biowatch SOUTH AFRICA biodiversity | food sovereignty | agroecology | social justice
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Biowatch South Africa submission on the Draft National Climate Change Adaptation Strategy (No.644) published on the 6th of May 2019 by the Department of Environmental Affairs

Biowatch SA welcomes the development of a strategy for South Africa to respond and adapt to climate change, and the opportunity to comment on this draft.

Our submission follows below and consists of:

1. Introduction to Biowatch South Africa
2. Comments on the Draft National Climate Change Adaptation Strategy

Yours sincerely

Rose Williams
Director

1. Biowatch South Africa

Biowatch is a non-governmental organisation established in 1999, which strives for social and environmental justice within the context of food sovereignty. Biowatch works to challenge unsustainable agricultural practices and to advocate for ecologically viable alternative that safeguards people, land and the climate. This includes supporting smallholder farmers; working with civil society to create joint understanding and action; and constructively engaging with government in implementing policies and practices that promote, facilitate and actively support agroecology and farmers' rights. We have a long track record of working on policy issues concerning agriculture, biodiversity and indigenous knowledge systems. Our contribution to this draft Bill stems from this experience.

2. Comments on the Draft National Climate Change Adaptation Strategy (NCCAS)

Overview and key issues

Climate change is undoubtedly the biggest threat to humanity and life on earth that we face requiring systemic change to all aspects of human existence. Given this imperative we agree that adaptation to and mitigation of climate change are inextricably intertwined. The cyclones Idai and Kenneth following a severe drought have been a forceful reminder of the impacts of climate change we can expect in our region. We believe that bold and urgent action, within a framework of climate justice, is required to address these challenges; which is not evident in the draft NCCAS.

Two key issues stand out in this regard:

The first is water – our most precious resource in a severely water scarce country, without which human and other life in the region cannot survive. Adaptation strategies must prioritise the conservation, protection and rehabilitation of our water as a critical resource and curtail developments that over exploit or pollute our water reserves, threatening the essential needs of the majority of people and our environment in favour of profit. The NCCAS should as a priority conduct an assessment of all existing and planned developments that threaten the availability and quality of water resources - including through pollution (such as poor maintenance of infrastructure leading to sewage pollution as currently witnessed in the Vaal catchment, or fracking which pollutes water as part of routine operations); over-extraction (such as timber or sugar plantations) or threats to upper reaches of water catchments (such as coal mining in the Waterberg) to provide a framework for the implementation of restrictions or curtailment of these developments in the interests of water security.

The second is the current industrialised food system, which when looked at holistically is the major driver of climate change, contributing as much as 50% of global emissions.[1] This not only includes the on-farm emissions from soil disturbance, mechanisation, release of gases from chemical fertilisers etc., but also emissions from the conversion of natural ecosystems to monocultures; the trade in commodities aimed at export markets where agricultural produce is transported around the globe, often several times before the final food product reaches the consumer and the consequent need for refrigeration, packaging and processing; the retail sector; and methane emissions from the 30% of food that is currently wasted and landfilled.

[1] GRAIN. September 2011. *Food and climate change: the forgotten link*. Against the Grain. Accessed: http://www.grain.org/article/entries/4357- food-and-climate-change-the-forgotten-link

Not only is industrialised agriculture largely contributing to climate change, but its impacts are further compromising our ability to adapt. These include the use of 60% of freshwater resources for agricultural irrigation; water pollution; widespread degradation and loss of soil; annihilation of biodiversity compromising ecosystem functioning and resilience; and malnutrition compromising human immunity and resilience to disease.

In this regard we note that the adaptation strategy is focused entirely on Climate Smart and Conservation Agriculture practices. While Climate Smart and Conservation agricultures do promote some better practices, these do not provide the 'transformational and systemic change' (as per the key messages on p40) required of our agriculture. Their narrow focus on production, tweaking practices to be less carbon intensive often through the use of new technologies from the corporate sector (such as GM crops in conjunction with herbicides, or micro-fertiliser dosing), prevent climate smart and conservation agriculture from truly tackling the structural causes that lie behind food insecurity and climate change.

Instead the NCCAS strategy must advocate for agroecology as the key objective in transforming our agriculture to realise both adaptation to and mitigation of climate change. Agroecology can be defined as the application of ecological principles to the study, design and management of sustainable agro-ecosystems, and an agenda for the ecological, economic and social dimensions of food system change.[2]

Agroecology is recognised by the UN Food and Agricultural Organisation (FAO) which describes ten elements of agroecology that can help countries to operationalise agroecology by identifying important properties of agroecological systems and approaches, as well as key considerations in developing an enabling environment for agroecology and to plan, manage and evaluate agroecological transitions. [3]

The 2004 "*Agriculture at a Cross-roads*" report initiated by the World Bank and several UN agencies, written by 400 world experts and endorsed by 58 countries recognises agroecology as one of the ways to achieve environmental sustainability, together with improving resource efficiency; improving the understanding of soil-plant-water dynamics; increasing farm diversification; enhancing biodiversity conservation; promoting the sustainable management of livestock, forests and fisheries; improving understanding of the agroecological functioning of mosaics of crop production areas and natural habitats; countering the effects of agriculture on climate change; and mitigating the negative impacts of climate change on agriculture.[4]

Comments on sections

Page 1, time periods for review

The NCCAS is a ten-year plan with a five-year review. Is this frequent enough to respond to rapidly worsening climate scenarios? We recommend that this be shortened to an 8-year plan with review every 4 years.

Page 5, Table of vulnerability to climate change in key socio-economic sectors

Additional vulnerabilities not mentioned in the table in the agricultural sector include land degradation, water safety and quality, loss of agricultural diversity, loss of pollinator insects.

[2] For more comprehensive analysis of the definitions and need for agroecology please see the Biowatch research paper: 'Agroecology: environmental, social and economic justice' downloadable from: http://www.biowatch.org.za/docs/papers/2016/Biowatch_ResearchPaper_Agroecology_042016_web.pdf

[3] See the FAO ten elements of agroecology here: http://www.fao.org/agroecology/knowledge/10-elements/en/

[4] See http://wedocs.unep.org/handle/20.500.11822/7862

Page 6, Principles and key elements of an adaptation strategy

In general, we support the principles framing the adaptation strategy. However, we note that many of these principles are required because of a societal context of highly unequal power relations. We support a 'country-driven approach' in principle one, but whose agenda will be prioritised? For example, in a situation where a company wishes to implement a development that compromises strategic resources such as water? Or the valuing and protection of traditional knowledge and resources over climate adaptive seed varieties in the face of the corporate 'science' take-over of seed systems abetted by South African legislation protecting private interests and criminalising seed exchange? Or gender equality in rural areas where the decisions about development is likely to be taken by men. Mechanisms are needed (and missing from the Climate Change Bill as well as the NCCAS) to adjudicate between conflicting interests in a way that ensures social and environmental justice.

Strategic interventions and outcomes

Intervention and outcome 1

1.1.1
As described above we object to the focus on Climate-smart and conservation agriculture and propose that this is replaced with Agroecology as a more transformative goal.
Biowatch's concerns with Climate Smart and Conservation Agriculture are detailed in the following documents respectively (also attached):
http://www.biowatch.org.za/docs/fs/2015/Biowatch_Fact_Sheet_CSA_web.pdf
http://www.biowatch.org.za/docs/fs/2015/Biowatch_Fact_Sheet_CA_web.pdf

A resource summarising agroecological farming can be found here (and also attached):
http://www.biowatch.org.za/docs/fs/2015/Biowatch%20Fact%20Sheet_AE_FINAL%20web.pdf

1.1.2
Agroecology is inherently more efficient in the use of water as the building of soil health through the addition of organic matter (which increases the water holding capacity of soils) as well as the conservation and cycling of resources in the agricultural system are key principles of agroecology.

Water conservation technologies should not only focus on products but also practices such as contouring, swaling of land and maintaining natural habitat which also require funding and could use more appropriate small-scale equipment to facilitate implementation.

1.1.4
We are concerned by the inclusion of climate-smart approaches to ecosystem rehabilitation, which requires regeneration of functioning natural biodiverse ecosystems. The inclusion of climate-smart here opens the door for the introduction of disingenuous carbon trading schemes such as REDD+ that offset climate pollution in one part of the world with 'development' in others, or the promotion of solutions such as timber plantations instead of the generation of natural forest systems.

1.1.5
We note the escape of plantation trees from plantation and community out growers schemes that are contributing to alien invasive vegetation.

1.1.2
Research on the impacts of water availability in the forestry sector need to be accompanied with legislation that will allow the curtailment of this extension and even reclamation of plantation areas as necessary.

This type of study and legislation should not be confined to forestry but should also include other non-food agriculture such as sugar plantations, as well as other activities such as mining that threaten water resources, as discussed above.

1.1.19
This intervention should also include support for local manufacturing of products that improve access and affordability of climate resilient products as well as skilling the engineering and design industries in climate resilient design . An example is the production of porous paving and the design of water retention bunds and ponds to reduce water run-off in urban spaces.

1.1.21
The sort of projects considered to improve resilience are not defined, but these should include projects that reduce reliance on fossil fuels or fossil-fuel derived products, reduce water consumption and improve quality, localise production and consumption, apply closed-loop zero-waste production, and improve access to appropriate and small-scale technologies to enable community self-sufficiency.

Intervention and outcome 2

Early warning systems, page 14
We note that current early warning systems in the agricultural sector primarily focus on the commercial agriculture sector. Special attention needs to be paid to communication with the most vulnerable smallholder farming sector.

Early warning systems need to include public warning for localised fire and flooding.

Intervention and outcome 4
It is essential that the public actively participate in the development of sectoral plans for climate change adaptation and mitigation. It is not clear, however, how this will be facilitated especially at the strategic level. Communities are deeply impacted by climate change, but it seems that the only way to engage is through local IDPs which are processes that are not very accessible to most people. More accessible mechanisms need to input local and traditional knowledge into planning and adaptation strategies.

Intervention and outcome 5
Research agendas for climate adaptation should include the views of civil society and communities on the ground to ensure that research needs are driven by the lived experiences of impacted people, and not only technological agendas that often are driven by corporate interests. An example of this is agendas driving the incredibly expensive and as yet ineffective development of drought tolerant GM crops instead of support for participatory breeding to improve farmer varieties with proven drought tolerance.

Intervention and outcome 6
6.1.4
Agroecology must be introduced to school and tertiary education curricula, especially the training of agricultural extension officers, and the problems with the current food production system should be highlighted.

Education interventions must include re-skilling of the workforce who are currently employed in climate destructive industries for new livelihoods in a climate friendly economy.

Intervention and outcome 9

9.1
Mechanisms for involving civil society in monitoring and evaluation of interventions and progress should be included.

Page 32, Implementation framework – Indicators

In general, the indicators for implementation only speak to the number of projects implemented. This is however not guaranteed to produce positive impacts and additional qualitative indicators are needed.
The specifics of actions and related indicators are discussed under interventions above.