

Dear Ms Madubela

**Comments on "Strengthening of the work of the Weather Service through the South African Weather Service Amendment Bill, 2011"**

I am an atmospheric modelling specialist, with more than 10 years of experience of working in the field of the atmospheric sciences in South Africa. I would hereby like to, in my private capacity, comment on the South African Weather Service (SAWS) Amendment Act.

The SAWS Amendment Act proposes severe penalties for institutions or individuals other than SAWS that issue severe weather warnings. Whilst the maximum penalties listed in this regard seem excessive, a fundamental shortcoming of the Act is its failure to define the concept of a "severe weather warning".

If the SAWS Act is to limit the authority of issuing severe weather warnings to SAWS, as it currently does, I would like to propose that the concept of a "severe weather warning" is explicitly defined in the Act. I would suggest the following definition, that is consistent with the list of weather related warnings that SAWS currently issues and disseminates through the SABC television and radio stations:

"A severe weather warning is a statement related to short-range weather forecasts (forecasts less than 3 days into the future), indicating that there is a likelihood for one or more of the following to occur:

- Heavy falls of rain (more than 50 mm of rain falling within 24 hours at a particular location);
- Severe thunderstorms;
- Veld/forest fire danger;
- High levels of discomfort (related to high levels of temperature and humidity);
- Rough seas and high swells (stating certain thresholds of wind waves or swell being exceeded);
- Conditions of severe cold;
- Damaging winds.

It should be stated clearly that private companies, research institutions and tertiary institutions in South Africa that issue independent weather forecasts are not prohibited of doing so – they are however prohibited from issuing any of the listed severe weather warnings. The weather forecasts that eTV currently issues are an excellent example. Although eTV present their independent forecasts of rainfall and temperature patterns over the next few days, the weather warnings they issue are those obtained from SAWS, and they state clearly that it is SAWS that has issued the relevant warnings.

The act will have to provide very explicit guidance in regarding the limitations placed on the weather forecasting products issued by private companies, research institutions and tertiary institutions in South Africa. For example, an independent forecast institution should be allowed to issue (for example) a map of forecast rainfall over the next 24 hours. On such a map, there may be regions for which it is forecast that more than 50 mm of rainfall is to occur. However, it is only SAWS that is allowed to issue an official warning of the likelihood of heavy falls of rain to occur.

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It is my opinion that the private companies, research institutions and tertiary institutions in South Africa that do issue independent forecasts are making value contributions in this regard. The private companies function to address the weather forecasting needs of the South African public and economy that are not sufficiently addressed by SAWS, thereby contribution to a healthy and competitive environment for the industry of weather forecasting. The operations of such independent companies should not be restricted in any way. The weather forecasting activities of research and tertiary institutions are largely for research purposes, and function to improve the accuracy the accuracy and skill of weather forecasts over South Africa –also of the forecasts issued by SAWS.

In fact, whether SAWS should indeed have a monopoly on issuing weather warnings is an issue that deserves some debate in its own right. My opinion is that the South African public should have the right to listen to severe weather warnings issued by any forecasting company that employ trained and accredited meteorologists. This, however, will require the existing SAWS Act to be changed, and not only the SAWS Amendment Act.

I don't think that SAWS has the capacity to issue many types of weather related warnings, or are currently failing to warn against certain types of dangerous weather conditions. Two examples in this regard are real-time warnings (nowcasting) of the occurrence of tornadoes, and the warnings of dangerously high levels of UV radiation exposure. These gaps may be efficiently addressed by private forecasting companies. I don't think that companies with the skill to issue such warnings should be prevented to do so.

Finally, the SAWS Amendment Act also specifies that warnings of dangerous air pollution conditions may only be issued by SAWS. I strongly doubt if SAWS has the capacity and infrastructure to competently deal with this responsibility. However, there are a number of private air quality forecasting companies, situated strategically across the country, that with their local observational and modelling infrastructure and expertise can more competently issue such warnings. These companies typically work in close association with the major pollution emitters in the country – ESKOM and SASOL. Such companies should not be prevented from using their forecasting skill and capacity to the benefit of all South Africans.

Yours faithfully

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