

The South African Weather Service: Warning Products and Services

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Current forecast and warning products: Public Alerts

1 - 3 days in Advance

Watches and Warnings

- Gale force winds and stronger
- Heavy rain
- Heavy rain leading to flash flooding
- Localised urban flooding
- Disruptive snowfalls
- Severe thunderstorms
- High seas

Any amount of rain that could lead to the flooding of small streams as guided by the SAFFG/SARFFG system or other reliable information

Warning: Within three hours from time of forecast

Watch : Beyond 3 hours from time of forecast

Up to 5 days in Advance

Special Weather Advisory

- **Category 1:**
 - Widespread adverse cyclonic conditions
- **Category 2:**
 - Extremely hot conditions
 - High discomfort values
 - Heat wave
 - Snowfalls
 - Strong winds over the interior
 - Frost
 - Reduced visibility

Issued in collaboration with other institutions

Specialised Collaborative warnings

- Fire danger rating
- Tsunami
- Storm surges
- Estuary flooding

Current forecast and warning products: Public Alerts

	Severe Weather Alert Levels			
	GREEN	YELLOW	AMBER	RED
Alert Category	No alert	Advisory	Watch	Warning
Awareness level for disaster management and public	None expected	Be aware	Be prepared	Take action
Risk	No adverse weather is expected	A risk that widespread adverse weather conditions may occur	Moderate risk that adverse weather conditions will occur	Very high risk, about to happen, or already happening
Impact		A risk of some damage to infrastructure and local disruption, dangerous to people and small communities	Moderate risk of some damage to infrastructure and local disruption, dangerous to people and small communities	High risk of some damage to infrastructure and local disruption, dangerous to people and small communities
Advice		Be alert and follow the latest weather forecasts.	Be vigilant and follow the latest weather forecasts.	Be extra vigilant of dangerous conditions and follow the advice given by authorities.
Typical forecaster confidence of event occurring	Very low <20%	Low >20% Moderate >40% to high	Low >20% Moderate to high >40%	Very high >80%

	Lead time	Alert Category		
Severe weather alerts	> 3 days	Nil	Advisory	
	2-3 days	Nil	Advisory	Watch
	24 hours	Nil	Watch	Warning

Dissemination and End Users

- **Severe weather bulletins issued by SAWS:**

- SMS
- Email
- Common Alert Protocol (CAP) messages
- SAWS website

The screenshot shows the South African Weather Service website interface. At the top, there are tabs for 'Hazard', 'Alert Level', 'Valid From (SAST)', and 'Valid To (SAST)'. A map of South Africa is displayed with color-coded regions indicating different weather hazards. A legend on the right side of the map lists the following hazards: Damaging Winds, Heavy rain, Flooding, Snow, and Veld Fire Conditions. Below the map, there is a section titled 'Warnings' which includes a 'Warning Reports' section. This section provides detailed information about specific weather events, such as 'Damaging Winds' (Gale force NW winds of 70-80km/hr), 'Flooding' (Heavy rain leading to localised flooding), 'Heavy rain' (Heavy rain leading to localised flooding), and 'Snow' (Disruptive snowfalls). The website also features a search bar, a mobile weather forecast section, and a navigation menu with links to 'Warnings', 'Forecast', 'Observations', 'Climate', 'News & Events', 'Product and Services', 'Corporate', 'FAQ', and 'Contact Us'.

Dissemination and End Users

- **End Users:**

- Disaster Management structures
- Councilors and Tribal Chiefs
- Emergency Services
- Police
- Traffic and Response Agencies
- Media
- Members of the public
- Separate Report issued for insurance companies (different criteria)

Weaknesses and Gaps

- Radar coverage
 - Not all areas covered and regular problems with various radars, thus difficult to issue warnings for severe thunderstorms
 - Satellite assists in some areas
- The SARFFG system
 - Not always affective for all areas – areas with stratiform rainfall
 - Not all forecasters have thorough understanding of the SARFFG system and have little confidence in the system
- Lack of upper air ascents
- Message to end user not always reached
 - Communication errors



Thank You