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

Percentage of Normal Rainfall for April 2021
(Based on preliminary data, Normal period 1981-2010)

Figure 2

Percentage of Normal Rainfall for May 2021
(Based on preliminary data, Normal period 1981-2010)

Figure 3

Percentage of Normal Rainfall for 01-16 June 2021
(Based on preliminary data, Normal period 1981-2010)

Figure 4

Percentage of Normal Rainfall for season for July 2020 to May 2021
(Based on preliminary data, Normal period 1981-2010)
During April, below-normal rainfall was received over most parts of the country with the exception of mainly KwaZulu-Natal, eastern parts of the Eastern Cape, eastern parts of North West Province which received normal to above-normal rainfall (Figure 1). In May, winter rainfall areas and parts of the Eastern Cape received normal to above-normal rainfall (Figure 2). The remainder of the country received below-normal rainfall. For the first ten days of June, northern parts of the Northern Cape, North West, eastern parts of the Eastern Cape, KwaZulu-Natal and Mpumalanga received above-normal rainfall (Figure 3). Other remaining areas remained dry. The season July 2020 to May 2021 received normal rainfall with patches of below-normal over the Eastern Cape, Western Cape and Northern Cape (Figure 4). Above-normal rainfall was received mainly in the northern parts of the Northern Cape and western regions of the North West Province.

**NDVI map: May 2021 compared to the long-term mean**

When comparing the NDVI difference map for May to the long term mean, it can be observed that below-normal vegetation activity was experienced over most parts of the country, with pockets of above-normal activity in the eastern and northern parts of the country.

**VCI map: May 2021 compared to the long-term mean**

The western parts of the country continued to experience poor vegetation conditions in May when compared to the long term mean. Similar conditions occurred in other areas in the north-eastern parts of the country. KwaZulu-Natal, southern parts of the Western Cape and other isolated areas in the country experienced above normal vegetation conditions. (The VCI is a better indicator of water stress than the NDVI).
II. CONDITIONS IN THE PROVINCES DURING MAY/JUNE

Eastern Cape
Normal rainfall was received in some areas; however Sarah Baartman remains the driest Districts in the province. Harvesting of maize commenced and vegetables suitable for the winter season were reported to be thriving well. Joe Gqabi District and certain areas of Amathole reported good conditions of livestock, whereas the rest of the province reported livestock conditions as poor to fair. Pastures are in poor to reasonable condition, with the exception of Joe Gqabi and Alfred Nzo Districts where it was reported to be in good condition. Rangeland ranges from reasonable to very good in the eastern parts of the province, as well as in Joe Gqabi District, whereas poor to very poor rangeland conditions were reported in Alfred Nzo and Sarah Baartman, respectively. The average level of major dams is at 51% in 2021 as compared to 52% of 2020.

Free State
Below normal rainfall was received. The veld has wilted due to frost and farmers have been advised to prepare supplementary feed as the winter season continues. Winter pastures are in very good condition especially those that are under irrigation. More hay has been cut this season than for the past few years and yields are above normal. The veld condition is near-normal and most of the veld has started to shed seeding. Livestock condition is good. The harvesting of wheat is completed but the yield is far below the norm due to fewer hectares that were planted. There was brown locust outbreak in Edenburg, Dealesville, Hertzogville, Phillipolis, Fauresmith, Soutpan, Bultfontein, Petrusburg, Koffiefontein and Fauresmith. The swarms were successfully controlled. There were reports of avian influenza especially in Parys, Frankfort and Wesselsbron and the Veterinary Services quarantined the affected farms. Veld fires occurred in Petrus Steyn, Botshabelo, Fouriesburg, Bethlehem, Boshof, Petrusburg, Kroonstad, Virginia and Thaba Nchu. The average level of major dams has increased as compared to the previous year during the same period (96% in 2021; 83% in 2020).

Gauteng
NIL REPORT.

KwaZulu-Natal
Dry conditions were experienced over most parts of the province. The drought monitor for mid-May shows that conditions are deteriorating slightly across the province, with Umzinyathi, Umkhanyakude, Umgungundlovu, Harry Gwala, Ugu and Zululand Districts remaining in Level 3, minor drought. The remaining Districts are still close to the top of the range for level 2 drought advisory. Summer pastures have stopped growing except along the coastal areas. Winter pastures are growing well with a large variety of mixtures being used. Planting of winter crops has been completed. A lot more maize silage and hay bales (conserved feed) has been grown and stored this season than farmers were able to do since 2014. Livestock condition remains good in most areas despite entering the mid-winter season. Stock numbers must be adjusted to the carrying capacity of the grazing available. Veld and vegetation condition is mostly average. Snow falls, hail and heavy rains were reported in some parts of the province. Foot and Mouth disease was reported in Mtubatuba and Ulundi at communal dip tanks. Below average veld fires have been reported. The average level of major dams has increased as compared to the previous year (72% in 2021; 62% in 2020).

Limpopo
Below-normal rainfall was received. Most farmers had begun with land preparation for winter crops while others have already started planting. The condition of livestock has deteriorated, as well as grazing conditions. Farmers are continually warned to reduce livestock numbers to avoid
losses as a result of lack of grazing in most municipalities. The average levels of major dams has increased to 86% in 2021, as compared to 68% of 2020.

**Mpumalanga**
Normal to below-normal rainfall was received. Farmers are harvesting grain crops and preparing to plant winter crops. Planted vegetables are in good condition. The veld condition has deteriorated in most areas; whereas livestock is in reasonable to good condition but poor in some parts of Enkangala District. Streams and earth dams are mostly at full capacity but other dams were reported to be silted in the Nkomazi region while other dams have collapsed because of the January floods. The average level of major dams is at 85% as compared to 73% on 2020.

**Northern Cape**
NIL REPORT.

**North West**
Below-normal rainfall was received. Farmers are harvesting maize, sunflower and sorghum. The veld and livestock are in reasonable condition. There were veld fires in Dr Kenneth Kaunda District. The average level of major dams is at 81% higher than 70% of 2020.

**Western Cape**
NIL REPORT.

Information on level of dams is obtained from the Department of Water and Sanitation
Dam levels as at 2021/06/28

### III. AGRICULTURAL MARKETS

**Livestock domestic markets**
According to FNB, beef prices trended sideways to firmer. Seasonal production conditions remain solid helping maintain good fodder supplies. Lamb and mutton prices trended sideways as demand eased. It is expected that prices will maintain a sideways to firmer trend in the short term. The pig market saw a mixed trend with porkers retaining gains and baconers eased. In the medium term it is expected that prices will improve. Poultry prices dropped due to lower demand. Prices are expected to maintain current trend in the short term.

<table>
<thead>
<tr>
<th>Producer prices for selected livestock commodities</th>
<th>Beef</th>
<th>Mutton</th>
<th>Pork</th>
<th>Poultry</th>
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<tr>
<td>Open market: Class A / Porker / Fresh whole birds (R/kg)</td>
<td>53.45</td>
<td>93.45</td>
<td>30.42</td>
<td>27.71</td>
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<tr>
<td>Open market: Class C / Baconer / Frozen whole birds (R/kg)</td>
<td>44.90</td>
<td>70.58</td>
<td>28.40</td>
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<tr>
<td>Contract: A2/A3* / Baconer/ IQF (*includes fifth quarter) (R/kg)</td>
<td>53.25</td>
<td>92.60</td>
<td>-</td>
<td>26.60</td>
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<tr>
<td>Import parity price (R/kg)</td>
<td>41.64</td>
<td>87.89</td>
<td>32.86</td>
<td>25.57</td>
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<tr>
<td>Weaner Calves / Feeder Lambs (R/kg)</td>
<td>37.96</td>
<td>48.08</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**FNB: 2021/06/23**
IV. SADC REGION

The Famine Early Warning Systems Network (FEWS NET) report issued in May states that in Southern Madagascar, due to the consecutive droughts and poor early harvests, Crisis (IPC Phase 3) outcomes are ongoing due to a severe extended 2020/21 lean season. Despite the harvest and increased labor opportunities driving some seasonal improvements, Crisis (IPC Phase 3) outcomes are expected to persist through at least September 2021. In the rest of the region, the ongoing favourable 2021 harvest is improving access to own foods for most households in Zimbabwe, Malawi, Lesotho, and most parts of Mozambique. As a result, widespread Stressed (IPC Phase 2) and Minimal (IPC Phase 1) outcomes are ongoing among most households. Conflict in Cabo Delgado in Mozambique and Ituri, Tanganyika, and Kassai Provinces of DRC continues to affect households’ access to food and disrupt livelihood activities. In these areas, agricultural activities are limited, with many activities affected by banditry, driving a low harvest for many displaced households. According to UNHCR, over 700,000 people have been displaced to Cabo Delgado, Nampula, Niassa, Sofala, and Zambezia. This does not account for those who fled to Tanzania and are now being systematically returned to Mozambique. Households that are displaced and affected by conflict in these areas are expected to continue to experience Crisis (IPC Phase 3) outcomes.

FEWS NET further indicated that household access to cash income is expected to improve through May and August as households across most parts of the region where production improved engagement in harvesting labor. In addition, poor households are also expected to benefit from in-kind payments as better-off households are likely to seasonally increase payment to labourers. With the average to above-average water availability enhanced by above-average rainfall and production, gardening activities are also expected to start soon and provide additional income to poor households for other livelihood expenditures. Regional staple supplies are expected to be above-average across much of Southern Africa. Average to above-average production in Malawi, Zimbabwe, Lesotho, Zambia, and South Africa will likely drive the decline in staple food prices with prices likely to be lower than in 2020 across the region. In Malawi, March maize grain prices were up to 50 percent below last year and up to 30 percent below the five-year average. Similar trends are observed in non-conflict affected areas of Mozambique, where maize grain prices decreased by 11 to 46 percent lower than their respective 2020 prices. This is expected to improve household access to staple foods on the market.

[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](http://www.fews.net/southern-africa)

Summary of the reports

The winter rainfall areas and parts of the Eastern Cape received normal to above-normal rainfall in May. Veld and livestock conditions are generally reasonable. Winter crops are being planted, while in other areas planting has been completed. There were veld fires in KwaZulu-Natal, North West and Free State. Foot and Mouth disease was reported in KwaZulu-Natal. In the Free State avian influenza outbreak was reported and affected farms quarantined; also brown locust swarms were successfully controlled. The average level of major dams has increased as compared to the 2020 level. Over SADC, Crisis (IPC Phase 3) outcomes are ongoing due to a severe extended 2020/21 lean season.
V. MONTHLY CLIMATE OUTLOOK

Seasonal Climate Watch: July to November 2021

State of Climate Drivers
The El-Nino Southern Oscillation (ENSO) is currently in a neutral state and the forecast indicates that it will most likely remain in a neutral state for the remainder of the winter and most of spring. The influence of ENSO on South Africa is however very limited during the winter season and is not expected to have a major impact on the southern African weather systems on a seasonal time scale at this time.

Figure 1 – Rainfall

The multi-model rainfall forecast indicates mostly above-normal rainfall during the late-winter season (Jul-Aug-Sep), notably however there are below-normal rainfall expectations over the southern coastal areas for late winter as well. During early- and mid-spring however, mostly below-normal rainfall is expected over most of the country including the southern and eastern coastal areas that receive significant rainfall during this time.
Figure 2 – Minimum and Maximum temperatures

Minimum

Expected Min Temp Conditions for JAS 2021
Issued: Jun 2021

Expected Min Temp Conditions for ASO 2021
Issued: Jun 2021

Expected Min Temp Conditions for SON 2021
Issued: Jun 2021

Maximum

Expected Max Temp Conditions for JAS 2021
Issued: Jun 2021

Expected Max Temp Conditions for ASO 2021
Issued: Jun 2021

Expected Max Temp Conditions for SON 2021
Issued: Jun 2021
Above-normal minimum and maximum temperatures are expected across the country.

In summary, mostly above-normal rainfall is expected during late-winter but there are below-normal rainfall expectations over the southern coastal areas for late winter as well. During early- and mid-spring, mostly below-normal rainfall is expected over most of the country. Temperatures are anticipated to be above-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 fruits tree 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 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:
  o Through ploughing, grading, other earth movement.
• Use of herbicides.
• Use animals to overgraze specifically to minimise fuel.
• Strategic placement of burned areas,
  o 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.
  o Sow grass.
  o 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. 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, e.g. Furrows and tillage ridges can trap loose soil.
- Farm along contours as this reduces slope lengths.
- Prevent overgrazing.
- Practice conservation farming e.g. Maximize retention of crop residues.

I. Cold spells (snowfall & 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.

The majority of winter rainfall areas have received some rain in May. Mostly above-normal rainfall is expected during late-winter but there are below-normal rainfall expectations over the southern coastal areas for late winter as well. Temperatures are expected to be above normal countrywide. The veld and livestock conditions are generally in reasonable condition. However, farmers are still advised to keep livestock in balance with the available grazing and provide additional feed such as relevant licks. They should also provide enough water points on the farms as well as shelter during bad weather conditions.

Winter crop farmers in areas that have not been receiving rain for some time should wait for sufficient rain before planting and stay within the normal planting window. Although above normal rainfall is anticipated in winter rainfall areas, soil moisture and some dam levels are low, and not all areas might receive the expected above normal rainfall. Therefore farmers are 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. Irrigation farmers should reduce the planting area in line with water restrictions in their areas. Farmers must continually conserve resources in accordance with the Conservation of Agricultural Resources Act 1983, (Act No. 43 of 1983). All farmers should follow the weather and climate forecasts regularly so as to make informed decisions.

Conditions are conducive for veld fires in summer rainfall areas due to the high fuel load as a result of rains received during summer. Therefore, construction and maintenance of fire belts should be prioritized as well as adherence to veld fire warnings. Although above normal temperatures are expected, episodes of cold spells and localized flooding resulting from frontal systems are likely to continue and measures should be in place. Farmers are encouraged to implement strategies 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:-

<table>
<thead>
<tr>
<th>DALRRD, Directorate: Climate Change and Disaster Risk Reduction</th>
<th>SAWS: South African Weather Service</th>
<th>ARC: Institute for Soil, Climate and Water</th>
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</thead>
<tbody>
<tr>
<td>Private Bag X250 Pretoria 0001 Tel: 012 319 6775/ 6794 Email: <a href="mailto:MittaA@Dalrrd.gov.za">MittaA@Dalrrd.gov.za</a></td>
<td>Private Bag X097 Pretoria 0001 Tel: 012 367 6000 Fax: 012 367 6200 <a href="http://www.weathersa.co.za">http://www.weathersa.co.za</a></td>
<td>Private Bag X79 Pretoria 0001 Tel: 012 310 2500 Fax: 012 323 1157 Email: <a href="mailto:iscwinfo@arc.agric.za">iscwinfo@arc.agric.za</a>, <a href="http://www.arc.agric.za">http://www.arc.agric.za</a></td>
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