

**Are we disabling climate science in southern Africa
? – a brief consideration of the draft South African
Weather Service Amendment Bill'**

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Abstract

On the 2nd of November, 2011, South Africa's Minister of Water and Environmental Affairs tabled the draft South African Weather Service Amendment Bill to the National Assembly. After the period for written comment closed, in January 2012, submissions from both individuals and organizations were made to Parliament's Portfolio Committee on Water and Environmental Affairs, initiating a period of lively debate in mainstream and social media communities – resulting (in part) in the bill being withdrawn in July 2012. The bill, in its original form, included a clause that would effectively impel organizations and individuals to obtain written permission from the South African Weather Service prior to disseminating a 'severe weather warning'; with proposed sanctions should this not occur. The draft bill had further key implications for access to both climate and air quality data (amongst others) for scientists and partners in South and southern Africa, as well as their international partners. In this commentary article, I propose that legislation such as the draft bill risks creating an environment that disables climate science. Rather, on a continent where concerns regarding vulnerability to climatic hazards are on the increase, we should be supporting a policy environment that truly enables the climate science community. Using the United States experience as a comparison, and existing regional science initiatives in the SADC region as a departure point, the article makes a series of recommendations in this regard, while being sensitive to the original motivations behind the draft bill, as well as its current revised form.

Keywords: climate, southern Africa, policy, commercialization

Introduction

Concern regarding the vulnerability of the southern African subcontinent to climatic hazards is on the increase. A number of so-called ‘regional science initiatives’ have been and are being put in place to provide a more robust scientific basis for national and regional climate strategy and policy. The increasing value of climate services, and certain shifts of National Meteorological and Hydrological Services (NMHSs) to accommodate this, complicates such initiatives, however, and rather than enabling climate science in the region, is likely to impede healthy collaboration and collegiality.

The draft South African Weather Service (SAWS) Amendment Bill, proposed and withdrawn in July 2012 (and recently released in revised form), is here presented as an example of the complications and challenges inherent in the shifting of NMHS roles as climate services increase in commercial (and other) value. The case of the United States is presented, where partnerships have evolved rather differently, with lessons for the southern African experience. Finally, the article provides selected recommendations for a more enabling environment for climate science in the region.

The evolution of the South African Weather Service Amendment Bill

On the 2nd of November, 2011, the Minister of Water and Environmental Affairs in South Africa tabled the draft South African Weather Service Amendment Bill, with a period of public comment closing in January 2012. Written submissions were invited from both individuals and organizations to the Portfolio Committee on Water and Environment; and oral submissions were subsequently taken in Parliament.

The draft bill initiated months of strenuous debate, in the media, in Parliament itself, and on social networking platforms. Several legal challenges were made to the bill (including that of ETV, a private television channel in South Africa, that provides a separate forecasting service) and the bill’s withdrawal was gazetted in July of 2012

(Yeld 2012). The bill's evolution, as well as the tenor of submissions to Parliament and subsequent debate, provides us with a cautionary example of how such a policy may risk disabling climate science in a country, and in a broader region.

In the original draft of the bill, clause 1b effectively prohibited publication, distribution or supply of 'false or misleading' information about SAWS, with accordant penalties (SAPA 2012). Further, non SAWS stakeholders, in the original draft, would not have been able to distribute severe weather or air quality warnings without written permission from SAWS. Although the stated explanation for the inclusion of these restrictions was given as SAWS's concern regarding the dissemination of faulty or 'hoax' warnings, some stakeholders considered the proposed bill as supporting SAWS's partial move to commercialization, and a need for increased control of competition.

A number of submissions were made by private weather and climate services, largely focusing on the extent to which the unrevised bill would be anti-competitive. Stakeholders proposed that hoax or erroneous warnings are of far lesser concern than indicated by SAWS in its justification for the bill; and that, were there to be genuine concern, legislation would not be the best route of control. A range of scientists in both oral and written submissions further observed that the bill, if passed in its current form would significantly affect research and access to weather/climate and air quality data, possibly violating SAWS's compliance with Resolution 40 of the World Meteorological Organisation.

During and after Portfolio committee hearings, a series of recommendations were made to amend the bill, in consideration of the above concerns. Such amendments included the recommendation by the Portfolio Committee chair that a review mechanism be provided to ensure that cases against so-called offenders are truly legitimate (SAPA 2012). In addition, clauses that could limit or criminalize the activities of private and semi-private weather and climate services were recommended to undergo serious review. After the withdrawal of the

bill, in July 2012, redrafting commenced for eventual resubmission to the South African parliament.

Resubmission and re-review is now, as of June 2013, under way.

Can we learn from the contrasting experience of the United States ?

The experience of climate and weather services and allied partners in the United States has evolved in markedly different ways to South Africa, and, with a longer history of discussion and critique, provides an opportunity to consider alternative paths in this area. In contrast to South Africa, private weather and climate services have a long history in the United States, beginning effectively after World War 2, with the return to non-military life of a number of military meteorologists (Pielke 2003).

As a result, as early as 1948, the American Meteorological Society indicated that the relationship between the then Weather Bureau and the private meteorology community needed to be “clarified” (Pielke 2003, 117).

Over the subsequent decades, a series of discussions and negotiations around the nature of this relationship took place. By the late 20th century, despite (or perhaps because of) such debates and several policy statements, roles and responsibilities of the National Weather Service, the private climate and weather service community, and other key stakeholders continue to dynamically evolve.

The scope of discussion in the United States differs from the situation in South Africa in a number of key ways. Firstly, the far earlier emergence of a private weather and climate service provider community has meant that the private weather and climate service provider community in the United States is recognized as a significant stakeholder – far more so, given the tenor of discussions around the proposed bill described in the previous section, than in South Africa.

Further, the US has for far longer engaged in formal and informal discussions around the role of the academic community, parastatal stakeholders and non NMHS government in the provision of climate and weather services – where these discussions are really only beginning in South Africa. Morss and Hooke (2005), while

observing that some of these partnerships are under increasing strain as weather and climate information increases in commercial value, explicitly place some of these debates within the context of the commercialization of academic and scientific research, drawing lessons from the experience of biotechnology. As a small set of examples, the cases of Accuvue, Wunderground (acquired in mid 2012 by the Weather Channel) and UCAR all raise a number of issues around how weather and climate services may emerge from a government and/or academic setting, and how the move into the commercial arena may evolve, as well as the conflicts that may arise. This, then, clearly constitutes an imperfect, yet improved enabling environment for climate science – with accordant lessons for the South and southern African experience.

Anticipated challenges to regional science initiatives

In recent years, a number of regional climate science initiatives in southern Africa have emerged, recognizing that the Southern African Development Community (SADC) approach to climate change requires regional coordination, in addition to national approaches. Selected examples here include the Applied Centre for Climate and Earth Systems Science (ACCESS); and the Southern African Science Service Centre for Climate Change and Adaptive Land Use (SASSCAL). In both cases, programmes include key climate change components, and have member country NMHSs as partners.

SADC NMHSs have, for some years, been discussing data access, and the commercial application of such data, as well as forecasting techniques – usually at fora such as the Southern African Regional Climate Outlook Forum (SARCOF). With the introduction of the draft South African Weather Service Amendment Bill, southern African NMHSs had been closely observing the process. Should elements of the SAWS Amendment Bill have been successful, it would have effectively set a precedent for other southern African countries.

In contrast, however, the types of regional science initiatives detailed above are highly reliant on open meteorological data access, on close relationships between research scientists and NMHSs and on an enabling environment being created for innovation in weather/climate science, such that advances may be made. Pielke

(2003) observes that the increasing value of weather/climate services may endanger essential collegiality between these types of stakeholders, and the move demonstrated by the South African case poses a critical challenge to regional science initiatives.

Moving forward: enabling climate science in southern Africa

The experience of the US, with, of course, its own limitations, provides clear lessons for the southern African experience in enabling climate science. Firstly, commercial and academic application of climate and weather data and services is recognized, with none of the penalties or barriers to use envisaged in the draft bill described here. Secondly, non NMHS providers of weather and climate services have a far more prominent role to play as stakeholders in the discussion around all aspects of service provision – a development that would serve the southern African regional climate and weather science community well. As the subcontinent receives increasing investment to enable climate and weather science; a move away from the environment for provision of such represented by the SAWS proposal of 2011 is not merely desirable, but essential.

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References

- Morss R E and Hooke W H 2005 The Outlook for US Meteorological Research in a Commercializing World: Fair, Early but Clouds Moving In ? *Bulletin of the American Meteorological Society* 86(7) 921 – 936
- Pielke R Jr, 2003 Public-Private Provision of Weather and Climate Services: Defining the Policy Problem *Fair Weather: Effective Partnerships in Weather and Climate Services*, BESR, BASC & NRC, National Academy Press, Washington D.C
- SAPA 2012 *Committee debates weather bill*. News24, February 14th , 2012
- Yeld J 2012 *Controversial weather bill canned*. Cape Argus, August