

**National Agro-meteorological Committee (NAC) Advisory on the
 2022 autumn and winter seasons
 Statement from Climate Change and Disaster Risk Reduction
 09 DALRRD 2021**

02 June 2022

In light of the seasonal climate watch 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

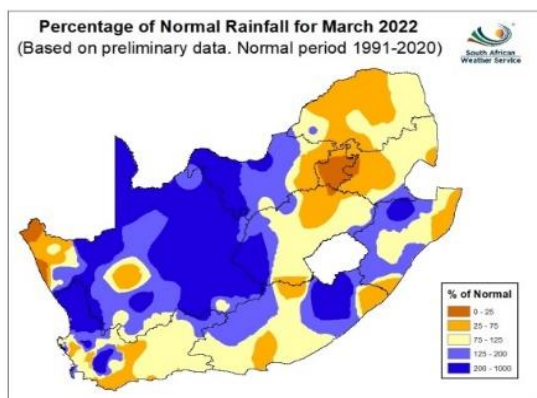


Figure 2

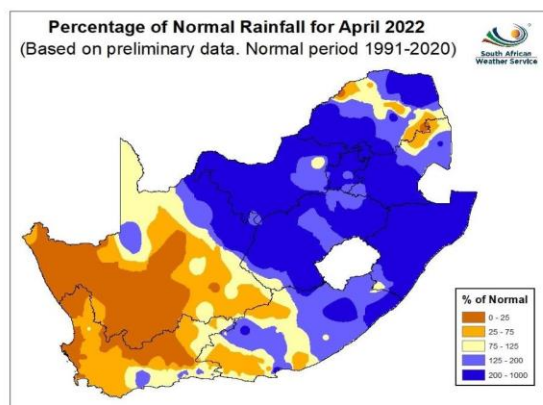


Figure 3

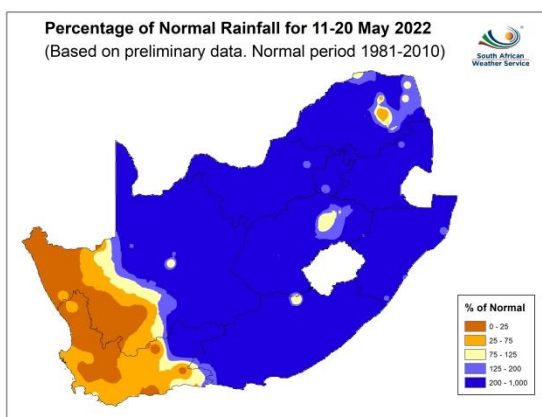
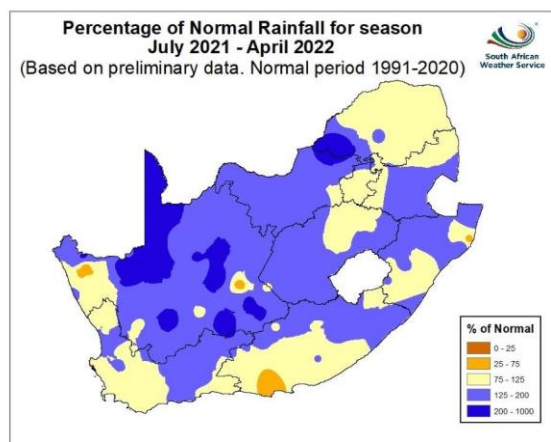
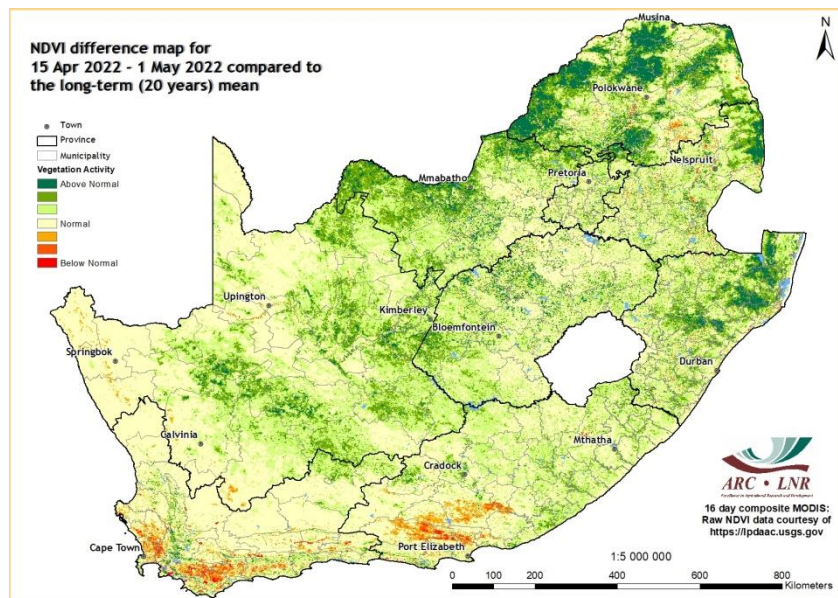


Figure 4



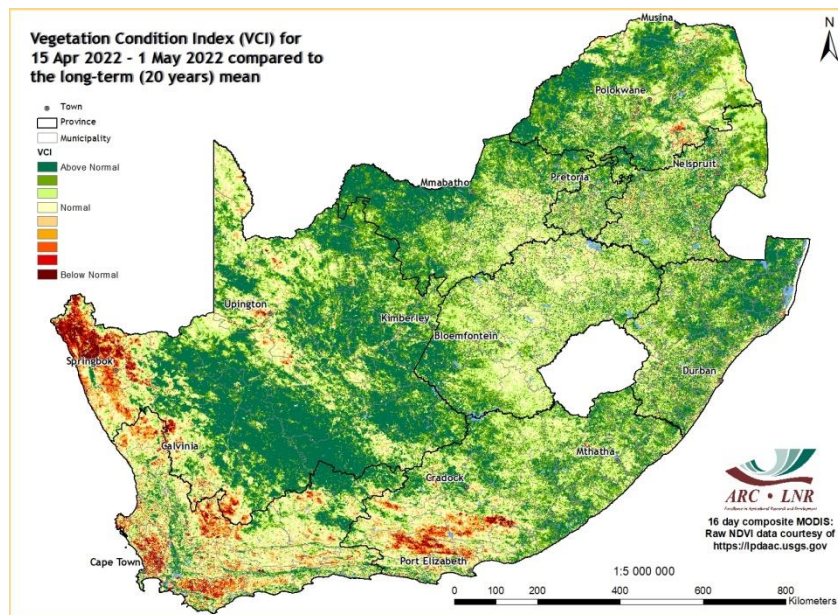
In March, rainfall was above-normal over most of the western parts of the country as well as the eastern coastal areas while the remainder of the country received near-normal to below-normal rainfall (**Figure 1**). The month of April received above-normal rainfall over the central and eastern half of the country and below-normal in the west (**Figure 2**). The above-normal rainfall trend continued in mid-May covering the majority of the country excluding the western half of the Northern Cape and most of the Western Cape (**Figure 3**). For the season July 2021 to April 2022, normal to above-normal rainfall was received countrywide (**Figure 4**).

NDVI map: 15 April – 01 May 2022 compared to the long-term mean



Compared to the historical mean, the 16-day NDVI map indicates normal to above-normal vegetation activity. Pockets of below-normal vegetation activity are visible in the Western Cape and the Eastern Cape.

VCI map: 15 April – 01 May 2022 compared to the long-term mean



The 16-day VCI map indicates that most of the Northern Cape and Eastern Cape continue to experience improved vegetation conditions, with mainly the western parts of the Northern Cape and the Sarah Baartman District of the Eastern Cape still experiencing poor vegetation conditions. The poor vegetation conditions are also prevalent in the Western Cape, although a few pockets of good vegetation activity are visible.

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

II. CONDITIONS IN THE PROVINCES DURING APRIL/ MAY

Eastern Cape

The province received excessive rainfall in OR Tambo, Alfred Nzo and parts of Joe Gqabi which caused damages to crops, irrigation equipment and access roads to the cropping lands. Some important irrigation dam levels have not yet improved beyond the critical zone of 29% in Sarah Baartman e.g. Kouga dam, although there is slight improvement. Most of dryland farming areas reported reasonable cropping conditions; however the excessive rains especially areas along the coast resulted in degradation of maize quality. Some fields were waterlogged for a long time which resulted to crop damage. In Sarah Baartman and Nelson Mandela Metro, citrus production was affected by striking workers, which threatened the export market. Pastures are in good condition in Joe Gqabi but the quality is poor in Sarah Baartman District due to poor rainfall. The veld and livestock are in reasonable to good condition but reasonable to poor in Chris Hani and Sarah Baartman Districts. The outbreak of Brown locust continues to be controlled. The average level of major dams is at 72% as compared to 55% of 2021.

Free State

Normal to above-normal rainfall was received. The veld has started to wilt due to frost. Livestock condition is good and farmers are advised to continue with supplementary feeding as the winter season has set in. Winter pastures are in excellent condition especially those that are under irrigation. Harvesting of sunflower, beans and potatoes has started especially in the eastern parts of the province. Small swarms of Brown locust were spotted in Kaallaagte, Paul Roux and Bloemfontein and were successfully controlled. The average level of major dams has increased as compared to the previous year (102% in 2022; 97% in 2021).

Gauteng

Above-normal rainfall was received and the veld is in reasonable condition. An outbreak of Foot and Mouth disease in cattle was reported in Randfontein and Wallmansthal. Highly pathogenic avian influenza was detected at a live bird trader in Ekurhuleni. There was a significant increase in outbreaks of African horse sickness. A number of cases of lumpy skin disease outbreaks were reported across the province. The water level of the Vaal Dam rose to 115%, prompting authorities to open eight sluice gates. The average level of major dams has slightly increased (101% in 2022; 99% in 2021).

KwaZulu-Natal

Wet conditions prevailed in most parts of the province. Frost has occurred in the Midlands, interior and higher mountainous areas. Most areas experienced good levels of summer pasture growth and bulk accumulation. However, with the recent flooding, many pastures are still waterlogged, fencing is broken, and accessibility is limited. Winter season pastures are starting to bulk up although they are similarly affected by saturated soils. Commercial maize is drying out and early season plantings are being harvested provided farmers can access their fields. Good veld and vegetation conditions continued across the province through April due to the extended rains during the month. The high bulk accumulation poses a threat for the coming winter season and firebreaks are essential. Livestock condition across all sectors remains good. Tick burdens are still very high and regular dipping and deworming is very important. Managing livestock numbers according to the available fodder is essential ahead of the winter season. Above average veld fire incidents have been reported. Many areas across the province have reported flood damage as a result of inclement weather. This has resulted in flooding of crops and pastures with the likelihood of increased losses due to insect damage, plant diseases such as moulds and rots as well as invasive weeds. Farm infrastructure was also damaged. A number of lightning-related livestock fatalities were reported.

Foot and Mouth disease was identified in another area of Umkhanyakude. The average level of major dams has increased as compared to previous year (92% in 2022; 73% in 2021).

Limpopo

Most parts of the province received normal rainfall. Crops are in good condition. The veld and livestock are in reasonable to good condition. Foot and Mouth disease is still being reported in Vhembe District; Tuta absoluta on tomatoes in some areas; Fall Army Worm in all districts and oriental fruit fly on citrus. The average level of major dams has slightly increased in comparison (89% in 2022; 87% in 2021).

Mpumalanga

Good rains were received and the veld condition is good in the Highveld but drying out in the Lowveld. Livestock is in good condition. However, in Bushbuckridge, Dr JS Moroka and Thembisile Hani which are characterized as dry areas with prolonged dry conditions and prone to veld fires, livestock condition is poor to reasonable. Planted vegetables in Ehlanzeni and Gert Sibande Districts are in good condition. Maize and soya beans are being harvested in most parts of the province. Various types of vegetable are at harvesting stage. African swine fever was reported in the province. The average level of major dams has increased to 96% as compared to 86% in 2021 during the same period.

Northern Cape

Normal to above-normal rainfall was received. The veld condition has improved except in the Richtersveld. Livestock conditions are good. Crop farmers are currently harvesting summer crops; citrus and pecan nuts are also being harvested. Rain received in mid-May delayed harvesting of maize and soil preparation for winter crops. Brown locust outbreaks continue to be controlled. The average level of major dams has slightly increased in comparison to the 2021 level (100% in 2022; 90% in 2021).

North West

The province received normal to above-normal rainfall that resulted in flooding in some parts. The conditions of the veld and livestock are reasonable to good. Livestock prices are still higher than previous years due to higher feeding costs and fuel increases. Farmers are advised to sell unproductive stock despite having ample grazing. The average level of major dams has slightly decreased (81% in 2022; 83% in 2021).

Western Cape

Below-normal rainfall was received with only the Garden Route District receiving normal to above-normal rainfall. Due to the good rainfall received during March, the veld condition in the Karoo is recovering. The winter rainfall region is now in the dry season and fodder for animals depends on irrigated pastures and stored bales of hay, straw and silage. The fruit harvesting season is well underway. Most commodities expect a higher than normal yield, but producers are concerned about the increase in input cost, delays in exports through the Cape Town harbour and the effect of the Russia-Ukraine conflict on exports. The stone fruit (nectarines and peaches) harvest has been completed. The pome fruit (apples and pear) harvest is continuing. The wine grape harvest is underway with an expected lower yield. The table grape season is almost complete, with only the Hex River region still packing. The below-normal rainfall in the winter grain areas of the Swartland and Southern Cape has delayed soil preparation and planting in some areas. Incidences of Brown locust outbreaks have decreased. Higher than usual incidences of insect-borne diseases such as bluetongue and Wesselbron disease in sheep occurred in the Central Karoo. Water sources in the

Karoo are recovering after the good rains received during the year. The average level of major dams has slightly decreased (52% in 2022; 54% in 2021).

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 2022/05/30

III. AGRICULTURAL MARKETS

Livestock domestic markets

Beef prices have shown a slight dip after Easter price highs; class A carcass prices are again gaining momentum touching R62.00 per kg. Class C carcass prices, in turn, have recorded more significant price increases compared to class A. Lamb prices have shown modest increases whilst the mutton increased by 1.5%. Prices of both categories are also substantially higher than in April. This is due to constrained supply. Pork prices have shown modest increases over the past week and strong increases over the past month. Individually quick-frozen chicken prices decreased marginally by up by 2.2% month on month and prices are expected to follow an upward trend over the next three months.

Producer prices for selected livestock commodities	Beef	Mutton	Pork	Poultry
Open market: Class A / Porker / Fresh whole birds (R/kg)	61.7	93.34	27.92	32.92
Open market: Class C / Baconer / Frozen whole birds (R/kg)	47.2	72.45	27.32	32.43
Contract: A2/A3* / Baconer/ IQF (*includes fifth quarter) (R/kg)	62.21	48.2	-	29.59
Import parity price (R/kg)	38.20	-	-	
Weaner Calves / Feeder Lambs (R/kg)	-			

FNB: 2022/05/30

Major grain commodities

Local maize prices increased by 3.2% and 2.7% for yellow and white maize respectively. Local price increases were more pronounced due to the weaker rand against the dollar. Local wheat prices followed global price increases, increasing by 7.4% while every month the increase was higher at 16.9% due to the weaker exchange rate. Local soybean prices decreased by 1.6% while sunflower seed prices traded sideways. Local soybean prices eased from the highs seen at the beginning of the month due to the weaker rand compared to the dollar.

Commodity	Future Prices (2022/05/24) R/ton				
	May-22	Jul-22	Sep-22	Dec-22	Mar-23
White maize	4 626.00	4 642.00	4 701.00	4 794.00	4 774.00
Yellow maize	4 688.00	4 737.00	4 797.00	4 874.00	4 837.00
Wheat	8 323.00	8 298.00	8 205.00	7 756.00	7 817.00
Sunflower	11 002.00	11 110.00	11 295.00	11 465.00	10 815.00
Soybeans	9 052.00	9 148.00	9 265.00	9 382.00	9 275.00

SAGIS: 2022/05/26

IV. SADC REGION

The May Famine Early Warning Systems Network (FEWS NET) reported that the start of the main harvest is improving food availability and access across much of the region. Improvements in food security have been observed in northern Malawi, northern surplus-producing areas of Zimbabwe, non-conflict affected northern areas of Mozambique, northern and central Madagascar, and northern DRC, where Minimal (IPC Phase 1) outcomes are ongoing. Although areas affected by poor rainfall, cyclones, and conflict are likely to face food deficits even in the post-harvest period, with Stressed (IPC Phase 2 and Crisis (IPC Phase 3) outcomes expected through at least September. These areas include southern Madagascar, southern and central Mozambique, southern parts of Malawi, extreme southern areas of Zimbabwe, and conflict-affected DRC and northern Mozambique. Macroeconomic challenges and inflation drive increases in food and fuel prices, predominately in Zimbabwe, DRC, and Malawi. In these countries, the minimum expenditure baskets are increasing and causing food access challenges mainly for low-income households in urban areas and poor households in rural areas. The situation has been further impacted by the disruption of global supply chains due to the Ukraine Crisis. In Zimbabwe, parallel market exchange rates have significantly increased, leading to a surge in the cost of food. In Zimbabwe, maize meal and bread prices in ZWL terms increased by approximately 50 and 30 percent, respectively, between March and April.

FEWS NET further reported that conflict remains a significant driver of food insecurity in DRC and Cabo Delgado, Mozambique. Since March, DRC has seen a resurgence of conflict in Rutshuru, which has affected Season B cropping. The same rebel group was recently reported to be advancing towards Goma town. Other areas in DRC where conflict continue to cause displacement and significant levels of food insecurity include North and South Kivu, Kassai, Ituri, and Tanganyika. In Mozambique, the conflict in Cabo Delgado threatens livelihood activities, causing households to rely mainly on humanitarian assistance and markets. Due to limited resources, WFP is distributing half rations equivalent to 39 percent of a 2100 kilocalorie diet in April and May to around 850,000 people in Cabo Delgado and 74,000 in Nampula and Niassa provinces.

[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

Rainfall received was normal to above-normal in the central and eastern parts of the country during April; mid-May also received above-normal rainfall over much of the country excluding the far western parts. Flooding resulted in damages to crops and infrastructure in KwaZulu-Natal and North West Province. There were lightning related livestock mortalities in KwaZulu-Natal. The veld and livestock are in reasonable to good condition in most areas. Locust is continually being controlled in the Free State, Northern Cape, Western Cape and Eastern Cape Provinces. Foot and Mouth disease has been reported and livestock quarantined in Limpopo, Gauteng and KwaZulu-Natal. In Mpumalanga African swine fever has been detected and cases of African horse sickness had increased in Gauteng. The average level of major dams has increased in many areas.

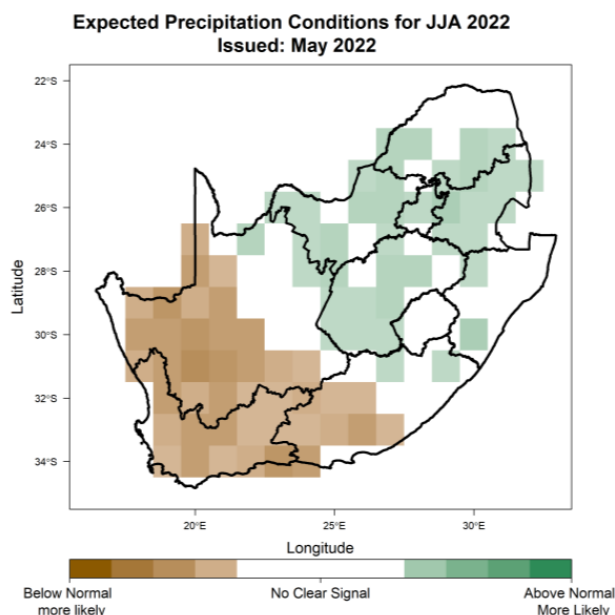
V. MONTHLY CLIMATE OUTLOOK

Seasonal Climate Watch: June to October 2022

State of Climate Drivers

The El Niño-Southern Oscillation (ENSO) is currently in a La Niña state, and forecasts indicate that it will likely remain in this state during the coming seasons. During winter, the presence of ENSO has less of an impact. Thus, the presence of the current La Niña event is not expected to have any significant impact on rainfall in the coming seasons.

Figure 1 – Rainfall



The multi-model rainfall forecast indicates below-normal rainfall for the south-western half of the country and notably above-normal rainfall over parts of Kwa-Zulu-Natal throughout the winter season.

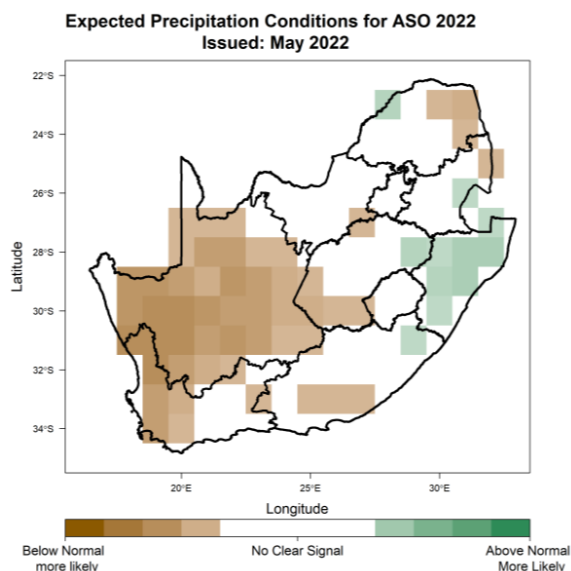
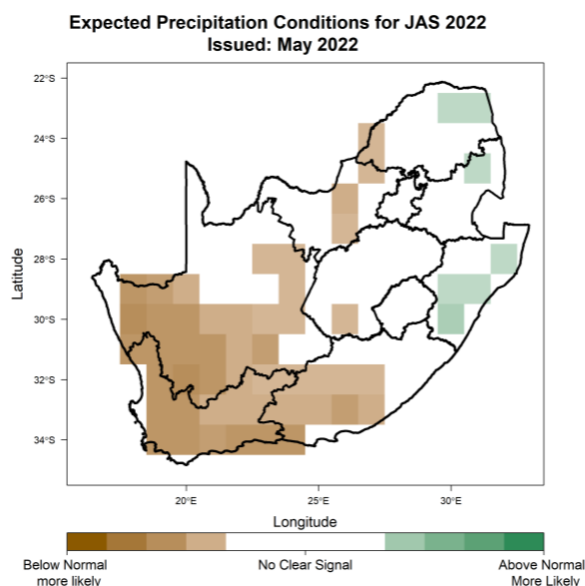
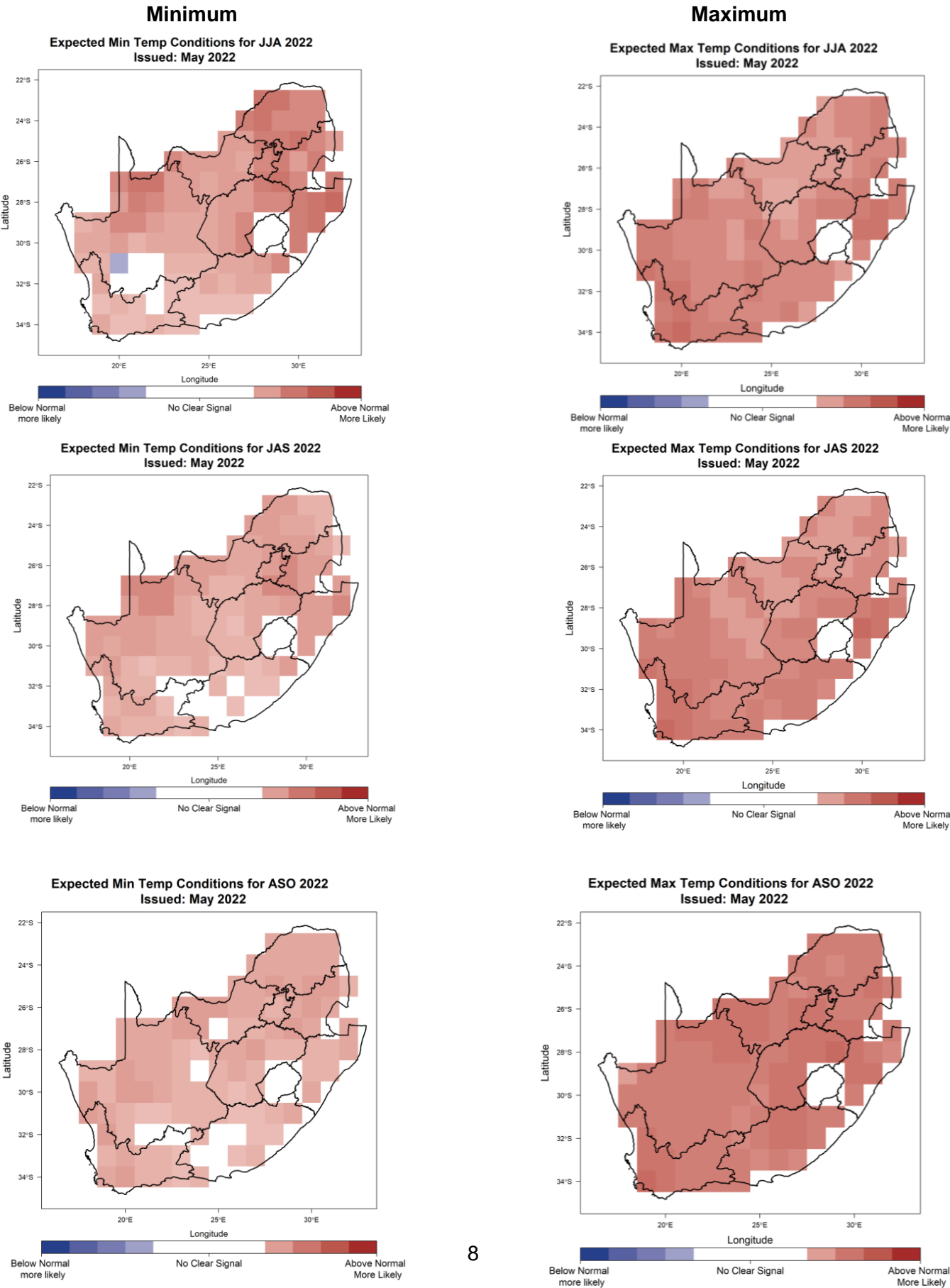


Figure 2 – Minimum and Maximum temperatures



Both maximum and minimum temperatures are expected to be above-normal for most of the country.

In summary, below-normal rainfall is anticipated for the winter rainfall areas but above-normal over KwaZulu-Natal. It is expected that temperatures may be warmer than normal. 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. Winter crops: 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 minimize evaporation.
- Minimise compaction by reducing the passing of heavy machinery in the field.

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.
- Stick to normal planting windows if appropriate 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.
- Lay out planting rows parallel to the prevailing direction of the cold air flow.
- Keep air drainage pathways open to insure good air drainage and elimination of frost pockets.

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 fruit trees reduces winter trunk damage.
- Use overhead sprinkler irrigation.

B. 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 especially where there are water leaks.
- Be aware of the state of regional water resources and whether it will be adequate for irrigation.
- 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.
- Avoid over irrigation because that can create problems e.g. water logging and diseases.
- 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.
- 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.
- Analysis of vegetation/soil samples can benefit the decision for supplement composition.
- Sell mature, 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 maintain firebreaks in all areas. 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 flammable material capable of carrying a veld fire across it.
- Firebreaks may be temporary or permanent.
- Firebreaks should consist of fire-resistant vegetation, non-flammable 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. Flooding

Heavy rainfall raises the water level. When the water level is higher than the river banks or the dams, water flows out from the river and flooding occurs.

Preventive measures:

- Construction of proper drainage systems. Drains must be cleaned constantly as they ensure proper water irrigation.
- Mechanical land treatment of slopes such as contour ploughing or terracing to reduce the runoff coefficient.
- Construction of small water and sediment holding areas.
- Construction of floodways (man-made channels to divert floodwater).
- Terracing hillsides to slow flow downhill.
- Water pumps in rivers likely to be affected should be lifted from the river banks when a warning for heavy rain has been issued.

What to do when flooding is forecasted:

Avoid:

- Cutting grass in the rainy season as this can result in nutrient depletion.
- Applying fungicides and pesticide (plants and animals).
- Applying Nitrogen fertilizer as this can burn plants. Dumping fertilizer in one spot can cause the roots below the fertilizer to be burnt and die.
- Irrigation, this can result in waterlogging leading to nutrient depletion.

Other measures to implement:

- Cover Urea licks to prevent them from becoming toxic.
- Provide shelter for animals (young ones can die easily).
- Leave cultivated areas coarse.
- Relocate/ move animals to a safe place.
- Be extra cautious for pest and diseases after rain has fallen, as high moisture content and high temperatures may trigger these.
- Assume that flood water contains sewage and might be harmful for human and livestock consumption.
- Before leading livestock across a river, check whether the water level is rising. This is especially necessary if it is already raining.

Erosion

Erosion is the wearing away of soil and rocks by the action of natural forces, for example, water and wind. The loose and dissolved materials move from one location to another. Erosion therefore may reduce agricultural production potential.

Preventative measures for 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 acts as a blanket, traps eroded particles and reduces the wind speed at ground level.
- Plant evergreen trees growing densely and perpendicular to the 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 overgrazing.
- Practice conservation farming

- Maximize retention of crop residues.

I. Cold spells (snowfall and frost)

When temperatures plunge below zero, livestock and crops need to be given extra attention. Prevention is key in dealing with hypothermia, and other cold weather injuries in livestock and crops. Following are a number of concerns and recommendations:

Livestock:

- Hypothermia and dehydration are a serious concern in animals during cold and wet conditions. Wind-chill also adds greatly to the cold stress for animals.
- Livestock should be provided with windbreak, roof shelter and monitored for signs of discomfort (extensive shivering, weakness, lethargy, etc.)
- It is very important that livestock be provided with extra hay/forage/feed to double the calories for normal body heat maintenance during extremely cold conditions.
- It is critical that livestock have access to drinking water. Usual water sources may freeze in low temperatures and dehydration becomes a life threatening factor. In general, livestock tend to drink less water in extremely cold conditions.
- Special attention should be paid to very young and old animals because they may be less able to tolerate temperature extremes.
- Do not shear Angora goats. Also, take extra time to observe livestock, looking for early sign of diseases and injuries.
- Severe cold-weather injuries or death primarily occur in the very young or in animals that are already debilitated.
- Cases of cold weather-related sudden death in calves often result when cattle are suffering from undetected infection, particularly pneumonia.
- Livestock suffering from frostbite don't exhibit pain. It may be up to two weeks before the injury becomes evident as freeze-damaged tissue starts to slough away. At that point, the injury should be treated as an open wound and a veterinarian should be consulted.

Crops:

- Prune out the lower portions of windbreaks to allow air to pass through to avoid the formation of a frost pocket.
- Wrapping the trunks with materials such as newspaper, cardboard, aluminium foil will prevent much of frost damage.
- With more severe frosts, canopy death can occur and trunk coverings need to extend up beyond the graft union, so the tree can reshoot from undamaged buds above the graft once the wraps are removed.
- Use heating devices such as orchard heaters to raise temperatures in plantings.

Flooding in a few provinces resulted in damages to crops and infrastructure. The veld and livestock are in reasonable to good condition. However, farmers are advised to keep livestock in balance with carrying capacity of the veld, and provide additional feed such as relevant licks. A slow start for the planting of winter grain crops has been observed in parts of the Western Cape. The seasonal forecast anticipates below-normal rainfall for the winter rainfall areas but above-normal over KwaZulu-Natal. It is expected that temperatures may be warmer than normal.

With the current conditions in mind as well as the seasonal forecast, winter crop farmers are advised to wait for sufficient moisture before planting and stay within the normal planting window. As below-normal rainfall is anticipated, farmers are also advised to be conservative in their planting i.e. planting density/cultivar/area being planted. In addition, they should consider drought tolerant cultivars where possible. Farmers using irrigation should reduce the planting area in line with water restrictions in their zones. Farmers need to follow the weather and climate forecast regularly so as to make informed decisions.



Livestock should be provided with enough water points on the farm as well as shelter during bad weather conditions. As the veld has recovered in many summer rainfall areas, it continues to dry out during winter thereby increasing the risk of veld fires. Therefore the creation and maintenance of fire belts should be prioritized as well as adherence to veld fire warnings. Episodes of cold spells and localized flooding resulting from frontal systems are likely during winter and measures should be in place. 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: <https://www.dalrrd.gov.za/>.

For more information contact:-

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