

The Chairperson
Portfolio Committee on Environment, Forestry and Fisheries
Parliament

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27rd May 2022

SUBMISSION ON THE CLIMATE CHANGE BILL [B 9—2022]

This submission is made jointly by [SAOSO](#) (South African Organic Sector Organisation) and [Unpoison](#), a civil society collective made up of multi-sector organisations, educational institutions, NPO's, researchers, advocacy groups, communities, environmental practitioners, scientists, doctors, and concerned citizens, committed to a sustainable, healthy, clean, safe, just and thriving agricultural sector; a healthy food system, and a food secure future for all South Africans. This submission, while addressing the climate crisis in general will focus on the agriculture sector and agricultural chemicals.

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EXECUTIVE SUMMARY

In its present form the Climate Change Bill has insufficient criteria guiding administrative action to ensure that the necessary reforms are undertaken in the various government departments and the sectors that they manage, to ensure that South Africa's climate objectives are met as set out in the Bill.

Our concern relates particularly to the agricultural sector, which unlike other sectors is both critically vulnerable to climate change, AND one of the most significant contributors to global carbon emissions. It also holds the key to climate adaptation and mitigation through the very high soil carbon sequestration rates achievable via proven agricultural methods including agroecological, organic and regenerative agriculture.

We urge the legislation drafters to add the necessary principles and imperatives to the wording of the bill to ensure that the future Abatement and Emissions strategies will properly reflect the role each sector must play in addressing the climate crisis. Our comment is focused on agriculture to highlight the need for the Climate Change Bill to include these guiding criteria, principles, and imperatives in this sector.

Introduction

“Climate change is having a growing impact on the African continent, hitting the most vulnerable hardest, and contributing to food insecurity, population displacement and stress on water resources. In recent months we have seen devastating floods, an invasion of desert locusts and now face the looming spectre of drought because of a La Niña event. The human and economic toll has been aggravated by the COVID-19 pandemic,”¹

1. South Africa has committed itself to various reductions in greenhouse gas emissions, known as Nationally Determined Contributions under the UNFCCC. The Bill seeks to create measures which will ensure the attainment of these undertakings.² It is submitted that the Bill is deficient in several key respects which will make the achievements of its objectives uncertain. In the agriculture sector we make certain recommendations aimed to ensure that the State in implementing the Bill will achieve its objectives which are broadly:

To enable the development of an effective climate change response and a long-term, just transition to a low-carbon and climate-resilient economy and society for South Africa in the context of sustainable development; and to provide for matters connected therewith.³

¹Ovais Sarmad, Deputy Executive Secretary, UN Climate Change.27 October 2020
<https://unfccc.int/news/climate-change-is-an-increasing-threat-to-africa>

² Climate Change Bill Clause 2(e)

³ Id - Preamble

2. We endorse the general criticisms by environmental and civil society organisations⁴ as to the deficiencies in the Bill in general which include:

- Reliance on outdated 2015 Nationally Determined Contributions under the UNFCCC whereas South Africa's Cabinet last year significantly increased these targets under the country's climate action plan.
- Extremely weak provisions for compliance and enforcement, making the Bill ineffective.
- Critical mitigation measures such as determining an emissions trajectory and allocating carbon budgets and establishing sectoral emission targets have no deadlines.
- Time frames do not reflect the degree of urgency of the climate crisis. Sectors identified including energy, agriculture, transport, water and sanitation and human settlements are given four years after promulgation to come up with sector adaptation strategies and plans, and municipalities and provinces have five years to develop and implement climate change response implementation plans after the Act comes into operation.
- The burden of implementation falls to a significant extent on provincial and municipal government. This includes assessment of climate change needs and creation of climate response implementation plans to cover both adaptation and mitigation. It is not clear how local government will finance and resource its commitments under the Bill and provision should be made for expertise, for capacity building and financial support of local authorities.⁵

Agriculture and Climate Change

3. Agriculture is a significant contributor to climate change and will be significantly affected by climate change, putting the lives and livelihoods of millions of vulnerable and disadvantaged people globally and in South Africa at risk. Agriculture contributes to the emission of climate change gases through land clearing, tilling the soil, the use of fertilizers, pesticides, livestock emissions, and the energy consumption of various mechanised processes.

- The importance of addressing climate change in the agricultural, forestry and land use sectors is a matter of the most pressing importance:

⁴ Centre For Environmental Rights, Just Share And Greenpeace Africa : See "Climate Change Bill: 'One Of The Most Important Draft Laws To Cross The Desks of SA Lawmakers'" – Mail And Guardian, Sheree Bega 19 May 2022; <https://Mg.Co.Za/Environment/2022-05-19-Climate-Change-Bill-One-Of-The-Most-Important-Draft-Laws-To-Cross-The-Desks-Of-Sas-Lawmakers/>; <https://cer.org.za/news/cer-welcomes-progress-of-climate-bill-in-parliament-calls-for-robust-climate-law>; <https://www.iol.co.za/capeargus/news/environmental-groups-unpack-the-climate-change-bill-to-assist-all-to-make-informed-comment-42747d1e-fcb3-424d-810a-ab0f541ba33b>

⁵ <https://cer.org.za/news/cer-welcomes-progress-of-climate-bill-in-parliament-calls-for-robust-climate-law>

“We also know that land-based human activities, such as forest clearing and unsustainable agricultural practices, are not only increasing GHG emissions from these sources, but are also reducing the earth’s natural ability to absorb GHGs. **The evidence that current global warming is due to human activities associated with industrialisation and modern agriculture is overwhelming...**⁶

Climate change significantly impacts agriculture and commercial forestry and they have significant potential for adaptation. Furthermore, in these sectors climate resilience addresses issues of strategic national importance: food security, water, health, and land reform. Under-resourced, small-scale and subsistence farmers are particularly vulnerable to the impacts of climate change.”⁷

4. At the same time agriculture holds the key to reducing climate change impacts dramatically if reforms are made in the **management of soil** – which can play a unique role in the sequestering of carbon. Countries are being called on to engage in a transition to regenerative farming, grazing and land-use practices with a focus on soil health.⁸ See paragraph 12 below.
5. Given the significance of agriculture in the climate crisis it is imperative that the objectives of the Bill are met in the agricultural sector. It is our submission that the Bill is insufficient in key details and imperatives to ensure that this will happen and needs the addition of several provisions which are discussed below with suggested draft clauses.

Agriculture is vulnerable to climate change

6. Climate change is affecting agriculture by interfering with the efficiency of crop production. Agriculture is facing droughts, flooding, sea level elevations, natural disasters, and health hazards for employees. All of these can lead to crop failure that creates famines and causes food prices to rise. The following conclusions by scientists explain some of the ways in which this happens:

“There is concordance amongst scientists that climate change encompasses atmospheric carbon dioxide variations, altered worldwide temperatures and precipitation variation, all directly or indirectly influencing sea levels and salinity, alterations in arable land, crop yields, changes in soil quality, nitrogen deposition and plant diversity (Fontaine, Decker, & Skagen, 2009; Harvell et al., 2002; Jackson et al., 2011; Miraglia et al., 2009)

Temperature, light and water are the key elements that control the growth and development of organisms (Harvell et al., 2002; Rosenzweig, Iglesias, Yang, Epstein, & Chivian, 2001). Consequently, biodiversity responses that depend on these environmental parameters can be expected (Lepetz, Massot, Schmeller, & Clobert, 2009). For example, altered precipitation patterns and cultivation practices can create a thriving environment for insect and pathogen attacks (Roos, Hopkins, Kvarnheden, & Dixelius, 2011), or corresponding advances in phenology (Fontaine et al., 2009). Moreover, the increasing climate variability (Wang, Zwiers, Swail, & Feng, 2009) can induce alterations in interspecific relationships between organisms, such as competition or predation (Lepetz et al., 2009),

⁶ DFFE – National Climate Change Response White Paper, p8

⁷ id

⁸ <https://www.Pesticidereform.Org/Climate-Change/>

possibly resulting in a decrease in food supplies and an increase in microbial and toxic contaminants in food (Hall, D Souza, & Kirk, 2002).⁹

Agriculture contributes significantly to climate change

7. Agriculture is a major part of the climate problem. Globally, the four major contributors to climate change have been identified - transportation, Industry, and agriculture, and land use and forestry. Agriculture, land use and forestry contributed 24% of 2010 global greenhouse gas emissions.¹⁰ Globally, agriculture is a key contributor to climate change, being responsible for about 14% of all GHG emissions.¹¹
8. Producing more food out of the land that has been depleted and damaged by industrial farming methods often requires heavier use of nitrogen-based fertilisers to keep producing, which in turn release nitrous oxide emissions and contributes to climate change. Intensive agriculture and fertiliser use also release nitrates to the soil and to water bodies.¹²

Climate change and global warming will increase pests and pesticide use:

“Anthropogenic climate change increases crop losses by pests 1, and extensive pesticide applications promote pesticide resistance 2, thereby threatening global food security and food safety in the 21st century 1:3. Specifically, climate change has expanded the geographic range of many pests in regions that have traditionally experienced low pest risk 4. At the same time, pesticide usage and pesticide resistance have increased in these regions 5:6. While these patterns appear linked, climate-mediated range shift and pesticide resistance are traditionally examined independently of each other. Consequently, it is still unknown how changes in pest distribution will affect the development and distribution of pesticide resistance under future climate change scenarios.”¹³

Pesticide use contributes to climate change

9. The manufacture, transport and application of pesticides creates greenhouse gas emissions through energy use in production and the release into the atmosphere of active ingredients and ‘inert’ adjuvants. Pesticides also cause further emissions through their deleterious effects on soils. For example soil fumigation, which is a widespread practice, can increase soil N₂O emissions sevenfold, and the fumigants

⁹ Literature Review: Impact Of Climate Change On Pesticide Use - Ilse Delcour, Pieter Spanoghe , Mieke Uyttendaele, Food Research International 68 (2015) 7 -15

https://www.researchgate.net/profile/Pieter-Spanoghe/publication/267544278_Literature_Review_Impact_Of_Climate_Change_On_Pesticide_Use/links/5c4ed1b6a6fdccd6b5ced9ee/Literature-Review-Impact-Of-Climate-Change-On-Pesticide-Use.Pdf

¹⁰ [FAO \(2014\). Agriculture, Forestry And Other Land Use Emissions By Sources And Removals By Sinks \(Pdf\)](#). (89 Pp, 3.5 Mb) Climate, Energy And Tenure Division, FAO

¹¹ National Climate Change Response White Paper at paragraph 5.3

https://www.dffe.gov.za/sites/default/files/legislations/national_climatechange_response_whitepaper_0.pdf

¹² <https://www.eea.europa.eu/signals/signals-2015/articles/agriculture-and-climate-change>

¹³ <https://www.nature.com/articles/S41467-021-25505-7> - Ma, Cs., Zhang, W., Peng, Y. *Et Al*. Climate Warming Promotes Pesticide Resistance Through Expanding Overwintering Range Of A Global Pest. *Nat Commun* 12, 5351 (2021).

<https://doi.org/10.1038/S41467-021-25505-7>

effects last far longer than fertiliser-induced emissions as the following study has shown:

“Agricultural soils are a major source of the atmospheric greenhouse gas nitrous oxide (N₂O). Agronomic practices such as tillage and fertilizer applications can significantly affect the production and consumption of N₂O because of alteration in soil physical, chemical, and biochemical activities. Soil fumigation is an agronomic practice used to control soil-borne disease pathogens, weeds, plant-parasitic nematodes, and fungi. (Laboratory studies have shown that) the strong impact of fumigants on soil microorganisms can indirectly affect the production and/or consumption of N₂O and would potentially alter net emissions from agricultural soils. Laboratory incubation and field soil fumigation studies were conducted to determine the potential impact of soil fumigation on the dynamics of N₂O production. Laboratory soil incubations showed an eight-fold increase in the production rate of N₂O as a consequence of chloropicrin (CP) fumigation. This stimulation effect was confirmed by a seven-fold increase in N₂O emission rates in field plots following CP fumigation.”¹⁴

A 2017 report by the UN’s Special Rapporteur on the **Right to Food** noted that, “Despite the harms associated with excessive and unsafe pesticide practices, it is commonly argued that intensive industrial agriculture, which is heavily reliant on pesticide inputs, is necessary to increase yields to feed a growing world population, particularly in the light of negative climate change impacts and global scarcity of farmlands”. But noting that 200,000 people die of acute pesticides poisoning each year, it added that “reliance on hazardous pesticides is a short-term solution that undermines the rights to adequate food and health for present and future generations.” It further concluded “Today’s dominant agricultural model is highly problematic, not only because of damage inflicted by pesticides, but also their effects on climate change, loss of biodiversity and inability to ensure food sovereignty. These issues are intimately interlinked and must be addressed together to ensure that the right to food is achieved to its full potential.”¹⁵

International developments in the agriculture sector to address climate change

10. The world has started to recognise the role of agriculture in climate change as well as the vulnerability of agriculture to climate change impacts as is evident from recent COP26 meetings, such as the COP Glasgow Leaders’ declaration.¹⁶ Here countries committed to working collectively to **halt and reverse forest loss and land degradation by 2030** while delivering sustainable development and promoting an inclusive rural transformation.¹⁷ However South Africa has not added its name to this initiative.
11. In short agriculture can play a key role in climate change mitigation – and adaptation – as well as better protecting the health of farmers, farm workers, the general public and the environment, by adopting agroecological farming methods. It can increase soil fertility and soil carbon, while **producing healthy and nutritious food to feed the**

¹⁴ Stimulation Of Nitrous Oxide Production Resulted From Soil Fumigation With Chloropicrin
K. Spokas*, D. Wang Department Of Soil, Water, And Climate, University Of Minnesota, St. Paul, Mn 55108, Usa -
Atmospheric Environment 37 (2003) 3501–3507
<https://Citeseerx.Ist.Psu.Edu/Viewdoc/Download?Doi=10.1.1.605.8317&Rep=Rep1&Type=Pdf>

¹⁵

<https://www.pan-uk.org/site/wp-content/uploads/United-Nations-Report-of-the-Special-Rapporteur-on-the-right-to-food.pdf> pg 22

¹⁶ COP 26 Glasgow Leaders’ Declaration on Forestry and Land Use
<https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>

¹⁷ <https://ukcop26.org/the-conference/cop26-outcomes/>;

world.¹⁸ Agroecological farming promotes diverse farming systems and healthy crops that are better able to resist pests and diseases. This approach also improves resilience to climatic and other shocks. Healthy soils that are rich in organic matter, for example, retain more water and provide better protection from both flooding and drought.

Agriculture can be part of the solution to the climate crisis.

Some recent initiatives in the sphere of agriculture include:

- COP 26 commitments
- UN Koronivia joint work on agriculture
- EU Green Deal and Biodiversity strategy
- International 4 per 1000 Initiative under the Lima-Paris Action Agenda

COP 26 and agricultural chemicals

12. The main goal of COP 26¹⁹ was to secure global net zero by mid-century and keep a maximum of 1.5 C degrees of warming within reach. Net zero means total emissions are equal to or less than the emissions removed from the environment.
13. The conference achieved several important milestones relevant to the issue of agricultural chemicals. Commitments in a range of other areas such as forests, methane, car emissions, and private finance were also made.²⁰ In the COP26 'Glasgow declaration on forests and land use' 137 countries (not including South Africa) took a landmark step forward by committing to working collectively to **halt and reverse** forest loss and **land degradation by 2030** while delivering sustainable development and promoting an inclusive rural transformation.²¹ However South Africa has not added its name to this initiative. The pledge is backed by \$12bn in public and \$7.2bn in private funding. In addition, CEOs from more than 30 financial institutions with over \$8.7 trillion of global assets committed to eliminate investment in activities linked to deforestation.²²

UN Koronivia joint work on agriculture

14. The UN's Koronivia joint work on agriculture was established at COP23 in Fiji in 2017, with an aim of bringing discussions of agriculture into the UNFCCC and addressing agricultural issues through the lens of climate change.²³ This process was scheduled to finish at COP26. Although unable to reach a final decision in Glasgow, the draft conclusions of this body set a new goal of "recommending a

¹⁸

<https://www.cambridge.org/core/journals/renewable-agriculture-and-food-systems/article/abs/organic-agriculture-and-the-global-food-supply/93DD2635AC706B08EE68B881D17A143B>

¹⁹ Meeting Glasgow From 31 October To 12 November 2021. 26th Conference Of The Parties, Attended By Countries That Signed The United Nations Framework Convention On Climate Change (UNFCCC) - A Treaty Agreed In 1994.)

²⁰ <https://www.un.org/en/climatechange/cop26>

²¹ <https://ukcop26.org/glasgow-leaders-declaration-on-forests-and-land-use/>

²² <https://www.un.org/en/climatechange/cop26>

²³ <https://www.fao.org/koronivia/about/en/>

draft decision for consideration and adoption” at COP27 in Sharm el-Sheikh next year.²⁴ These include a recognition that:

“...soil and nutrient management practices and the optimal use of nutrients, including organic fertilizer and enhanced manure management, lie at the core of climate-resilient, sustainable food production systems and can contribute to global food security;

.....the fundamental priority of safeguarding food security and ending hunger by designing sustainable and climate-resilient agricultural systems applying a systemic approach in line with the long-term global climate objectives, further recognizing the importance of long-term investments in agriculture focused on this objective.”²⁵

EU Biodiversity strategy

15. The European Green deal.²⁶

The Green Deal, launched in December 2019 “resets the Commission’s commitment to tackling climate and environment-related challenges that is this generation’s defining task.” The main ambition is that the EU becomes climate neutral by 2050. The Green Deal also pursues other environmental and health objectives that are equally important for a sustainable future.

16. The following undertakings have been made in terms of the EU biodiversity strategy:²⁷

- Reduce the use and risk of chemical pesticides by 50% in 2030, as well as the use of more hazardous pesticides by 50% in 2030²⁸;
- Dedicate at least 10% of agricultural area to high diversity landscape features;
- Devote at least 25% of agricultural land under organic farming management by 2030;
- Significantly increase the uptake of agro-ecological practices;
- Diminish the loss of nutrients from fertilizers by 50% in 2030, resulting in the reduction of the overall use of fertilisers by at least 20%.²⁹

How is SA dealing with climate change in the agricultural sector?

17. The South African Cabinet has approved key climate actions including the creation of a Presidential Climate Change Coordinating Commission, South Africa's Low Emissions

²⁴ https://unfccc.int/sites/default/files/resource/sb2021_L01_E.pdf

²⁵ id

²⁶ https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

²⁷

https://ec.europa.eu/info/food-farming-fisheries/sustainability/environmental-sustainability/biodiversity_en#:~:text=EU%20biodiversity%20strategy,-The%20European%20Commission&text=placing%20at%20least%2010%25%20of,of%20chemical%20pesticides%20by%2050%25.

²⁸ European Commission Farm-To-Fork Targets :

https://Ec.Europa.Eu/Food/Plants/Pesticides/Sustainable-Use-Pesticides/Farm-Fork-Targets-Progress_En

²⁹

https://ec.europa.eu/info/food-farming-fisheries/sustainability/environmental-sustainability/biodiversity_en#:~:text=EU%20biodiversity%20strategy,-The%20European%20Commission&text=placing%20at%20least%2010%25%20of,of%20chemical%20pesticides%20by%2050%25.

Development Strategy, a National Climate Change Adaptation Strategy, and a carbon tax. South Africa has also entered into agreement with France, Germany, the United Kingdom and the United States of America, along with the European Union, regarding a long-term Just Energy Transition Partnership to support South Africa's decarbonisation efforts, with a focus on the electricity system, to help it achieve the ambitious goals set out in its updated Nationally Determined Contribution emissions goals.

18. However, as regards agriculture, in practice South African policy is to promote increased agriculture with insufficient attention being paid to agro-ecological, organic, regenerative agriculture and thereby the protection of rural livelihoods in the face of climate change. Several policies make generalised references to more sustainable agricultural approaches, but several policy instruments that could assist agriculture to transition remain in **draft form** including the Organic Policy, the Agroecological Strategy and the Conservation Agriculture Policy³⁰ and the emphasis in DAFF remains focused on scaling up agricultural production for global commodity value chains and an industrialised 'Green Revolution' approach to extension, FISP and other agricultural support.
19. In 2015 The National Terrestrial Carbon Sink Assessment Detailed report³¹ reviewed eight policies and found broad support for various forms of 'sustainable' agricultural production, called "conservation agriculture", "climate smart agriculture" and "sustainable agriculture" but that these policies were weakly aligned and deficient in several respects:

"More detailed definitions and descriptions of what these terms refer to is limited. However, most of the policies proposed a broad common set of activities: • Protection of soil health, including the use of conservation tillage • Rehabilitation of rangelands and soils • An increase in organic composting • Reduced dependence on chemical fertilizers • Improved cropping techniques, broadly called conservation agriculture, sustainable agriculture or climate smart agriculture • Improved grazing regimes"

"The legislation in the field is limited to CARA, which appears to not have influenced DAFF's current strategies. Plans that call for wide-sweeping changes in agricultural policy – the NCCRP, the NDF and the NSSD – rely on the cooperation of DAFF; but in turn, these aims have not fully integrated into DAFF's plans as yet. It is worth noting that CARA, the National Biodiversity Framework and the National Sustainable Development Strategy are not mentioned in DAFF's strategic and integrated plans. In contrast, policies promoting agricultural expansion – the NGP, the Medium Term Strategic Framework, and the Industrial Policy Action Plan feature prominently in DAFF's plans."³²

20. It is important for the Climate Bill to strike the balance between promoting an increase in agriculture and addressing climate change emissions arising from agriculture and land use, and in particular the emissions that will result from increased

³⁰ Draft Conservation Agriculture Policy, DAFF 2017

³¹ (2015) Department of Environmental Affairs, Pretoria, South Africa

https://www.dffe.gov.za/sites/default/files/docs/nationalterrestrial_carbonsinksassessment_sect1.pdf at page 112

³² id

agriculture through soil disturbance and biomass removals.³³ It should do so through definitions, principles and guiding provisions. However it fails to do so.

21. South Africa's National Terrestrial Carbon Sink Assessment Detailed Report³⁴ identified several prominent gaps in South African policy relating to agricultural and land use greenhouse gas emissions and removals.³⁵ These gaps demonstrate key considerations that have received limited attention or are missing entirely from inclusion in policy. The position has changed little from 2015. The policy context therefore provides insufficient guidance for the implementation of the Bill and is likely to result in these issues not being effectively dealt with.

23. Gaps currently in South African policy relating to the agriculture, forestry and land use sector greenhouse gas emissions include:

- "Limited specific content around woodlands:
- There is a lack of a clear definition for the classification of woodlands
- There is also a lack of clear targeted interventions for the protection of woodlands,
- There is a lack of reference to the reliance on fuel wood by rural communities in energy policies
- Limited reference to 'climate-smart' agriculture, 'Agroecological' or other improved agricultural practices:
- There is a general lack of reference to these terms or explanation of what they entail; There is a lack of tangible plans and targets to implement improved agricultural practices;
- There is very limited reference to inclusion of 'climate smart' or 'agro-ecological' practices in the massive scale up of agriculture production envisaged for the country in the near term;
- There is very limited reference to the impact of fertilisers, especially in a greenhouse gas context;
- Limited commitments from government for protection and improvements of natural and semi-natural landscapes:
- There are very limited commitments for the protection of areas that fall outside the Protected Areas Network;
- There is a lack of commitment to implementing rehabilitation efforts to benefit degraded natural and semi-natural landscapes;
- Lack of inclusion of the AFOLU sector's contribution to climate change in policy;
- There is limited reference to the emissions from the AFOLU sector ;
- There is limited reference to the role of the AFOLU sector in mitigating climate change;
- There is limited consideration of the Costs of including AFOLU in an offset mechanism"³⁶

24. An implementation of conservation agriculture will have the following benefits according to the South African Terrestrial Carbon Sinks Assessment analysis:

³³ id

³⁴ (2015) Department of Environmental Affairs, Pretoria, South Africa
https://www.dffe.gov.za/sites/default/files/docs/nationalterrestrial_carbonsinksassessment_sect1.pdf

³⁵ National Terrestrial Carbon Sink Assessment (2015) Department of Environmental Affairs, Pretoria, South Africa– May 2015 https://www.dffe.gov.za/sites/default/files/docs/nationalterrestrial_carbonsinksassessment_sect1.pdf

³⁶ Id at Page 134

“The promotion of conservation agriculture, climate smart agriculture and sustainable agriculture, will most likely lead to reduced negative impact on the size of the national terrestrial carbon stock in a number of ways:

- An increase in soil carbon stocks of cultivated land following an increase in composting and conservation tillage practices.
- An increase in above and below ground carbon stocks following the restoration of rangeland systems used for commercial and small-scale livestock production.
- The avoided degradation of rangeland systems, and associated release of sequestered carbon into the atmosphere. This would be done through the adoption of appropriate grazing and burning regimes. It should be noted that over 65% of South Africa’s terrestrial carbon stock is located in natural and semi-natural grassland, savanna and thicket ecosystems (CSIR 2013, Module 2). Within these ecosystems, over 90% of the total carbon stock is located in soils.
- The restoration and sustainable management of rangeland systems may be one of the principal ways in which South Africa’s national terrestrial carbon stock can be maintained over the long-term.”³⁷

What the Climate Change Bill needs to include in order to achieve its objectives in the sphere of agriculture

25. For the Bill to achieve its objectives it must ensure that all sectors limit and mitigate climate emissions, and given its importance should specifically refer to the agricultural, forestry and land use sectors. As matters stand there is little to prevent this sector’s contributions from being overlooked or understated in the policies and actions that must be generated under the Climate Change Bill, once enacted.

The following actions are required:

a) Definition of Conservation Agriculture should be included in section 1 “Definitions”

The 2017 DAFF Draft Conservation Agriculture Policy provides the following definition:

“Conservation agriculture: Farming practices which use three key characteristics: 1. minimal mechanical soil disturbance (i.e. no tillage and direct seeding); 2. maintenance of a mulch of organic matter covering and feeding the soil (e.g. straw or other crop residue including cover crops); and 3. rotations or sequences and associations of crops including trees which could include nitrogen-fixing legumes.

Conventional farming: Farming methods which involve physical manipulation of the soil, the use of synthetic chemical fertilizers, pesticides and herbicides.”

b) Principles of the Climate Change Bill need to be amplified to promote sustainable agriculture

It is imperative that at the very least section 3 of the Bill – the Principles - should contain provisions that promote sustainable and regenerative agriculture³⁸ and that foster a balance between the promotion of agriculture and the reduction of climate change emissions in the agricultural sector. As it stands South Africa’s various policies are deficient in their treatment of the agricultural sector and its contribution to GHG emissions. The various spheres of government will have insufficient policy basis to refer to unless there is a clear

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³⁸ Including but not limited to agro-ecology, organic farming, regenerative farming, and conservation agriculture

statement in this regard in the Bill, especially when it comes to the drafting of implementation plans such as the National Adaptation Strategy and Plan (NASP), and National Greenhouse Gas phasedown.

Relevant principles could be drafted along the following lines:

“Sustainable agriculture (including but not limited to conservation agriculture) will be promoted in the drafting of the National Adaptation Strategy and Plan (NASP), and National Greenhouse Gas phasedown.” and

“A balance must be struck between the promotion of agriculture and the reduction of climate emissions through sustainable agriculture and regenerative farming measures.”

c) *Chapter 4 - **NATIONAL ADAPTATION TO IMPACTS OF CLIMATE CHANGE** should emphasise conservation agriculture*

Clause 16 should include as an adaptation objective the promotion of sustainable agriculture.

The provisions in chapter 4 should also require the National Adaptation Strategy and Plan to set clear targets and timelines for key interventions that will promote climate adaptation through sustainable, agroecological, organic and regenerative agricultural practices including the reduction of use of nitrogen producing fertilizers and pesticides, the dedication of agricultural areas to high diversity landscape features, and the devotion of agricultural land under organic farming management by a specific date. (see EU targets for examples in this regard³⁹)

d) *Clause 22 Sectoral emission targets*

For the agricultural sphere, sectoral emission targets should be determined by reference to outcomes, rather than trying to compute exactly what this sphere emits. So for example percentages can be set for different interventions which will result in a reduction of emissions. It is suggested that a clause be inserted that states.

“in the agricultural sphere emissions targets may be set with reference to sustainable agricultural goals which are measurable and in line with international best practice and best science including the reduction of use of nitrogen producing fertilizers and pesticides, the dedication of agricultural areas to high diversity landscape features, and the devotion of agricultural land under organic farming management by a specific date. Emissions reductions may be achieved through enforceable legislation governing cultivation practices. “

The Conservation of Agricultural Resources Act (1983), attempts to introduce cultivation techniques that may reduce soil turnover (conservation tillage) and the associated release of existing soil carbon stocks into the atmosphere. It is however not regularly referenced in strategic plans promoting agricultural expansion, and thus has limited visibility.

39

https://ec.europa.eu/info/food-farming-fisheries/sustainability/environmental-sustainability/biodiversity_en#:~:text=EU%20biodiversity%20strategy,-The%20European%20Commission&text=placing%20at%20least%2010%25%20of,of%20chemical%20pesticides%20by%2050%25.

CONCLUSION

The submission above has indicated deficiencies in the Climate Change Bill with regard to the area of agriculture, forestry and land use, which if not addressed will in all likelihood result in this sector not playing the vital role it can in addressing the climate change crisis. We trust that our suggestions will receive your attention and be included in amendments to the Draft Bill.

Yours faithfully

UNPOISON

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SAOSO





As per: 

Anna Shevel
Network Coordinator

As per: 

Colleen Anderson
Secretariat

This letter is supported by the following organisations:

	SAOSO	Colleen Anderson	Secretariat
	PGS SA	Matthew Purkiss	Vice-Chair
	RegenAg	Andrew Ardington	Executive Director
	Green Times	Elma Pollard	Editor

 <p>Environmental Humanities South for justice in African environmental climate interventions.</p>	Environmental Humanities South UCT	Lesley Green	Director
 <p>GOOD FOOD NETWORK</p>	Good Food Network	Anna Shevel	Director
 <p>INTEGRA FOOD GROWN WITH INTEGRITY REGENERATIVE AGRICULTURE</p>	IntegRA	Dr Hendrik Smith	Director
 <p>nurturing resilience FOOD GROWERS INITIATIVE</p>	Food Growers Initiative	Erica Inches	Co-ordinator
 <p>ABALIMI BEZEKHAYA Est. 1982</p>	Abalimi Bezekhaya	Grace Stead	Managing Director
 <p>EARTHLORE SEED JUSTICE SACRED LANDS</p>	EarthLore Foundation	Method Gundidza	Director
 <p>GET GLOBAL ENVIRONMENTAL TRUST</p>	Global Environmental Trust	Sheila Berry	Director
 <p>Kos en Fynbos Food for all</p>	Kos en Fynbos	Chris Godfrey	Co-ordinator
	Conservation At Work	Liz Eglinton	Chair
 <p>Blue Sky Organics</p>	Blue Sky Organics	Liz Eglinton	Director