

DISCUSSION PAPER FOR DROUGHT DIALOGUE AT ELSENBURG – 23 AND 24 MAY 2016

Lessons on Drought in South Africa

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Dear Organizers, Ladies and Gentlemen

Thank you for the opportunity to address you on a discussion and on a controversial matter, which can have more than one answer. My apology for not being here in person, due to a health disorder. I hope, this document, which only allows for a small portion on what influence perceptions on the item under discussion, presented on my behalf, will be useful.

Drought is a major feature of all climates on earth and often has a devastating impact. Drought is a condition of climatic dryness that is severe enough to reduce soil moisture and water levels below the minimum necessary for sustaining plant, animal, and economic systems. Drought is different from the rapid-onset environmental hazards. It is called a 'creeping' hazard because droughts develop slowly and have a prolonged existence, sometimes over several years. Unlike earthquakes or floods, droughts are not constrained to a particular tectonic or topographic setting, so their impact can extend over very extensive areas. Thus, drought has similarities to large-scale context hazards.

Drought the “wicked” problem

In an article “Drought – ‘moving mountains’ in search of solutions to a persistent, ‘wicked’ problem!” (Vogel and van Zyl, 2015), wrote, that the world is being buffeted by a range of ‘wicked problems or challenges’ including poverty, environmental degradation and climate change (Rittel and Webber, 1973). Wicked challenges are described as those that are usually linked to public policy issues with one of the key problems being able to precisely ‘frame’ a wicked problem (Rittel and Webber, 1973). Wicked problems or challenges, as defined by Rittel and Webber (1973) decades ago, usually have no stopping, there are limited criteria for understanding the problem and there are no clear links to the causal links in the system – finding discreet solutions to problems is usually time consuming; solutions to wicked problems are also not ‘true’ or ‘false’; there is no immediate or ultimate test of a solution to a wicked problem and

every solution to a wicked problem is a “one shot operation” (Rittel and Webber, 1973, page 163).

Drought the phenomenon

Drought as a phenomenon shares many of the attributes of a ‘wicked challenge’. Drought is proving to be a persistent challenge in parts of the USA (e.g. California); parts of Brazil (e.g. Sao Paulo) and also in South Africa.

Looking back, for example, drought in 1804, was noted to have resulted in severe water stress particularly for “boere” in the northern frontier areas. From 1813 onwards, drought spells were more frequently recorded and huge losses of livestock were reported, with certain areas severely impacted. Farmers in the “Sneeuberge”, for example, experienced the drought as:

... “de Hemel is koper en die aarde enkel dorheid, wy weten niet waar ons vee van levenindien er een regen mogte komen vergezeld van swaarde koude gelyk als het passeerde jaar 1812, dan staan wy te vrezen dat er weer enige honderd duizend schapen en beesten uit het leven gerukt worden, want de beknoptheid van de veeplaatsen veroorzaakt ons dezen rampen ” (extracts from Van Der Merwe as cited in Republic of South Africa, 1968, page 4).

In the Graaff Reinet area, for example, 300 000 sheep were reported to have died in 1813, with losses greater than in 1812.

What is also important that the Colonial Secretary Stockenstrom of the then Colonial Government stated in 1825 “that the main causes of the prevailing state of emergency must be sought in the fragmentation of land which enabled everyone to become an insignificant, but independent, extensive stock farmer. Again the subdivision of farming units posed a serious problem, which exacerbates the drought situation.” (*Source – Interim Report of the Commission of Enquiry into Agriculture, 1968, page 8*).

From 1834 to 1838 reports on drought conditions were reported with 1835 and 1836 as being the most difficult years. During the years 1817 to 1829 Stockenstrom acknowledge that on account of the deteriorating of grazing an scarcity of water, it will be necessary for farmers to move their livestock over the Orange River (now the Gariiep River) where grazing and water was available, in order to save their livestock

from dying. (Source – *Interim Report of the Commission of Enquiry into Agriculture, 1968, page 4*).

During the thirty-five years ended in 1938, there were thirty years in which parts of the Union, varying in extent from 1 to 87 per cent of the area of the Union, experienced drought conditions. On eight occasions, the areas affected by droughts equalled or exceeded 50 per cent of the area of the Union, and on twenty occasions the area affected equalled or exceeded 20 per cent of that of the Union (Levinkind, 1941, page 85).

The drought spells of the 1960s and 1980s emerge as key periods of persistent drought spells in the latter half of the 19th century. Other devastating droughts included those ending in March 1933, that of the late 1960s and the early 1970s (Bruwer, 1989).

The drought of the early 1990s is thus remarkable not only because it brought the debt crisis to a head, but also because it came at a time when the political dispensation was such, that the country was undergoing a major political shift, moving from an apartheid regime to a more democratic dispensation. The droughts of the 1980s and 1990s also came at a time when the macro-economic environment was largely negative for farmers, both maize and livestock, (NAMPO, 1993). The call therefore for a widening of drought response and policy also came at a time when the international disaster risk reduction was also calling for more proactive, risk-reduction approaches.

South Africa has long been recognized as a country subjected to recurring droughts, as the 1923 final report of the Drought Investigating Commission remains a classic publication on the subject, while the great droughts of the 1930s, which coincided with the Great Depression, have been the local drought benchmark for decades (Bruwer, 1990). This led to the conclusion that drought is a persistent feature of South Africa and the wider region as defined by the Intergovernmental Panel on Climate Change (IPCC, 2007, Working Group 1, Chapter 11).

Analysing drought

By analysing drought over time, it illustrates that a persistent failure to fully examine and assess institutional, government responses and approaches to drought, including a serious 'reflection' and 'learning' in drought risk response, as one of the fundamental

oversights of effectively reducing risks to drought in South Africa. Few have interrogated the role of institutions across scales, particularly their effectiveness in reducing drought impacts and more importantly the causes of drought vulnerability. Furthermore few efforts, however, have been made to assess how adaptation responses may be better integrated into disaster risk responses, how institutional responses can be made more timely, flexible and better connected to realities on the ground and how we can better learn from past drought efforts so as to enhance overall resilience to future drought risks.

Periods of subsidies and “bail outs”, have been common interventions in drought-risk reduction practice, and given the financial crises at present, these types of approaches, suggest, require even more scrutiny as we try to examine what it may take to build ‘drought resistant capacity’ (a term already used in the 1920s, Union of South Africa, 1922, Interim Drought Report, Introduction) in a region of the world also expected to be buffeted by droughts in future (IPCC, 2007).

At the same time, calls for more robust and resilient approaches to various environmental changes, including finding ways to be more adaptive to climate change have also been made by various scholars and policy makers (e.g. Department of Science and Technology, South Africa, Global Change Grand Challenge documents).

Drought response and intervention in South Africa, particularly for white, commercial farmers, has also been strongly influenced by a dominant biophysical science and socio-political focus [(e.g., land care, soil conservation, and rainfall are often used as indicators of drought impacts; see Union of South Africa (1914, 1926)]. The seminal drought report in South Africa (Union of South Africa, 1923) was very influential in shaping such a drought response for many years. Driven by the then Chairman du Toit (see, e.g. Beinart’s, 2003, in-depth assessment of the role of du Toit in shaping drought policy), much of the early drought policy was influenced by du Toit’s experiences that he had gained from studies outside South Africa, including a strong drought science of “dry land farming” and conservationist farming approaches. His focus on agricultural conservation, effective use of water, dry land farming, soils and soil conservation, influenced the thinking of the time and for many years to follow. Dryness was not so much a product of failing rains but was the result of a combination

of natural factors and failed conservation practices (e.g., overstocking), resulting in the inability of the ground to absorb water (Beinart, 2003).

The first steps to legislation

In the mid-1940s, the Soil Conservation Act of 1946 (Government of South Africa, 1946), influenced by du Toit (Beinart, 2003), ushered in a number of formal drought-related institutional arrangements, including the introduction of key soil conservation schemes by the state and financial assistance for farmers to erect soil conservation works on private farmland. This policy was aimed at combating reduced soil erosion and enabling good farming practice and included attempts for more effective drought risk reduction practices. A reciprocal approach to drought management thus was envisaged with farmers considered for drought relief if they could show they had tried to farm in sustainable ways (conservation farming).

The Department of Agriculture has long claimed that by correct land usage and the application of soil-conservation practices, the destructive effects of drought can be reduced to a minimum (Adler, 1953, page 1).

To this end, institutional arrangements dealt with the administration of an array of financial schemes (e.g. that rewarded good soil-conservation practices) and focused on the professional requirements of farmers. Of relevance here, is that although extensive investigations took place in establishing insurance schemes and proactive measures (e.g. encouraging conservation farming and good grazing practices), various practical and financial reasons usually frustrated the implementation of these goals. Assistance to farmers coupled to indicators of drought and also informed by land use practices, dependent on scientific assessments (e.g. soil and land degradation assessments and status) continued to influence drought relief for many years. The Reconstruction Committee of the Department of Agriculture and Forestry of 1943, (Union of South Africa 1943), shaped the drought response in South Africa, more particularly drawing attention to the role of science and drought management, including problems of poor land use practice and farming that heightened and aggravated drought impacts. A strong conservation approach to managing droughts persisted in several cycles of commissions, constituted by the state and began to become entrenched in various institutional structures and drought policies. The Verbeek Committee (Department of Agricultural Technical Services, 1966), the first

to call for an “institutional” body in the form of a National Drought Committee, to coordinate and maintain any form of drought relief and to try and avoid ad hoc schemes, maintained the strong “conservation” approach. Various institutional arrangements were thus made that began a process of greater and more intensive drought assessment and monitoring on a long-term basis. White commercial farmers were encouraged to farm sustainably and the state tried to use reciprocity measures to award relief and assistance.

The differences between biophysical contributions of drought and the structural causes (e.g. adverse terms of trade and rises in real interest rates) thus cannot be ignored when assessing these interventions as a ‘drought response’. Areas of concern were highlighted in Rimmer’s investigation. (Land and Agricultural Policy Centre (LAPC) (1993). He also urged for a better understanding of the ramifications between land reform and the debt relief policy.

The other areas included the role of market distortions that result through drought policies that distort land and capital markets. He urged for caution in future on input subsidies. Finally he called for a much wider drought policy that included social and economic aspects of drought.

For the future, drought policy will need to address the social and economic costs of drought induced vulnerability in a far more focused way than hitherto. (Rimmer, LAPC, 1993, page 25).

During the 1990s, a National Consultative Forum on Drought, (NCF) was established and for the first time, inputs from civil society, trade unions, organised agriculture and other sectors were included. This Forum began to focus on the ‘other’ half of the community who they suggested had been left out in previous drought considerations.

“...we have attempted to view the drought from their perspective. The primary problem is not so much a lack of water as a problem of endemic poverty” (Abrams, Short and Evans, 1992).

This view was echoed by others and the urgent need to re-examine paradigms of drought ‘management’ was called for.

“The disastrous drought of 1992, which in many areas of South Africa was the worst recorded since 1900, however, once again brought local drought policy under scrutiny

and revealed significant weaknesses in the ability of government structures to respond timeously and effectively to the disaster and reduce the impact thereof” (Walters, 1992, page 1).

The NCF on drought was comprised of various task forces including water, health and agriculture (Abrams, Short and Evans, 1992; Walters, 1992). The recommendations of the NCF (Abrams, Short and Evans, 1992) included a more transparent process for the flow of relief monies, and also called for greater recognition of community engagement and the capacity of NGOs. Of greater relevance, however, was the renewed call that had been made by others (Walters, 1992) for a national drought management strategy that would have as elements: “*A long-term infrastructural programme to provide the necessary buffer capacity to absorb drought crises more readily; An emergency reaction programme (including extensive early warning system) by means of which a crisis can be dealt with swiftly....*” (Abrams, Short and Evans, 1992, page 24).

Notwithstanding, the very clear spotlight that the NCF cast on development issues, the sentiments still remained largely locked into a reactionary mode. The benefits of this forum, however, remained that it did widen and begin to interrogate existing policies including those for a ‘sector’ that some would have argued had been ignored in previous drought policy, namely the rural poor. These developments ushered in a revised view and policy-framing agenda that lays down the guidelines for drought response.

Notwithstanding positive remarks, as well as the criticisms documented in previous paragraphs, the following from a report on the financial position of grain farmers, 2001, is worth noting:

“Die finansiële posisie van landbouprodusente in die graangebiede van die RSA is tans besig om dieselfde ontwikkelingsgang as in die tagtigs en vroeë negentigs te volg. Die regering het egter dit in 1992 met die aankondiging van die 1992 hulppakket duidelik gestel dat die staat voortaan nie weer finansiële bystand aan landbouprodusente sal verleen nie, en die regering het dié standpunt sedertdien by herhaling bevestig” (Finansiële Posisie van Kommersiële Landbouprodusente in die Graan-gebiede van die RSA. C F le Clus, Graan SA, January 2001).

The new political dispensation in 1994 saw the ‘beginning of an end of an era’ during which disaster aid, especially drought assistance was to be revised and to make way to develop a more “proactive” response to the “phenomena” of drought. It is worth noting that 1994 saw the beginning of globalisation for South Africa and pressure from the World Trade Organisation on member countries to reduce farm subsidies.

Investigations to enhance drought response began with the White Paper on Agriculture of 1995, where it states that:

“a careful and realistic assessment of the underlying risks posed and opportunities presented by the environment and the economy should therefore be made before the Government will implement a policy incentive aimed at agricultural development and marketing”.

A new era of thinking on disaster drought risk reduction

Notwithstanding the recommendations in the various commissions, much of the actual practice on the ground remains one of drought relief and response, with few notable cases of a drought risk response being implemented.

In the mid-1990s, a process triggered by changes to government, as well as several disasters, a process began which once again tried to find more proactive solutions to droughts and other disasters. A discussion document prepared by members of the Task Team on Drought and other Agricultural Disasters, became part of the process of developing a Green Paper on Disaster Risk Management. Proposals centred on institutional design and requirements for effective drought risk reduction, a renewed call for better early warning, emergency, contingency planning for cases of emergency and the call for an effective disaster risk management.

The Paper also focused on the requirements for the establishment of a National Disaster Management Centre to ensure that an effective disaster management strategy is established and implemented and to co-ordinate disaster management at various levels of government as well as the implement the Disaster Management Act, 2002 (Act 57 of 2002), followed by the National Disaster Risk Management Framework of 2005 (NDRMF). This would bring about a uniform approach to disaster management, seek to eliminate the confusion created by current legislation, regarding declarations of disasters, addressing legislative shortcomings by implementing key

policy objectives. This mandated, in terms of section 25 of the Act, that all organs of state must prepare disaster risk management plans as line functionaries. Following this mandate, the Department of Agriculture accepted the primary responsibility of drought management, while sharing responsibility within the other tiers of government, organised agriculture and the farming community.

The Agricultural Drought Management Plan (ADMP) based on the Disaster Management Act, 2002 (Act 57 of 2002), with four key performance areas, namely integrated institutional capacity/arrangements, disaster risk assessment, disaster risk reduction, and response and recovery. Three 'enablers' are also prescribed, and are seen to drive drought risk management, information management and communication, education, training, public awareness and research as well as funding arrangements. Furthermore, the Agricultural Sector Plan and the Strategic Plan of the Department of Agriculture, provided the vision and strategic objectives pertaining to drought risk management, the implementation guidelines of the plan as well as the challenges faced within the new dispensation and new approach to drought risk management. This called for a new scenario towards a comprehensive approach to drought risk management of an appropriate balance of prevention, mitigation, preparedness, response, recovery and disaster-related development.

The long-term aim of ADMP is to ensure that the agricultural sector has an effective and integrated drought management system for plant, animal husbandry and income, where the negative impacts of drought have been minimized for sustainable use of natural resources. This will be achieved through the following: the setting up a system of information management, monitoring and evaluating drought situations to detect biophysical and social vulnerabilities and inventing innovative ways to mitigate effects of drought. The establishing and implementing of priority programmes for drought risk reduction, preparedness, mitigation, response, recovery, rehabilitation and adaptation, will receive urgent attention.

This Green Paper on Disaster Risk Management therefore represents a marked departure from the existing approach to disaster management. It introduces a coherent national framework for disaster management aimed at integrating risk reduction measures into all development initiatives, in order to avoid human, economic, environment and property losses. Risk reduction is, therefore, the core principle of the

policy and is aimed at reducing the vulnerability of sectors or communities, especially the poor and disadvantaged, to disasters. This approach is in keeping with international trends (e.g. ISDR and the Hyogo Framework). It encourages greater investment in prevention and mitigation measures and overall risk reduction by both the public and private sectors. The policy signifies a shift away from the disproportionate emphasis given to rare major disasters. It seeks to include relatively smaller household and community disasters and the resulting losses borne by different sectors of society. This is of particular significance in the Southern African context, with its mixture of developed and developing economies.

The policy also addresses the importance of regional co-operation and the establishment of joint standards of practice in the Southern African region. The policy recognizes that the primary obligation for disaster management rests with government. It is mindful, however, of the need for the establishment of partnerships between government and the private sector and the sharing of responsibilities for risk reduction.

Final reflections on a history of drought risk reduction

The historical analysis of drought and drought management in South Africa clearly demonstrates that despite an apparent paradigm shift from emergency response to more holistic disaster risk and a climate risk-reduction approaches in the past few decades, the focus in drought 'management' across various governance scales has remained focussed on reactionary measures. These measures have included large investments in financial 'bail outs' and subsidies rather than developing institutional capacity and training in ensuring that drought efforts are more risk reduction in focus and also where possible, ensuring that drought efforts are linked to various developmental initiatives. The continued focus on emergency relief has discouraged local initiatives and local ownership of disaster risk.

A further outcome of protracted international assistance involves the shaping of national perceptions of disaster risk in Southern Africa. The focus on relief in Southern Africa has also led to regional disaster activities being highly reactive and extremely dependent on external initiative and financial support. Thus the international 'best practice' of linking disasters and development has not always been translated into reality in Southern Africa where externally funded relief operations continue to run in parallel to governmental programmes. This 'externalisation of disaster response' and

its division from mainstream development priorities have effectively curtailed true ownership of disaster risk reduction by South Africa (Holloway, pers. communication).

In concluding this history of drought practice, some serious questions thus still remain for both commercial and small-scale emerging farmers. Although conscious of good farming practices, issues of farm sizes, grazing capacity and the dependence on disaster aid from government during times of drought, all remain key issues. These concerns, particularly the latter, despite the fact that the new disaster management legislation calls for more proactive approaches to drought risk reduction, require further debate and investigation.

Conclusions

The burning question remains whether we have learnt anything after centuries? Although only time will tell, the following might give some thoughts for debating -

Firstly the persistent failure to fully examine and assess institutional, governance responses and approaches to drought, including a serious 'reflection' and 'learning' in drought risk response, as one of the fundamental oversights of effectively reducing risks to drought in the region. This left farmers without the necessary guidance, advice and proper structure, which have been interrogated in the role of institutions across scales, particularly their effectiveness in reducing drought impacts and more importantly the causes of drought vulnerability in Southern Africa.

Notwithstanding these deficiencies, many farmers did adhere to the calls, recommendations, advice by many commissions, researches, extension officers, through reference farms, to assist farmers to farm in a sustainable manner - "farming according to the book". However, some farmers have even made it to assess how adaptation responses may be better integrated into disaster risk responses. We ought to salute these farmers. It is worth noting that one of the oldest documents, namely the Interim Report of the Drought Investigation Commission, April 1922, page7 and Republic of South Africa, 1968, page 10), made the following conclusions:

- “(i) The practice of overstocking farms is very prevalent throughout the Union.
- (ii) Several causes are responsible therefore, among which are extreme seasonal variations and the optimism of the farmer.

- (iii) Animals on overstocked farms go into drought handicapped by a low condition, as well as little food in prospect, which circumstances lessen their chance of coming through the drought.
- (iv) The reserving of fodder for use in times of scarcity is a very unusual practice.
- (v) Overstocking leads to overgrazing and all its attendant evils.
- (vi) Largely responsible for drought losses is the almost universal practice of overstocking the farm, and a failure to make any sort of provision for the drought, which the farmer knows, will come on him sooner or later”

Secondly, periods of subsidies and ‘bail outs’, have been common interventions in drought-risk reduction practice, and given the financial crises at present, these types of approaches, led to a ‘dependency syndrome’. The ADMP was specially designed to promote risk reduction and, rather build ‘drought resistant capacity’ (a term already used in the 1920s, Union of South Africa, 1922, Interim Drought Report, Introduction) in a region of the world also expected to be buffeted by droughts in future (IPCC, 2007). Thus, although we have some knowledge of future drought scenarios, notwithstanding the lack of certainty, we have very little knowledge of future adaptive capacity. Government’s neglect to fulfil this approach and leaving farmers the option to be part of the syndrome. Many farmers due to unsustainable farming units, were in no other position than to be part of the syndrome. Droughts and the severity, as the present drought, left farmers in a serious financial predicament and even under these severe circumstance the government did not come to the party with substantial financial assistance.

Thirdly the Conservation of Agricultural Resource Act, 1993, and the structures that supported this legislation, have either been scraped or neglected severely, not only hampers the execution of the legislation, but it also erodes livelihoods and coping capacities (Benson and Clay, 1994; de Waal and Whiteside, 2003). Despite calls for better risk management approaches at all levels, it illustrates: firstly a failure to fully understand, integrate, and learn from past efforts may undermine current and future drought response: secondly state-led drought risk reduction, which remains focused on a financial “bailout” mentality, with little follow-through on proactive rather than reactive drought responses, seriously contributing to the vulnerability of the region to future drought impacts and lastly that it should talk by way of specific key themes on

how drought was management and a discussion on what lessons learned on drought risk management in Southern Africa. In this regard the government fails to assist farmers in doing the “right thing”.

Thanks to the organizers for arranging this event and ladies and gentlemen for your attention.

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