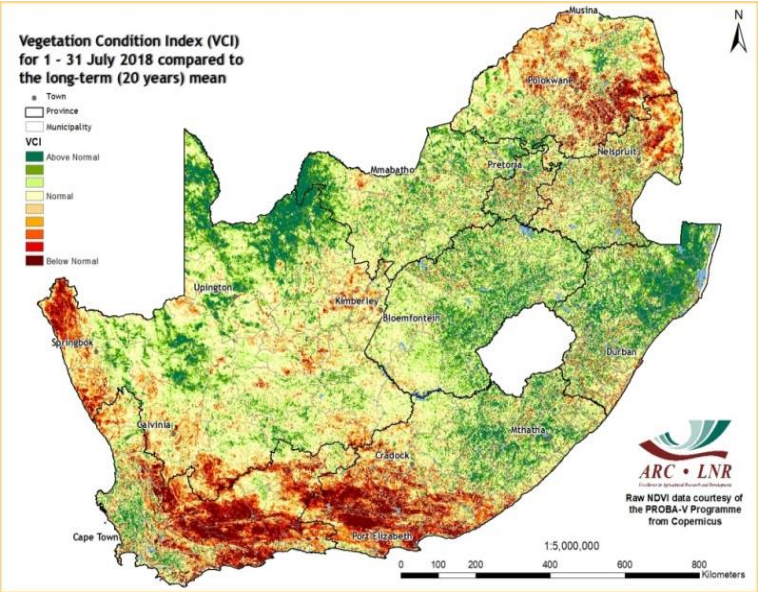
In June, rainfall received was below normal rainfall over most parts of the country **(Figure 1)**. In July, rainfall increased resulting in above normal rainfall mainly over northern parts of the Northern Cape, North West, and Gauteng Provinces **(Figure 2)**. During mid-August, above normal rainfall was received mainly over the Eden District of the Western Cape and over the northern half of KwaZulu-Natal **(Figure 3)**. In other areas, rainfall was below normal. For the season July 2017 to June 2018, mainly near normal rainfall was received but below normal over the western half of the country **(Figure 4)**.

NDVI map: July 2018 compared to the long-term mean



The July NDVI difference map shows that the country's interior continues to experience normal vegetation activity while the coastal regions and some isolated areas in Limpopo and Mpumalanga continue to experience below-normal vegetation activity compared to the long-term mean.

VCI map: July 2018 compared to the long-term mean



The VCI map for July indicates that dry conditions persist in the Western Cape with pockets of good vegetation activity in isolated areas of the west coast, as well as the northern and far north-eastern parts of the Beaufort West municipality. Vegetation condition remains poor over much of the western region of the Eastern Cape and across the Limpopo province. Good vegetation conditions are evident over much of the Green Kalahari, Kalahari and the Diamond region of the Northern Cape.

(**The VCI is a better indicator of water stress than the NDVI**).

II. CONDITIONS IN THE PROVINCES DURING JULY/AUGUST 2018

Eastern Cape

The province received below normal rainfall, with the exception of Mbizana and Ntabankulu in Alfred Nzo District, as well as in King Sabata Dalindyebo under the OR Tambo District where normal rainfall was received. Reasonable to very good crop conditions were reported in the central, eastern and southern parts of the province, whereas some areas in Amathole, Nelson Mandela Bay and Joe Gqabi reported poor conditions of crops. Most areas reported poor to very poor livestock conditions except for areas in OR Tambo and Alfred Nzo Districts where reasonable to good conditions were recorded. The conditions of pasture were reported to range from reasonable, poor to very poor within most areas except in Sunday River Valley and Port St Johns local municipalities where good pasture conditions were reported. Natural veld was also ranging from reasonable to very poor, except in Mbizana local municipality which reported good natural veld condition. The average level of major dams has increased as compared to the previous year during the same period (61% in 2018; 56% in 2017).

Free State

The Province received below normal rainfall, with signs of minor drought in parts of Xhariep District. Most municipalities are still operating under water restrictions. Winter pastures are progressing well particularly those that are under irrigation. Veld and other vegetative material have shown signs of temporary wilting due to frost. Livestock has shown a great recovery from the winter period and they are moderate in terms of body score while veld is reasonably fair. The harvesting of maize and sunflower has been completed on most farms and the harvest is likely to be normal despite receiving rainfall very late for 2017/18 planting season. Veld fires have been reported in Kroonstad, Koppies, Edenville, Petrus Steyn, Parys and Thaba Nchu. There were also reports of Snow in QwaQwa and the Drakensberg. The average level of major dams has increased (92% in 2018; 78% in 2017).

Gauteng

The province has received above normal rainfall in most parts. The natural veld is in poor condition and resulted in poor livestock condition. Some farmers have experience veld fires that resulted in livestock mortalities, burnt grazing and fodder. Maize farmers are harvesting; however, some farmers in the eastern parts experienced losses due to veld fires. The dams are at satisfactory levels. The average level of major dams is at 99% as compared to 89% of 2017 during the same period.

KwaZulu-Natal

Dry conditions prevailed over most of the province particularly over the western, central and northern districts. Snowfalls were reported over the Drakensberg. The drought monitor maps for July indicate that UMzinyathi has deteriorated into severe drought status, with the other ten districts continuing in a minor drought status. Wheat crop in the Uthukela district is growing well. Livestock condition ranges from fair to good in some areas but poor in others. Veld is dry and brown with little to no grazing value. The Polyphagous Shot Hole Borer has been identified on the North Coast and Pietermaritzburg. The pest attacks trees of all kinds and has become a threat to avocados, all nuts and citrus trees. During July the Province experienced a higher than average number of veld fires. The average level of major dams has increased as compared to the previous year (62% in 2018; 52% in 2017).

Limpopo

Normal rainfall had been received, with the exception of Capricorn and Sekhukhune Districts where below normal rainfall was recorded. Livestock conditions have been slowly deteriorating

especially where grazing is insufficient and farmers are struggling to provide supplements for their livestock. Furthermore, the condition of livestock was found to be very poor in Makhuduthamaga and Tubatse in Sekhukhune District; Giyani, Maruleng and Ba-Phalaborwa in Mopani District; Blouberg in Capricorn District; and around Musina and Malamulele villages in Vhembe District. The conditions of veld have deteriorated, especially in communal areas. There was an incident of dead cattle due to dry conditions in Sekhukhune and Mopani Districts. In Waterberg District tomatoes and green peppers were affected by frost during first week of July. The average level of major dams has decreased as compared to the previous year during the same period (70% in 2018; 74% in 2017).

Mpumalanga
Rainfall received was below normal. Most farmers have started with land preparation for the spring season. Farmers are harvesting winter produce such as sugarcane and cotton in Nkomazi. In Bushbuckridge local Municipality the overall livestock condition is fair to good. Farmers have been advised to provide supplementary feeds to livestock and to also reduce the stock density. In Ehlanzeni District and parts of Bushbuckridge local Municipality the veld condition is poor, but reasonable in Gert Sibande District and other areas of Bushbuckridge. The average level of major dams is at 77% in 2018 as compared to 75% of 2017.

Northern Cape
The province received below normal rainfall. The veld and livestock conditions are poor. Namakwa and Pixley Ka Seme District remain drought stricken. The average level of major dams has decreased to 89% when compared to 92% of 2017.

North West
The province received above normal rainfall in July. Farmers are making preparations for spring/ summer season. The natural pastures are in poor condition in some areas due to veld fires and the dry winter season. The livestock prices are ranging from R34/kg to R38/kg; and conditions are still fair to good. The average level of major dams has decreased to 68% when compared to 84% of 2017.

Western Cape
The province experienced normal winter rainfall distribution during July; however conditions remained dominantly below to normal. Above normal monthly rainfall was mostly evident in the western side of the province. The Central Karoo received below normal rainfall, In comparison to the long term, the rainfall over the western parts ranged from below normal to normal, while in the northern parts rainfall appeared to be more positive. Due to a period of above normal temperatures during July, the province experienced above normal monthly mean temperatures. Winter cereal crop production in the Swartland and Overberg so far indicate reasonable conditions, though rainfall remained less optimistic for July. As for extensive livestock farming, the dry parts of the province Central Karoo, Matzikama, Little Karoo region received poor rainfall, resulting in no relief for these areas. The overall water level of state dams in the province is at 55%, compared to 33% in 2017.

Information on level of dams is obtained from the Department of Water and Sanitation
Available: https://www.dwa.gov.za/Hydrology/Weekly/Province.aspx
Dam levels as at 2018/08/27

III. AGRICULTURAL MARKETS

Livestock domestic markets

According to FNB, beef prices eased somewhat due to limited uptake which is expected during this time of the year. Both class A and contract class A beef prices were marginally low. The lamb and mutton prices showed some gains on the back of improved uptake. Pork prices seem set to a modest recovery as evidenced by the recent upwards trend in carcass prices. Pork prices showed gains supported by good demand during month end period. It is expected that pork and baconer maintain the recent momentum supported by the good demand. Poultry market traded sideways due to subdued seasonal demand.

Producer prices for selected livestock commodities	Beef	Mutton	Pork	Poultry
Open market: Class A / Porker / Fresh whole birds (R/kg)	46.41	80.89	24.29	25.88
Open market: Class C / Baconer / Frozen whole birds (R/kg)	39.82	59.89	22.56	24.69
Contract: A2/A3* / Baconer/ IQF (*includes fifth quarter) (R/kg)	46.84	82.00	24.30	23.48
Import parity price (R/kg)	48.70	78.06		14.57
Weaner Calves / Feeder Lambs (R/kg)	33.16	45.29		

FNB: 2018/08/23

Major grain commodities

Local maize prices gained some ground despite lower international prices, finding support from the weaker Rand. The weaker Rand also provided some support to the wheat market. Wheat crop conditions remain uncertain in the Southern Cape due to persisting dryness. The Overberg and Swartland areas received good rains but the Southern Cape is still taking strain. Oilseed market gained some ground despite the lower international prices and the sunflower seed outperformed the soybean seed.

	Future Prices(2018/08/21) R/ton				
Commodity	**Aug-18**	**Sep-18**	**Dec-18**	**Mar-19**	**May-19**
White maize	2317.00	2322.00	2419.00	2470.00	2510.00
Yellow maize	2385.00	2394.00	2492.00	2531.00	2513.00
Wheat	4313.00	4325.00	4451.00	4560.00	4580.00
Sunflower	4961.00	4999.00	5121.00	5033.00	4879.00
Soybeans	4560.00	4581.00	4704.00	4805.00	4845.00
Sorghum	n/a	3400.00	3500.00	3600.00	3577.00

SAGIS: 2018/08/23

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 products (livestock and grain).

IV. SADC REGION

The food security outlook for August 2018 to January 2019 by the Famine Early Warning Systems Network (FEWS NET) indicates that following below-average 2018 harvests in many parts of the region, poor households in southern areas of Malawi, Zimbabwe, Madagascar, and central and southern Mozambique are expected to continue facing Crisis (IPC Phase 3) outcomes through at least January. In eastern DRC, where conflict continues to disrupt households' access to food and income, Crisis (IPC Phase 3) is also expected. The rest of the region is likely to maintain Minimal (IPC Phase 1) or Stressed (IPC Phase 2) throughout the projection period. Most markets in the region remain well supplied and prices for maize grain are still slightly below average. However, many poor households are expected to deplete their crops by August, two months earlier than usual. This will increase demand for staple food from markets earlier than usual and is expected to trigger maize price increases in several areas of Mozambique, Malawi, and Zimbabwe. The retail price of maize is expected to be roughly 15 to 30 percent above the five-year average between August 2018 and January 2019.

Furthermore, FEW NET explains that increasing conflict and insecurity in Tanganyika province of the DRC is limiting humanitarian access to over 300,000 displaced people. Recent reports from the United Nations indicate that several humanitarian partners operating in the area have suspended humanitarian assistance delivery due to insecurity and this may result in worse food security outcomes among many who are already experiencing Stressed (IPC Phase 2) and Crisis (IPC Phase 3) outcomes. FEWS NET also continues monitoring insecurity incidents in Mozambique where sporadic attacks in Cabo Delgado Province continue to disrupt livelihoods. An increased likelihood of an El Niño event is forecast to occur during the main part of the summer cropping season. Historically El Niño has been associated with below-average rainfall in Southern Africa between October and December, when summer cereals are planted in most parts of the region. Below-average rainfall during this time would likely result in lower levels of planting and weeding, and consequently lower availability of agricultural labor for poor households who rely on this source of income during the lean season.

[The Integrated Food Security Phase Classification (IPC) is a set of standardized tools that aims at providing a "common currency" for classifying the severity and magnitude of food insecurity.]

Source: http://www.fews.net/southern-africa

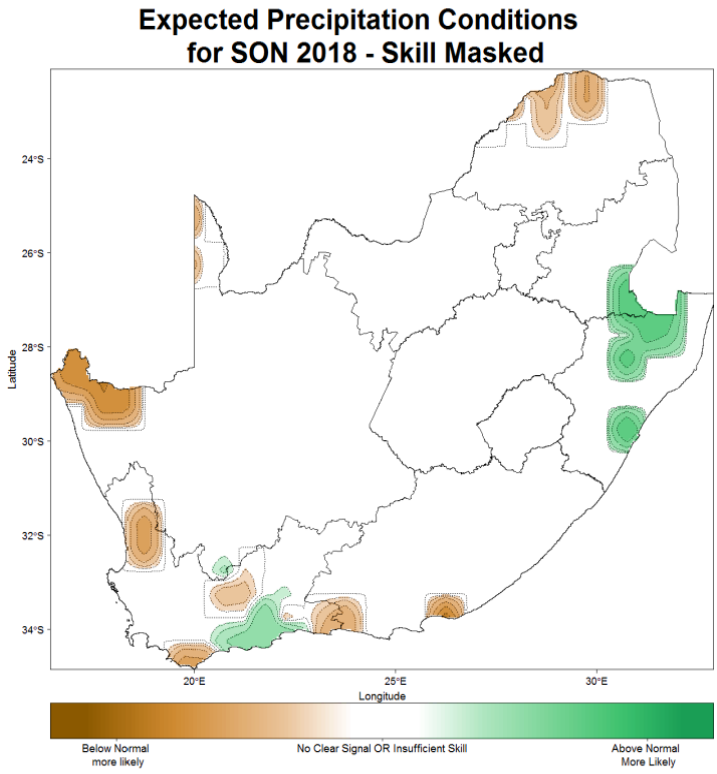
Summary of the reports

Dry conditions prevailed over most parts of the country with water restrictions still in place in some parts. The veld and livestock are in reasonable to poor condition in many areas. Veld fires have been reported in Free State, Gauteng, KwaZulu-Natal and North West. The average levels of major dams in most provinces are higher when compared to the 2017 levels during the same period. The Polyphagous Shot Hole Borer has been identified on the North Coast and Pietermaritzburg. The pest attacks trees of all kinds and has become a threat to avocados, all nuts and citrus trees. Over SADC poor households in southern areas of Malawi, Zimbabwe, Madagascar, and central and southern Mozambique are expected to continue facing Crisis (IPC Phase 3) outcomes through at least January following below average 2018 harvests.

V. MONTHLY CLIMATE OUTLOOK

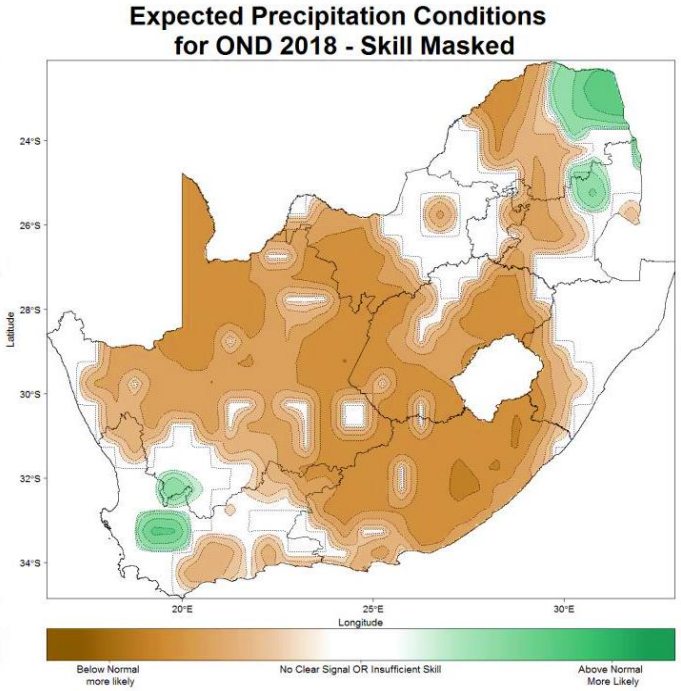
Seasonal Climate Watch: September 2018 to January 2019

Figure 1 – Rainfall



Above-normal rainfall conditions are expected over parts of KwaZulu-Natal during spring (Sep-Oct-Nov) but below-normal rainfall is expected for most of the summer rainfall areas during late spring (Oct-Nov-Dec). There are indications that there will be above-normal rainfall for most summer rainfall areas for the early summer period (Nov-Dec-Jan), however there is uncertainty in this forecast due to the fact that an El Niño is expected to be in full flow during this period. The rain day frequency forecasts also indicate that the late spring period will have less significant rainfall days for the summer rainfall areas.

Forecasts for the southern coastal areas continue to indicate below-normal rainfall throughout spring and late spring. This is of some concern as these areas tend to receive a significant portion of its annual rainfall during spring and the current low levels of water resources.



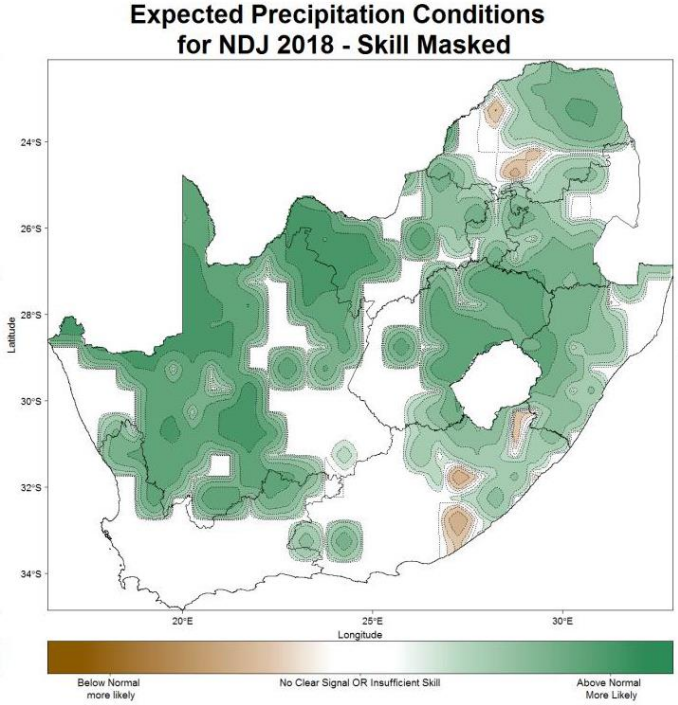
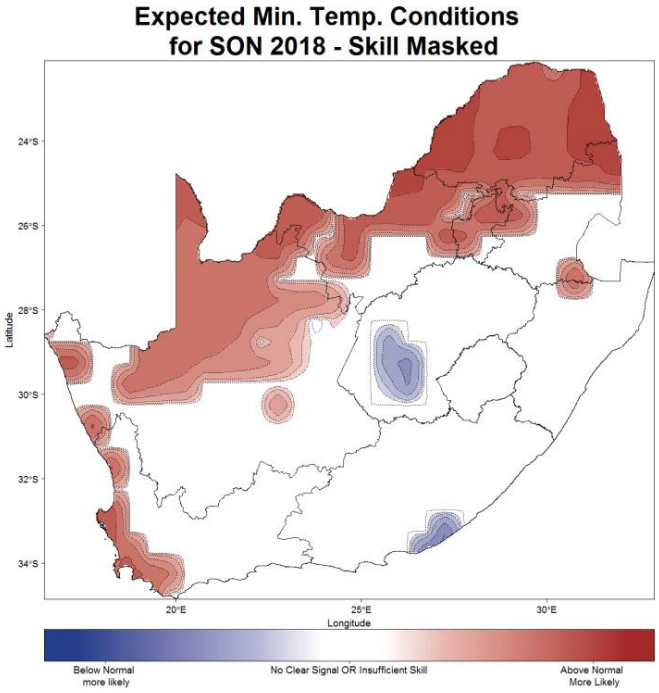
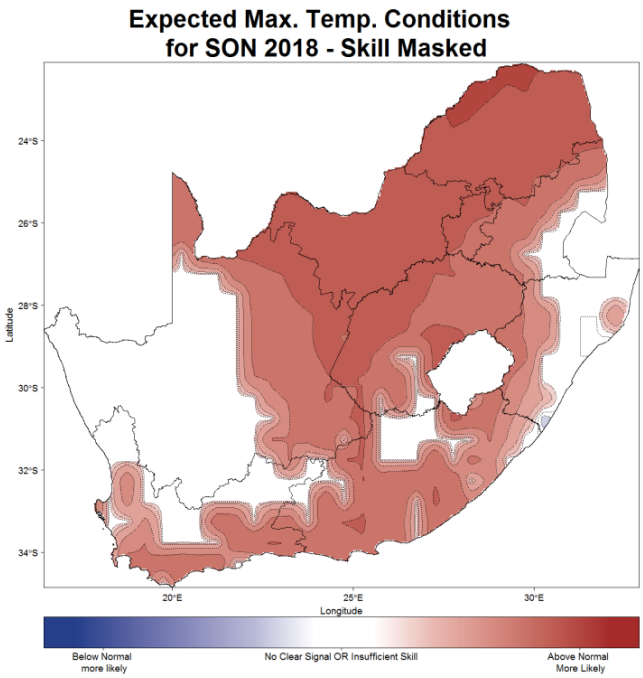


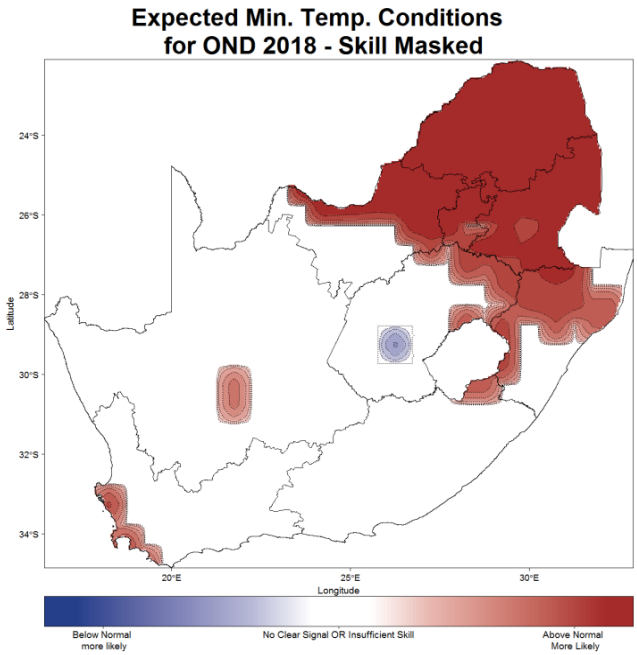
Figure 2 - Minimum and Maximum temperatures

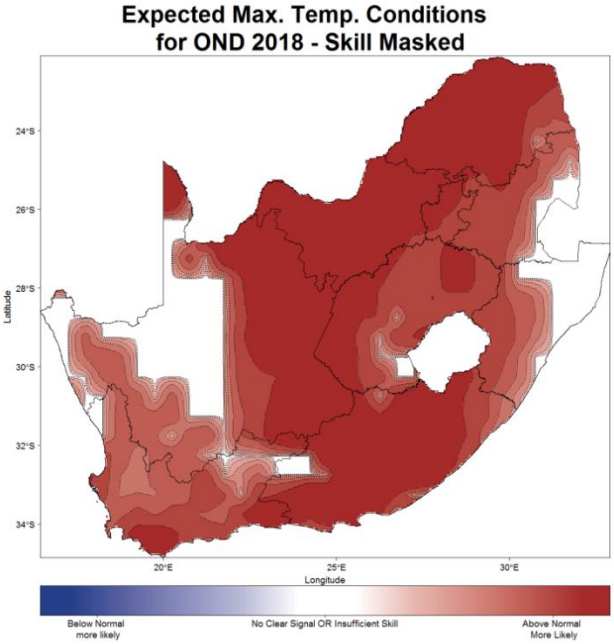
Minimum

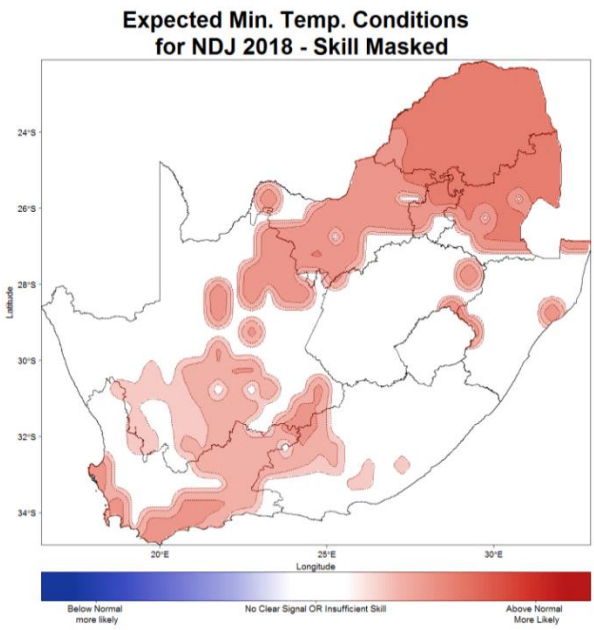


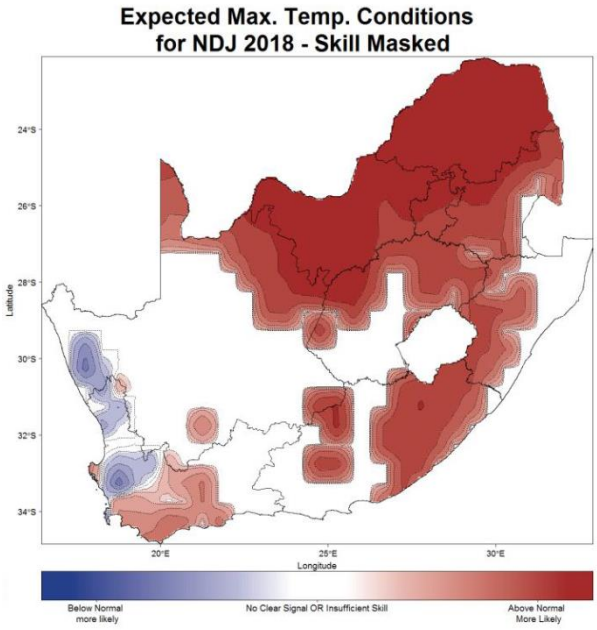
Maximum









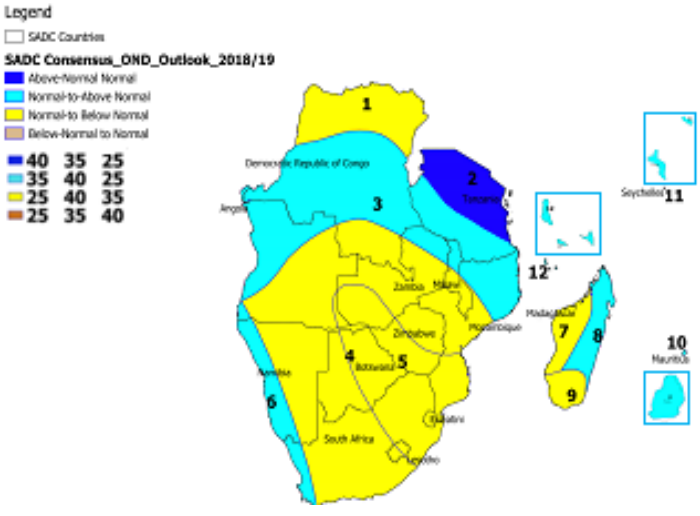


Overall higher temperatures are still expected moving towards the late spring and early summer period. There is a particularly confident forecast for above-normal temperatures over the northern parts of the country.

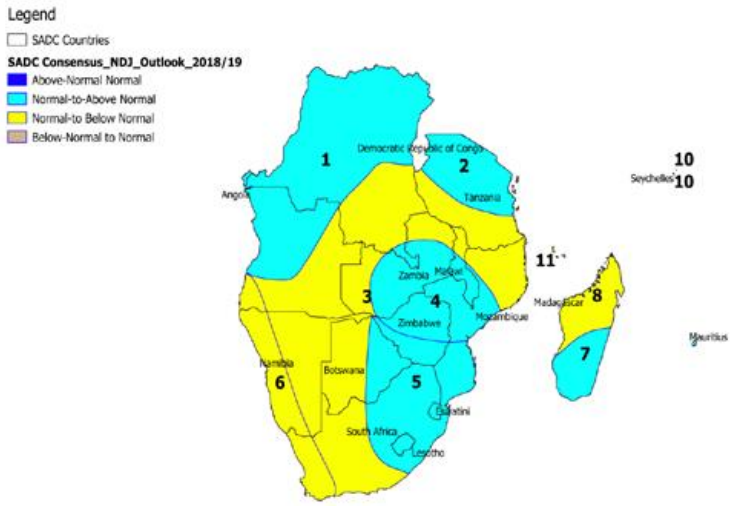
State of Climate Drivers

The El Niño-Southern Oscillation (ENSO) is still in a neutral phase and is still expected to rise towards an El Niño phase through the spring period. The likelihood of an El Niño event occurring is increasing as we move towards spring, and confidence in ENSO forecasts are high during this period. At this stage the impact of the expected El Niño is unclear, however early indications are that it will at least influence the late spring (Oct-Nov-Dec) period.

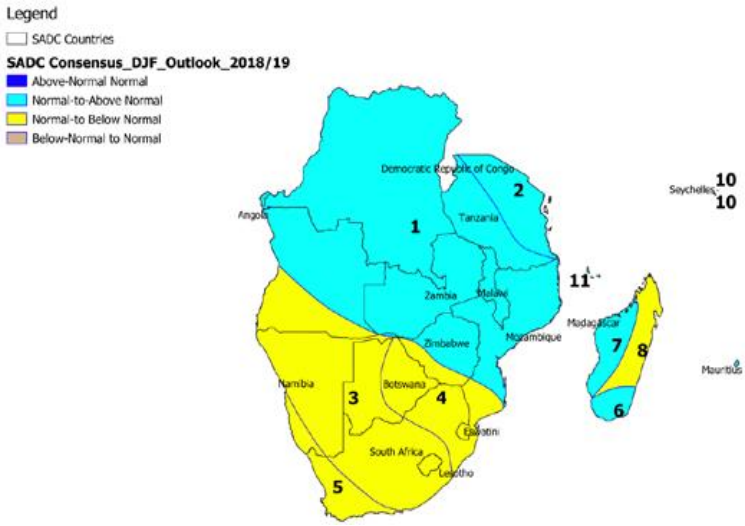
Southern Africa Regional Climate Outlook Forum (SARCOF-22) forecast



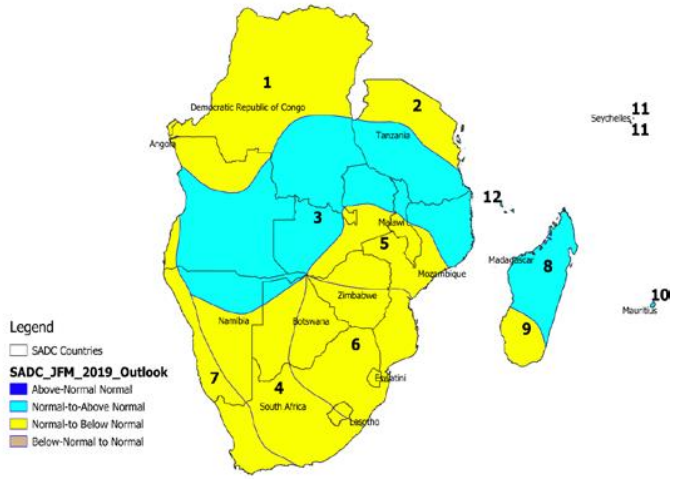
Rainfall forecast: October – December 2018



Rainfall forecast: November- January 2018/19



Rainfall forecast: December- February 2018/19



Rainfall forecast: January-March 2019

The bulk of Southern African Development Community (SADC) is likely to receive normal to below-normal rainfall for most of the period October to December (OND) 2018 and above normal rainfall over the northern half of the United Republic of Tanzania. The January to March (JFM) 2019 period will be normal to below normal rainfall for most of the region. However, northern most Angola, central most Democratic Republic of Congo (DRC), south-western Tanzania, northern Malawi, and the islands states of Comoros, Mauritius, easternmost Madagascar and Seychelles are likely to receive normal to above normal rainfall throughout the 2018/19 rainy season.

Mean temperatures will be normal to above normal for most of the 2018/19 season over the entire SADC region except for Northeast of Democratic Republic of Congo (DRC), north-western Tanzania, extreme south of Mozambique, Eswatini, extreme east of South Africa, central South Africa, half north of Lesotho, Extreme southwest of Botswana, south of Namibia, northwest of South Africa with the likelihood of above normal temperature.

This Outlook is relevant only to seasonal (overlapping three-monthly) time-scales and relatively large areas and may not fully account for all factors that influence regional and national climate variability, such as local and month-to-month variations (intra-seasonal).
Users are strongly advised to contact the National Meteorological and Hydrological Services for interpretation of this Outlook, additional guidance and updates.

In summation, during spring below normal rainfall is anticipated for most summer rainfalls except KwaZulu-Natal which is expected to receive above normal rainfall. Towards early summer, it is anticipated that summer rainfall areas could receive above normal rainfall, however there is uncertainty in the forecast due to an El Nino. There is also concern of below normal rainfall for the south-coast areas during spring and late spring as the area is already experiencing low water levels. Temperatures are expected to be tabove normal particularly in the north-eastern parts of the country.

Farmers are encouraged to continually check updates i.e. seasonal forecasts and utilize 7 day weather forecasts for short term planning. With the above forecast in mind, the following strategies are recommended:

VI. SUGGESTED STRATEGIES

A. Rain-fed crop production

Soil choice

- Choose suitable soil type.
  - Suitable soil and land use management practices that would control wind and water erosion in cultivated lands are suggested.
  - Avoid marginal soils - shallow and low water holding capacity soils.
  - Rather plant in soils with high water holding capacity or with shallow water table.
- Ascertain that the soil profile has enough water when planting commences.
- Roughen the soil surface to enhance rain water penetration and reduce runoff.
- Minimise compaction by reducing the passing of heavy machinery in the field.
- Add organic material to improve soil structure.

Land preparation

- Avoid where possible soils with pronounced plough pans.
- Consider practicing conservation agriculture such as zero or minimum tillage.
- Cover soil with organic matter or cover crops.
- Practice crop rotation.
- Do not expand land under crop production unnecessarily.
- Prioritise fallow land.

Crop choice and planting

- Choose drought resistant cultivars.
- Provide flexibility and diversification.
- Rather plant early in the season than late, but stay in the normal planting window and follow the weather and climate forecast regularly so as to make informed decisions.
- Consider staggered planting - spreading over weeks.
- Do not experiment with new and unknown cultivars and also avoid unnecessary capital investments.
- Consider intercropping for improved soil structure and pest/diseases control.
- Planting in a controlled environment (e.g. green house) is advisable where possible.

Crop management

- Adjust planting density accordingly.
- Consider mulching to minimise evaporation.
- Always eradicate weeds.
- Consider a conservative fertilizing strategy during dry conditions.
- Consider organic fertilization.
- Wheat: The strategy proposed is to scout the plants regularly, correctly identify any pests or diseases and make informed decisions regarding reaction.
- Prune trees properly to avoid blocking air movement. The removal of low hanging, dense branches is a must.
- Using white paint on trunks of fruits tree reduces winter trunk damage.
- Use overhead sprinkler irrigation.

B. Irrigation farming

Water restrictions remain in place in several provinces and this continues to have a negative impact on irrigation.

- 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 especially where there are water leaks.
- Be aware of the state of regional water resources and whether it will be adequate for irrigation.
- Irrigate with the correct amount, avoid over-irrigation because that can create problems e.g. water logging and diseases.
- Timing of irrigation - rather late afternoon or early evening to reduce evaporation.
- Manage irrigation so that the plant receives water only when needed.
- Consider using drip irrigation as it saves water by allowing it to drip slowly straight to the roots.
- **Adhere to water restrictions when issued.**

C. Domestic and home garden water use

- Conserve existing water supplies.
- Eradicate water weeds.
- Limit water waste and losses.
- Repair leaking pipes.
- Re-use water and retain high quality.
- Use grey water in gardens when necessary.
- Harvest water during rainy days.

D. Stock farming

- Keep stocking rates conservative and even lower to protect grazing.
- Never exceed carrying capacity of plant associations.
- Provide lots of drinking points where possible.
- Provide additional fodder and enhance nutritional value of dry grazing/feed with licks:
    - Phosphorous deficiency is a major problem.
    - Licks should (in most cases) provide:
      - Phosphorous.
      - Urea (to help with the break-down of dry vegetation).
      - Salt.
      - Molasses.
- Deficiencies differ according to vegetation composition/soil properties/climate.
- Assessment of vegetation condition and analysis of soil samples can benefit the decision for supplement composition.
- Sell mature, unproductive, marketable animals (to help prevent overstocking/ overgrazing).
- If grazing is in danger, herd animals into pens where different animals can be segregated and fed separately.

E. Grazing

- Subdivide your grazing area into camps of homogeneous units (in terms of species composition, slope, aspect, rainfall, temperature, soil and other factors) to minimise

area selective grazing as well as to provide for the application of animal management and veld management practises such as resting and burning.
- 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, and of grazers or browsers.
- Provide periodic full growing-season rests (in certain grazing areas) to allow veld vigour recovery in order to maintain veld productivity at a high level as well as to maintain the vigour of the preferred species.
- Do not overstock at any time to avoid overgrazing.
- Eradicate invader plants.
- Periodically reassess the grazing and feed available for the next few months, and start planning in advance.
- Spread water points evenly.

F. Pests and diseases

Crops
- Fruit crop farmers should regularly scout for pests and diseases and contact the local agricultural office for advice on best control measures. Farmers should further implement phytosanitary measures.

Livestock
- Follow the vaccine routine and consult with the local veterinarian.

G. Veld fires

The provinces and farmers are advised to create and maintain firebreaks. 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 firebreaks (Chapter 4 of the 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 neighbouring land.
- It does not cause soil erosion and
- It is reasonably free of inflammable material capable of carrying a veld fire across it.
- Firebreaks may be temporary or permanent.
- Firebreaks should consist of fire-resistant vegetation, inflammable materials, bare ground or a combination of these.
- Firebreaks must be located in such a way as to minimize risk to the resources being protected.
- Erosion control measures must be installed at the firebreak.

Firebreaks can be made through the following methods:
- Mineral earth firebreak:
    - Through ploughing, grading, other earth movement.
- Use of herbicides.
- Use animals to overgraze specifically to minimise fuel.
- Strategic placement of burned areas,
    - Not to be done on days with fire hazard (windy and dry/hot).
- Plant fire resistant plants.

- Plant species selected for vegetated firebreaks must be non-invasive and capable of retarding the spread of fire.

Maintaining firebreaks:

- Mow, disk, or graze vegetative firebreaks to avoid a build-up of excess litter and to control weeds.
- Inspect all firebreaks for woody materials.
- Inspect firebreaks at least annually and rework bare ground firebreaks as necessary.
- Repair erosion control measures as necessary.
- Access by vehicles or people must also be controlled.
- Bare ground firebreaks which are no longer needed must be stabilized i.e.
    - Sow grass.
    - Mulch.

What to do when conditions favorable for veld fire are forecast:

- Prohibit fires in the open air during periods of high fire hazard and establish a fire control committee.
- To control fires, an alarm system, firefighting teams, and beaters must be organized in advance and plans prepared.
- Livestock should be moved out of grazing land to a safe place.

What to do during a veld fire:

- Water is generally not available in sufficient quantities or at adequate pressure for the control of major fires; however, sand or other loose mineral soil material can be an effective method of control.
- Tree branches can be used to beat fire.

H. Heat stress – bad for productivity

- Signs of heat stress:
  Bunching in shade, high respiratory rates, open mouth breathing.
- What to do:
    - Offer shade.
    - Offer water- keep good quality water in front of animals.
    - Wet with sprinklers/fire hose.
    - Water ground.
    - Avoid overworking animals.
    - Control insects. Biting insects, such as flies can further stress livestock and interrupt their cooling. If pastures or buildings draw insects to livestock during times of extreme heat, provide proper insecticides or considering relocating your livestock.

Poultry

- Provide cool, clean, quality drinking water to your poultry. Water will help keep your birds cool.
- Always make sure your poultry is in a well-ventilated area in which there is nothing to obstruct the airflow.
- Provide feed during the coolest part of the day.
- Supplement drinking water with electrolytes.
- Reduce the number of birds kept in a house or in an area.

- Avoid excessive activity during the hottest part of the day.

I. Severe thunderstorms/flash floods

Building resilience:

- Identify resources/facilities within 50km that can be utilized and can be of help during emergencies.
- Be sure to have legal and adequate markings to identify your livestock.
- Stay well informed about livestock in your possession and conduct an inventory after the event.
- Monitor television and local radio stations for information regarding severe storms/flash floods in your region.
- Identify natural or built areas/shelters where animals can be kept during such conditions
  - Sufficient height to be above water level,
  - Sheltered from strong winds and wetness,
- Restrict access to high-risk areas such as low lying fields close to streams.
- Store food in safe areas sheltered from wetness to be used after storms/flash floods.
- Keep pesticides and other chemicals in areas where water will not be contaminated during extreme rainfall/storm events.
- Inspect/repair farm dams
  - Before rainy season, after each event.

J. Wind Erosion

Wind erosion reduces agricultural production potential.
Preventative measures for wind erosion:

- Do not burn vegetation.
- Keep vegetation cover – e.g. shrubs, grass, small trees; a cover crop may be used to increase organic material and increase soil structure.
- Plant permanent vegetation e.g. perennial grasses where possible.
- Maintain any remaining vegetative cover, e.g. maize stubble during winter wheat sowing, as it: Act as blanket, trap eroded particles –and reduce wind speed at ground level.
- Plant evergreen trees growing densely and perpendicular to typical wind direction during winter and spring as wind breaks.
- Increase water infiltration by correct management of soil – e.g. reduce frequency of plough and use minimum tillage.
- Mulch: to increase infiltration, reduce evaporation, and reduce raindrop impact as well as wind erosion.
- Construct retaining walls around gardens.
- Avoid soil compaction by roughening the soil surface
  - Furrows and tillage ridges can trap loose soil
- Farm along contours as this reduces slope lengths
- Prevent over grazing.
- Practice conservation farming
  - Maximize retention of crop residues.

Conditions have improved in some winter rainfall areas, with reasonable winter cereal crop conditions in the Swartland and Overberg. However, more rain is still needed in the winter rainfall areas for a significant recovery. Summer rainfall regions have generally reported reasonable to poor conditions of livestock and the veld.

During spring below normal rainfall is anticipated for most summer rainfalls except KwaZulu-Natal which is expected to receive above normal rainfall. Towards early summer, it is anticipated that summer rainfall areas could receive above normal rainfall, however there is uncertainty in the forecast due to an El Nino. There is also concern of below normal rainfall for the south-coast areas during spring and late spring as the area is already experiencing low water levels. Temperatures are expected to be above normal particularly in the north-eastern parts of the country.

With the seasonal forecast in mind, and the current conditions, farmers are advised to continually conserve water and other resources in accordance with the Conservation of Agricultural Resources Act 1983, (Act No. 43 of 1983). Livestock must continually be kept in line with carrying capacity of the veld, and be provided with additional feed such as relevant licks. They should also be provided with enough water points on the farm as well as shelter during bad weather conditions. There is high fuel load in summer rainfall areas and the fire season is taking place, further increasing the risk of veld fires. Therefore, creation of fire belts and their maintenance should be prioritized as well as adherence to veld fire warnings. Farmers are encouraged to implement measures provided in the early warning information issued.

The users are urged to continuously monitor, evaluate, report and attend to current Disaster Risk Reduction issues. It is very important and mandatory for farming communities to always implement disaster risk measures and maintain good farming practices.

The climate advisory should be disseminated widely. Users are advised to be on the look-out and act on the daily extreme weather warnings as well as the monthly advisory. Information sharing groups are encouraged especially among farming communities for sustainable development. In general, effective communication among all stakeholders in the sector will enhance effective implementation of risk reduction measures/early warning services. It is the responsibility of farmers to implement disaster risk measures.

The Disaster Management Act 2002, (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.daff.gov.za and www.agis.agric.za.

For more information contact:-

DAFF, Directorate: Climate Change and Disaster Management Private Bag X93 Pretoria 0001 Tel:012 309 5722/23; Fax: 012 309 5878 Email: MittaA@daff.gov.za	SAWS: Private Bag X097 Pretoria 0001 Tel: +27 (0) 12 367 6000 Fax: +27 (0) 12 367 6200 http://www.weathersa.co.za	ARC: Institute for Soil, Climate and Water Private Bag X79 Pretoria 0001 Tel: 012 310 2500 Fax: 012 323 1157 Email: iscwinfo@arc.agric.za, http://www.arc.agric.za