biowatch SOUTH AFRICA biodiversity | food sovereignty | agroecology | social justice
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30 April 2018

Attention:
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Biowatch SA comments on the Draft Conservation agriculture policy (Dated: May 2017)

Thank you for the opportunity to comment on the Draft Conservation Agriculture (CA) Policy, dated May 2017.

These comments are submitted by Biowatch South Africa, a registered non-governmental organisation established in 1999, which strives for social and ecological justice within the context of food sovereignty. Biowatch works to challenge unsustainable agricultural practices and to advocate for agroecology as an ecologically viable alternative that safeguards people and land. This includes supporting smallholder farmers on the ground in northern KZN; 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.

Over-arching comments

The introduction and problem statement to this policy rightly identifies problems with the industrial model of agriculture that has come to be seen and is promoted as conventional farming practice. These problems include: a major contribution to climate changing emissions, soil and water degradation, the destruction of ecosystems, loss of natural and agricultural diversity, toxic chemical pollution of our environment and our bodies, growing malnutrition and food insecurity, as well as growing social inequality and poverty as diverse small farms are displaced by large, resource intensive industrial farming systems.

The problem statement in the CA policy implies that Conservation Agriculture (CA) is a sustainable and agroecological approach to agriculture; it presents CA as a panacea that will address these problems. Biowatch believes this to be disingenuous, preventing a holistic and nuanced analysis of the challenges we face in our food production system. While the 3 main principles of CA are admirable and are also applied in Agroecology, these are only a few of the possible interventions

that contribute to the transition to a sustainable agricultural system; and this should be clearly acknowledged and stated in the policy and taken into account in the approach to implementation.

Conservation Agriculture is not Agroecology, which also looks beyond production challenges to the transformation of our food system with the goal of food sovereignty. Agroecology is commonly defined more broadly than in the Draft CA Policy document. Although there are many interpretations[1], we support this definition: Agroecology is a science, practice and movement that **applies the principles and concepts of Ecology** in the management and design of **sustainable agroecosystems**, which includes the environmental, social, economic, cultural, and ethical aspects of sustainability and where scientific knowledge supports and builds on local, indigenous knowledge. [Bold emphasis includes key parts of commonly used definitions which are missing in the definition in the CA policy document].

Conservation Agriculture differs markedly from agroecology in that:

- Crop rotations are often still focused on a single main 'cash' crop like hybrid maize or soya, even though these may be interplanted with one or two secondary crops for soil cover and improvement, whereas agroecology promotes a landscape of functionally diverse areas with a diversity of crops, trees and natural areas and diverse varieties within each crop type.
- CA continues to promote the use of chemical herbicides and fertilisers.
- CA uses genetically modified (GM) herbicide tolerant crops in conjunction with herbicide as part of the no-till regime.

It is worth noting that CA emerged from Brazil and that the four Latin American countries that lead the adoption of CA are also leading producers of GM crops - mostly herbicide tolerant GM Soya. Despite the high uptake of Conservation Agriculture methods in Brazil, it has the highest herbicide use per kilogram of crop production of any country worldwide.[2] Soybean, corn and sugar cane crops together accounted for 76% of the area planted in Brazil in 2015. Glyphosate is the most used agrotoxin in Brazil, and an average of 5 litres of glyphosate is sprayed per hectare of Soybean, which is Brazil's most cultivated crop. Pignati et al (2017) have found a positive correlation between increased pesticide (including herbicide) use in Brazil against health indicators such as the incidence of acute poisoning, foetal malformation and childhood cancer mortality.[3] Brazil, Argentina, Paraguay and Uruguay are also renowned for the severe social impact of these production systems, which have disrupted regional food production elevating food prices; and displaced rural smallholders, driving millions of people into poverty in urban areas.[4]

CA may be a useful start-up method for transitioning agrochemical-addicted farmers to more sustainable approaches in the commercial sector. However, it appears that many of the CA projects in South Africa are targeting small-scale farmers and that herbicides are introduced as part of the 'CA method' in many of these projects.[5] This was illustrated by a woman small-scale farmer at the KZN Provincial consultation. The group was discussing avoiding agrochemicals and she stated that "conservation agriculture without herbicides is not the conservation agriculture I know".

Conservation Agriculture cannot be called a sustainable farming practice if it is used to surreptitiously promote and introduce the use of chemical herbicides, fertilisers and GM crops!

Biowatch proposes that a Conservation Agriculture Policy for South Africa should:

1. Acknowledge that CA offers some methods that contribute towards a more sustainable agricultural production system but is a small part of the broad and holistic transformation needed for a sustainable food system.

2. Aim for a best- case scenario and promote the principles of CA without the use of agrochemicals.

3. Propose a step-wise transition to this best-case in the implementation plans for the policy that take into account the current challenges experienced by farmers (including the agrochemical treadmill).

4. Distinguish between types of farmers in terms of their starting points so that implementation plans are differentiated. The commercial sector which presently has high agrochemical dependency should be working to reduce this in combination with minimal tilling; but small-scale farmers should be assisted to strengthen their farming methods by building on their traditional farming knowledge and agricultural practices with available resources, so that they have no need for external inputs (of fertiliser, herbicide, pesticide or seed) and can avoid the consequent dependency and debt associated with these. In other words, small-scale farmers could, with the right type of support, leapfrog to more holistic agroecologies that satisfy a greater range of sustainability criteria.

Detailed comments

Please find our detailed comments on the Draft Policy in the attached document, which uses the template provided.

Yours sincerely

Rose Williams
Director
Biowatch South Africa

References and notes

[1] See for example the FAO: http://www.fao.org/agroecology/knowledge/definitions/en/
[2] Zhang, W. (2018). ***Global pesticide use: Profile, trend, cost / benefit and more***. Proceedings of the International Academy of Ecology and Environmental Sciences, 2018, 8(1): 1-27
[3] Pignati, W.A.; et al. (2017). ***Spatial distribution of pesticide use in Brazil: a strategy for Health Surveillance***. Ciênc. saúde coletiva [online]. 2017 Oct;22(10):3281-3293. DOI: 10.1590/1413-812320172210.17742017
[4] For a frank discussion of these impacts see: https://www.grain.org/article/entries/4749-the-united-republic-of-soybeans-take-two
[5] See for example GRAIN SA: http://www.grainsa.co.za/pages/grain-research/conservation-agriculture/farmer-innovation-programme/eastern-cape-and-southern-kwazulu-natal-midlands

agriculture, forestry & fisheries
Department: Agriculture, Forestry and Fisheries
REPUBLIC OF SOUTH AFRICA

INVITATION TO CONSULTATION WORKSHOPS AND PUBLIC COMMENTS: CONSERVATION AGRICULTURE POLICY

PUBLISHED FOR COMMENT ON FEBRUARY 2018
IN GOVERNMENT GAZETTE NUMBER NOTICE
COMMENTS TO BE SEND TO EMAIL: ConservationACW@daff.gov.za
CLOSING DATE FOR COMMENTS: 30TH APRIL 2018

***Use clause number as in published on Policy**

BIOWATCH SA COMMENTS ON POLICY

Chapter	Section no in Policy	Section Title	Comments by respondent and date in which comments were submitted	Respondent (Name/Institution/ Department and Contact details)	What are the main benefits, costs and risks of the Policy	Proposed action
1	1	**Definitions**	30 April 2018 Agroecology: is much more than just a study of interactions, and the definition in the policy ignores even the most commonly accepted definitions of agroecology. Definition of farmer field school – these are not aimed at society, Reword	Biowatch SA vanessa@biowatch.org.za		Use a commonly accepted definition of agroecology, for example: **Agroecology: a science, practice and movement that applies the principles and concepts of Ecology in the management and design of sustainable agroecosystems,** which includes the environmental, social, economic, cultural, and ethical aspects of sustainability and where scientific knowledge supports and

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						builds on local, indigenous knowledge. **Add to the definition of Conservation Agriculture**: 'Farming practices which …. nitrogen-fixing legumes, **without the use of synthetic chemical fertilisers, pesticides and herbicides.** Farmer field school: A participatory and interactive approach to ~~**social**~~ **farmer** learning, based on the concepts and principles of people centred **and social** learning.
	1	**Introduction**	30 April 2018 Paragraph 3, page 5: If APAP calls for an agroecological approach why has the agroecology strategy not been finalised, or an agroecology policy developed. The CA policy infers that CA is a response to this requirement for an agroecological approach, which is deliberately confusing these concepts. CA is not an ecological and sustainable response if it	Biowatch SA vanessa@biowatch.org.za	If agrochemicals are included in the method for implementing CA, this policy will potentially introduce these chemicals to small-scale farmers who were not using them, thereby resulting in less sustainable farming systems in rural areas and creating health and economic problems which the rural poor cannot afford.	The policy should make the avoidance of agrochemicals a goal, and this goal must be clearly stated and emphasised. Figure 1: change the title to say: **Typical progression of CA systems on a sustainability gradient**. The current title gives the impression that organic CA is the most sustainable opposite to unsustainable conventional farming, whereas many more

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			continues to promote chemical inputs and without challenging the structural inequities in our agricultural system. Para 5, page 5: There is no optimum amount of agrochemical; they will interfere with biological processes at any dose. In addition, consistent exposure to micro-doses of chemicals like glyphosate is as damaging to health as big doses. CA can only contribute towards a more sustainable agriculture if it does not include agrochemicals (and monocultures). Figure 1, page 6: This table makes it seem that organic CA is the sustainable alternative to conventional farming, but there are many more interventions that can be made on the path to a sustainable production system.			interventions are to transform to a sustainable agricultural system. In general, the introduction should acknowledge that using the principles of CA is a step towards a more sustainable production system, but that there are more interventions to make beyond CA. Thus, while these may be practical first steps, implementing CA does not equal agricultural sustainability.

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Chapter	**Section no in Policy**	**Section Title**	**Comments by respondent And date received**	**Respondent (Name/Institution/ Department and Contact details)**	**What are the main benefits, costs and risks of the Policy**	**Proposed action**
2	**2**	**Problem statement**	30 April 2018 Para 1, page 8: This paragraph implies that CA is the only way to sustainably improve agricultural production. Does this mean that other ways of doing this will not receive state support? Para 3, page 8: CA will only reduce costs if farmers can rely completely on local resources – this is important for rural small-scale farming families. Environmental health may reduce compared to conventional farming but can only regenerate without chemical inputs. CA will have an extremely negative impact on biodiversity if it is practiced as part of large-scale	Biowatch SA vanessa@biowatch.org.za		State support to farmers must not exclude other ways of implementing sustainable agriculture, and state support for CA should not include subsidies for agrochemicals and GM seed. The problem statement should not over-exaggerate what CA can accomplish and make out that CA is the panacea to all production and environmental problems.

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			farming estates, replacing natural grassland and forest, with rotations of genetically uniform hybrid seeds and using agrotoxins on weeds and pests (as is the case in Brazil). The problem statement fails to acknowledge many other issues affecting the productivity of farmers and sustainability of the food system. These include: • lack of access to resources such as land and water by the majority of farmers.; • monopolies operating in the input market and retail sector which result in rising input costs, depressed sale prices and which dictate economies of scale etc which are counter to sustainability. • Increased production does not alleviate food insecurity and malnutrition. Although			

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			there is a surplus of food the poor cannot access it and much of this surplus consists of high energy crops resulting in diets with insufficient diversity and nutrition. • Poor food quality and diversity, resulting in malnutrition from unhealthy production systems as well as a market forces that promote fast-food consumer habits. • Dwindling biodiversity especially in food crops and animals. • Land degradation in relationship to grazing of livestock (both negative and positive impacts). Tables 1 and 2 on page 8 and 9 make it seem that Africa is behind when in fact 70% of food in Africa is still produced by smallholder farmers practicing traditional			

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			farming that is more sustainable than input-intensive commercial agriculture. The full cost of so-called no-till farming in Brazil and other Latin American countries needs to be unpacked – no-till Conservation Agriculture is practiced as ever-expanding soya/maize monocultures for an export market utilising GM seed and glyphosate herbicides. This system is poisoning the ecosystem and people and has impoverished small-scale farmers who have left the land in favour of an elite that owns huge land holdings and farms by plane and GIS. (Please see the covering letter to Biowatch's submission) This is not sustainable agriculture and is not aligned to the SA National Development Plan.			
	3.1	**Vision**	30 April 2018 The vision should be a realistic vision of what can actually be achieved by	Biowatch SA vanessa@biowatch.org.za		

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			CA. Food security does not result from increased production – we already produce enough food, but people cannot access it due to poverty - nor will it address issues of dietary diversity.			
	3.2	**Policy objectives**	30 April 2018 In the indicators, page 10: Bullet 4: why a focus on commodities? Here again the policy reveals that the focus is on commercialising farming and commodities only. The focus should be on feeding our population with healthy and diverse food, not on pursuing a commodity market. Smallholders should not be coerced into commodity markets. A CA focus on rotations of a few commodity crops fails to value the wild foods, medicines and building materials that are harvested in addition to cultivated foods in	Biowatch SA vanessa@biowatch.org.za		**Add to objective:** The objective of the CA policy is to promote and establish ecologically, **socially** and economically sustainable agricultural systems that will increase food security levels and address associated national security risks and **mitigate climate change.** **Amend the indicators as follows:** • Increased water infiltration that reduces runoff, soil erosion and sedimentation **leading to land rehabilitation**, and improves surface and groundwater levels and quality ~~**– land rehabilitation**~~. • Increased ~~commodity~~ **crop** and livestock production,

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			ecological (and traditional) farming systems. How will lower production costs be measured?			performance and resilience. **Add the following indicators:** • **An increase in soil fauna and flora** • **Reduction in the use of fertiliser, herbicide and pesticides per hectare of agricultural land** • **Soil and land regeneration.**
	3.3	**Principles**	30 April 2018 The principle headings are the descriptions are not clearly related – for example the description under bullet three would go better under bullet one. Bullet one: 'CA is a social construct' – the meaning of this as a principle for implementation is not clear. The descriptions of this point and bullet 3 could fit better together as new principles – see last column.	Biowatch SA vanessa@biowatch.org.za		**Rework bullet principles 1 and 3 to the following:** • **Use and regeneration of natural capital (including human, social and ecological)** • **Knowledge building that respects indigenous and traditional knowledge and farmers as innovators.** • **Invest in support for farmers that assists in transformation from industrial/conventional to ecological agriculture.**

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			In bullet 3: it is not clear why market development is included in a policy that focuses on {limited) changes to production methods. Addressing issues in the market would be appropriate if included in an Agroecology policy. Bullet 2 on soil: Biowatch agrees that the recognition of soil as a living system is a key principle, but don't agree with a caveat of sustainable use and focus on 'efficient' use of inputs and mechanisation. This will not deliver the change that is needed.			**Reword bullet 2:** Soil is a living ~~**material**~~ **system**: This gives recognition of the soil as a biologically active, living system, ~~**whilst respecting and responsibly utilising biodiversity to ensure sustainable natural resource management, through efficient input use and mechanization options**~~ **that requires respect for and working with ecological processes to regenerate soil as the most important natural resource underlying our food production.** **Add a new principle:** **Avoidance and reduction in the use of agrochemicals.**
	3.4	**Strategic significance**	-	-		-
	3.5	**Policy Options**	30 April 2018 <u>Resource allocation:</u> Biowatch objects to the equation of CA with agroecology (para 1 and 2) – these are not the same,	Biowatch SA vanessa@biowatch.org.za		It is important that a differentiated approach is used in the policy options that recognises that small-scale farmers are different to commercial farmers trying to get off the agrotoxin treadmill. Many small-

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			especially if government and private actors continue to promote agrochemicals as part of the CA method. Biowatch agrees in principle that any ecological farming effort is skill-intensive and that these skills need to be built in farming communities, and in education institutions and the extension service. We are concerned, however, that policies promoting ecological forms of agriculture shouldn't leave the private sector to implement this training or invest state funds in training provided by private entities. Agribusiness should pay on a 'polluter pays principle', but independent bodies that are genuinely pro-transformation should provide the training input. Sending agribusiness to retrain farmers in an approach that is counter to			scale farmers practice traditional farming which is already more sustainable in many diverse ways than commercial agriculture. State policy should support this. <u>Resource allocation, page 11:</u> **Reword the policy options so that:** **The State provides support to smallholders that excludes the provision of GM seed, and agrochemicals and supports all forms of ecological agriculture, particularly in building skills and knowledge.** **The state should not limit support and incentives to farmers practicing CA but should encourage a transition to all forms of ecological farming.** <u>Providing incentives</u>, page 11: **Remove references to carbon markets as a financing option.** Page 11, 3rd para: **Delete "such as CA."** (CA is not an agroecological approach)

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			their business objective is naïve. Para 3, page 11: Biowatch agrees with the statement that State support programmes should focus on sustainable systems in general. The state should focus support broadly on agroecology as a goal. <u>Providing incentives</u>, page 11: Biowatch objects to using carbon markets to fund incentives. Carbon markets allow industrialised nations to avoid climate change mitigation through easy projects. By resourcing our efforts through the carbon market, we are complicit in allowing polluters to continue practices that are counter to the goals of this policy. By focusing interventions on available resources, the main burden on the state is providing adequate			**Include a principle stating that 'support and incentives for CA will not create a dependency on external inputs amongst farmers'.** <u>Investing in research</u>, page 12: Para 1, last sentence: Add that research should also focus on: **lowering input use by using ecological processes.** **Add a section on building from and respecting the indigenous and traditional knowledge and practices of small-scale farmers as a starting point.** **<u>Additional policy options</u>: Investigate and include policy options that focus on rebuilding soil carbon through closing the resource loop by returning 'waste' biomass to the land through composting.** Page 12: Para 2, 1st sentence: change wording of sentence: "Government should actively …. as farmers have always been the

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			extension and other skills-based services. Investing in research, page 12: Biowatch supports a farmer-led approach to research. This should be founded on respect and recognition of the indigenous and traditional knowledge and practices already on the ground. Gender focus, page 13: Biowatch agree with the focus on women, who are marginalised while bearing greater hardships. One of the issues affecting women that should be considered is the impact of agrotoxins on women farmers and farm workers, which not only affect their own health but also have severe impacts on the development of babies in the womb, and children in agricultural areas. Implications, page 13:			implementers and developers of ~~CA~~ **innovative farming** practices" Farmers have not always implemented CA in the form that it is now conceptualised, and the concept of CA did not arise from farmers. It is true that farmers are the foremost innovators of methods that are the best fit with their circumstances, ecologies and cultures.

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			Biowatch strongly disagrees that it is difficult to promote CA to smallholder farmers under communal land tenure – this is only the case if CA is being promoted as a farming method that requires external inputs. If CA aims to work to practice in the most sustainable form it can, then it should not teach methods that burden farmers with high capital and input costs but rather provide skills for local resilience using appropriate technology. It is precisely in these circumstances where a majority of smallholders farm that innovative, agroecological methods and knowledge is required and where elected government and traditional leadership should be working together in innovative programmes. There are NGO examples that can provide examples of the innovation required.			

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			<u>Missing policy options</u> The policy options do not speak to the efficient use of existing biomass resources and resource flows. If one of the outcomes of this policy is to increase soil organic matter, repatriation of biomass to the soil should also be included. Currently organic matter is produced in rural areas and is then transported to cities where the waste products become a burden and are usually disposed to landfill where they further contribute to climate emissions. This is an important aspect of agriculture's contribution to climate change that has been neglected in this policy. Many opportunities exist for closing the resource loop by returning biomass to the land. These include: job creation through EPWP in composting fresh produce waste, roadside			

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			grass clippings, sewage sludge etc			
	3.6	**Linkages to other policies**	-	-	-	-
3	**3.7**	**Implementation plan**	30 April 2018 Capacity building & support, Page 15: NGOs can provide support in implementing ecological agriculture that includes and goes beyond CA principles. Government should play a bigger role in educating consumers about healthy diets that are not focused on commodity grains.	Biowatch SA vanessa@biowatch.org.za		
3	**3.8**	**Communication plan**	-	-	-	-
3	**3.9**	**Monitoring and Evaluation**	30 April 2018	Biowatch SA vanessa@biowatch.org.za		**Include the following additional indicators:** • **The quantity of chemical/inorganic**

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						fertiliser, herbicide and pesticide used annually and per hectare of agriculture in South Africa. • The diversity of crops grown and cropping systems by measuring the amounts produced and the balance between commodity crops and other crops such as legumes, small grains etc • The increase in diversity of locally adapted varieties of plants and animals of each species available to farmers (but not including genetically engineered varieties).