



Jane Harawa is a smallholder farmer and member of the Coalition of Women Farmers in Malawi. She grows maize, cassava and beans on her portion of communal land, and improving the fertility of the soil by making manure. PHOTO: GRAEME WILLIAMS/PANOS/ACTIONAID

Clever Name, Losing Game?

How Climate Smart Agriculture is sowing confusion in the food movement

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Introduction

'Climate Smart Agriculture' is gaining increasing attention among governments, NGOs, academics, corporations and international policy spaces. As proponents attempt to use the climate negotiations at the UNFCCC (United Nations Framework Convention for Climate Change) and the UN Secretary-General's Climate Summit, to obtain official endorsement of the concept, a range of stakeholders are starting to take note and ask questions.

With the impacts of climate change being felt on food systems around the world, and the contribution of agriculture to global emissions also gaining attention, agriculture is one of the issues at the heart of climate change concerns.

The concept of 'Climate Smart Agriculture' was developed by the FAO and the World Bank, claiming that 'triple wins' in agriculture could be achieved in mitigation (reducing greenhouse gas emissions), adaptation (supporting crops to grow in changing climate conditions), and increasing crop yields¹. A number of industrialised countries (the US in particular), along with a number of agribusiness corporations, are now the most enthusiastic promoters of the concept. The Global Alliance for Climate Smart Agriculture will be launched in September 2014, with the aim of expanding influence at national and international levels.

But there is growing confusion and debate over what the term really means, what it can achieve, what is new about it, and whether it really can benefit food systems in the face of climate change.

Increasingly, civil society and farmer organisations are expressing concerns that the term can be used to green-wash agricultural practices that will harm future food production, such as industrial agriculture practices or soil carbon offsetting². Some governments and NGOs also worry that pressure to adopt Climate Smart Agriculture will translate into obligations for developing countries' food systems to take on an unfair mitigation burden. They point out that their agricultural systems have contributed the least to the problem, but that mitigation obligations could limit their ability to effectively adapt to the climate challenges ahead.

Ultimately, there are no means to ensure that 'Climate Smart Agriculture' is either smart for the climate, or for agriculture.

No environmental or social criteria

It might be logical to assume that something that refers to the climate and is supposedly 'smart' would describe intelligent practices that are good for the planet. Agroecological practices, for example, enable farmers and food systems to adapt to a changing climate, while benefiting ecosystems and the atmosphere by ensuring that healthy soils absorb CO₂. ***But while the name may be clever, 'Climate Smart Agriculture' includes some perversely stupid practices that are bad for the climate.***

There are no meaningful criteria for what can – or cannot – be called 'Climate Smart.' Practices or corporations that are destructive to the climate, the environment, and to farmers, are free to use the term. Furthermore, there are no social safeguards to prevent so-called 'Climate Smart' activities from carrying out land grabbing, undermining farmers' livelihoods, pulling farmers into debt, or even suing them for seed saving.

1. World Bank brochure 'Climate Smart Agriculture: A call to action' http://www.worldbank.org/content/dam/Worldbank/document/CSA_Brochure_web_WB.pdf

2. Open letter from civil society on the Global Alliance for Climate Smart Agriculture (2014) <http://www.climatesmartagconcerns.info>

Corporations such as Syngenta, Yara (the world's largest fertiliser manufacturer), McDonalds and Monsanto, which promote synthetic agrochemicals, intensive factory farming of livestock, and promote industrial scale mono-cropping are all jumping on the 'Climate Smart' bandwagon, claiming that they offer solutions to address climate change.

Critics point out that ***the same so-called 'green revolution' industries that have been widely criticised for their significant contribution to climate change and their negative environmental and social impacts on farmers and food systems, have simply re-branded themselves as 'Climate Smart' and continued as before.*** Synthetic fertilisers, for example, contribute significantly to climate-changing greenhouse gases (see Box 1), while large-scale industrial livestock production has been shown to be a major contributor to climate change³. Meanwhile, industrialised agricultural techniques, including the use of Genetically Modified Organisms (GMOs), can increase the vulnerability of farmers to climate change (see Box 2). Not only do large-scale industrial approaches harm the climate, but they put significant pressure on the world's smallholder farmers, often exacerbating debt while eroding their livelihoods, lands and ecosystems⁴.

Box 1: How synthetic fertilisers contribute to climate change

- The creation of synthetic nitrogen fertilisers is energy-intensive, burning large amounts of fossil fuels and leading to high CO² emissions.
- When applied to soil, they can release Nitrous Oxide (N²O), a highly potent greenhouse gas that has 298 times the atmospheric warming effect of CO².
- Synthetic nitrogen fertilisers can cause stable organic matter in the soil to convert to CO² emissions⁵ in the atmosphere.

Claims by agribusiness giants such as Yara and Syngenta, whose core business model is built on the sales of these products, that they offer solutions to climate change, should therefore be treated with scepticism.

At the same time, however, some groups that promote small-scale, agroecological farming practices that really do benefit the climate and farmers are also keen to call their own work 'Climate Smart.' These groups may prioritise small-scale farmers, women, youth, traditional knowledge or participatory approaches. ***Confusion arises when some politicians, policy makers, corporations, NGOs and farmers welcome, promote or collaborate on 'Climate Smart Agriculture' activities – even though these groups may be talking about very different approaches.***



Fatou attends to her kitchen garden with a friend, The Gambia.

PHOTO: SYLVAIN CHERKAOUI/COSMOS/ACTIONAID

3. FAO (2013) Tackling Climate Change through Livestock <http://www.fao.org/docrep/018/i3437e/i3437e.pdf>
4. Special Rapporteur on the Right to Food, Olivier de Schutter (2014) 'The Transformative Potential of the Right to Food.' http://www.srfood.org/images/stories/pdf/officialreports/20140310_finalreport_en.pdf
5. Mulvaney, R.L., Khan, S.A., and Ellsworth, T.R. (2009) 'Synthetic nitrogen fertilisers deplete soil nitrogen: a global dilemma for sustainable cereal production', *Journal of Environmental Quality*, 38, Nov-Dec 2009, p.2295-2314; Khan, S.A., Mulvaney, R.L., Ellsworth, T.R., and Boast, C.W (2007) 'The myth of nitrogen fertilisation for soil carbon sequestration', *Journal of Environmental Quality*, 36, Nov-Dec 2007, p.1821-1832.

There are therefore significant concerns that destructive agribusinesses are able to use climate rhetoric, NGOs, and the general confusion over the term 'Climate Smart Agriculture', to provide 'green-wash' cover to their activities, enabling them to expand into new markets such as Africa and undermine local economies, ecosystems, seed diversity and farmers.

Talk of 'Climate Smart Agriculture' may also have important political consequences at international level. Farmers, NGOs and some developing countries are concerned that pressure in UN climate change policy spaces to adopt 'Climate Smart Agriculture' may translate into obligations for developing countries to prioritise mitigation and carbon sequestration in soils, at the expense of adaptation and food security. The fact that the originators of Climate Smart Agriculture have claimed that mitigation activities in agriculture can earn carbon offsets has also sparked concerns about the increased threat of land grabbing (see 'Agricultural carbon markets' section).

Box 2: How GMOs claim to be 'Climate Smart'

Monsanto is the world's largest producer of genetically modified seeds. Their best-selling technology is seed (soya, maize and canola) that is engineered to resist the company's powerful Glyphosate herbicide, known as Roundup. 'Roundup-Ready' crops can be sprayed with the herbicide as they grow, so that the weeds die back, but the crop remains standing. Monsanto claim that this practice reduces the need to till the soil for weeds, and thus reduces emissions of CO² from the soil. This, they say, makes GM crops a viable solution to climate change, and eligible to earn extra money from carbon offsets.

Sceptics doubt, however, that carbon sequestered in soil is any greater than CO² released in the production of the agrochemicals that the GM crop requires; or even that the sequestered carbon stays in soils after ploughing at the end of each season, as it is easily reversible.

Monsanto is also developing seeds to be grown in Africa that are drought tolerant. They claim that these seeds are also 'Climate Smart.' However these crops, which have taken many millions of dollars in investment, have so far failed to impress, when compared to advances made through conventional (non-GM) breeding processes or indigenous drought-tolerant crops⁶.

GM crops are opposed by many farmers, countries and civil society organisations for a number of reasons, not least of which is because biotechnology companies patent their GM seeds, frequently suing farmers if they save their seed or if their crop is accidentally pollinated by the GM gene⁷. Wherever agriculture has been industrialised, such as through the use of patented GM crops, massive disappearance of seed diversity from farmers' fields has resulted.

Seed diversity and access to a wide range of germplasm is necessary to enable farmers to save and develop crops that adapt effectively to the multiple challenges of climate change⁸. **Industrial agriculture practices such as GM crops thus can increase vulnerability of farmers and food systems in the short and long-term and reduce their adaptive capacity.**

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6. Union of Concerned Scientists (2012) 'High and Dry: Why Genetic Engineering is not Solving Agriculture's Drought Problem in a Thirsty World' http://www.ucsusa.org/assets/documents/food_and_agriculture/high-and-dry-report.pdf
 7. Center for Food Safety (2012) 'Monsanto vs Farmers' 2012 Update <http://www.centerforfoodsafety.org/issues/311/ge-foods/reports/1780/monsanto-vs-us-farmers-2012-update>
 8. The Gaia Foundation (2013) 'Seeds for Life' <http://www.gaiafoundation.org/sites/default/files/seedsforlifereport.pdf>

New alliances, old power imbalances?

New international platforms such as the Global Alliance for Climate Smart Agriculture, and the African Climate Smart Agriculture Alliance are now being set up. As a result, civil society organisations in the global food movement are debating strategy and scope for influence.

Some organisations hope that by joining these platforms, they can influence Climate Smart Agriculture's implementation to focus on agroecology, improve the practices of agribusinesses, or perhaps even benefit from greater outreach or funding.

Many organisations, however, are extremely sceptical of the wisdom of joining these Alliances, or even engaging with them at all. A major concern is that **by joining such platforms and appearing to give Climate Smart Agriculture legitimacy, environmental, development and farmers' organisations may be used to promote the very practices they oppose.**

The Global Alliance for Climate Smart Agriculture will be launched at the UN Secretary General's Climate Summit in September 2014. In an open letter sent to the Alliance organisers in July this year⁹, many civil society organisations expressed their concerns that there were no environmental criteria or social safeguards for those joining the Alliance, and that the lack of clear governance in the Alliance would likely lead to power imbalances favouring wealthy governments and corporations over developing countries and civil society organisations.

The specific aim of the Alliance to influence national policies has raised alarm bells among groups who fear that members such as Syngenta, Yara and McDonalds will seek to use the Alliance and the implied 'Climate Smart' endorsement as PR to expand their markets, especially in developing countries.

The Africa Climate Smart Agriculture Alliance was initiated by NEPAD (the New Partnership for Africa's Development). Structured differently from the Global Alliance, its members are currently composed of four agricultural research partners (FAO, FANRPAN, CGIAR and FARA) and five international NGOs (Care, Catholic Relief Services, Concern Worldwide, Oxfam and World Vision.) The aim of the African Alliance is to reach 6 million farming families over the next 7 years.

Agricultural carbon markets

The FAO and World Bank's claim that Climate Smart Agriculture can be funded by selling soil carbon offsets¹⁰, poses particular risks for the climate, for farmers, the environment, and for food security.

Agriculture, and particularly agroecology, can of course have a role to play in mitigating climate change. Healthy soils - especially those that receive compost and manure, and have abundant micro-organisms and healthy root systems - are rich in soil carbon that has removed carbon dioxide (CO²) from the atmosphere.

However, soil carbon can easily be converted back into atmospheric CO² if the land is ploughed, chemical fertilisers are applied, or if the area suffers from prolonged drought, heavy rain or accidental burning. Sequestration of carbon in soil is therefore considered to be a 'non-permanent' approach to reducing greenhouse gas emissions. It is also extremely difficult, complicated and costly to measure the carbon in soil, especially over large areas¹¹. This means that projects may be obliged to estimate their numbers, which could be highly inaccurate.

9. Open letter from civil society on the Global Alliance for Climate Smart Agriculture (2014) <http://www.climatesmartagconcerns.info>

10. FAO (2011) Climate Change Mitigation Finance for Smallholder Agriculture. <http://www.fao.org/climatechange/29763-0daebe-ae838c70f713da780982f16e8d9.pdf>

11. EU Soils Joint Research Centre 'Soil Atlas of Africa' http://eusoiils.jrc.ec.europa.eu/library/maps/Africa_Atlas/download/37.pdf

Box 3: Carbon offsets

Developed countries, industries and consumers in the North are aware that they need to reduce their emissions. Global carbon markets have emerged based on the idea that developed countries can pay for emission reductions in developing countries, and that the consumer or developed country can thus claim to have reduced greenhouse gas emissions.

The official UN system that allows developed countries to purchase carbon offsets from projects in developing countries is called the Clean Development Mechanism or CDM. The CDM does not currently permit soil carbon offsets to be sold as they are non-permanent. However, some countries are pushing for this to change.

There are also numerous voluntary carbon markets, that enable individual and corporate consumers to purchase carbon offsets, which supposedly allow them to compensate for greenhouse gas emissions such as flying or driving.

Trade in 'carbon offsets' is controversial because the system is highly fallible. Many critics point out that carbon offsetting does not work to reduce emissions overall, and actually delays or prevents polluters from taking the necessary action to reduce their emissions, contrary to the demands of climate justice. Carbon offsetting is not a solution to climate change.

The fact that soil carbon sequestration is 'non-permanent'¹² means that it is a particularly inappropriate for carbon offsetting. A customer can 'buy' a soil carbon offset from a farmer to compensate for their greenhouse gas emissions, but if the farmer ploughs or uses fertiliser and releases CO₂ into the atmosphere after receiving the money, both parties will have contributed to increased emissions, instead of reducing their impact.

There are additional social concerns about soil carbon offsetting. **Soil carbon offsets increase the risk of land grabbing**, as companies who think that they can make money from soil carbon offsetting may seek to control more land. In reality though, very little money from carbon offsetting actually reaches farmers. In the World Bank's pilot Climate Smart Agriculture project in Western Kenya, farmers were not told how much they would be paid for their sequestration. They did not realize that they would only make between \$1-5 a year for their work, after carbon consultants had taken the lion's share of the money raised by selling the offset¹³.



Women members of the Indatwailurim co-operative harvest potatoes, Rwanda.
PHOTO: GREG FUNNELL/ACTIONAID

12. ActionAid (2011) 'Fiddling With Soil Carbon Markets while Africa Burns' http://www.actionaid.org/sites/files/actionaid/actionaid_briefing-fiddling_with_soil_carbon_markets_0.pdf

13. IATP, Gaia Foundation, African Biodiversity Network (2011) 'Soil Carbon Sequestration for Carbon Markets: the wrong approach to agriculture' http://www.iatp.org/files/soil_carbon_durban12-5-11.pdf

International climate negotiations

The increased attention on 'Climate Smart Agriculture' comes during fierce debate in international climate negotiations, about whether or not developing countries should be obliged to change their agricultural practices to reduce climate change.

The major threat of climate change to agriculture and global food security was one of the principle reasons for the creation of the UN Framework Convention on Climate Change (UNFCCC). Developing countries are particularly vulnerable to climate change as they are more exposed to extreme weather events, while the majority of their populations are dependent on agriculture for their livelihoods¹⁴. Implementation of adaptation strategies that strengthen the resilience of farmers and their food systems are therefore of utmost urgency.

Many developing countries point out, however, that their agricultural production systems, which are usually far less industrialised than those of developed countries, have done the least to contribute to the global problem of climate change. They argue that supporting their agriculture to adapt to changing weather conditions should be the most important priority, and that they should not be obliged to take on mitigation commitments in their agriculture. Developed countries, who have intensive production and high consumption models of agriculture, should instead look at changing their own practices, allowing developing countries to focus on their urgent adaptation needs.

However, the countries that are keenest for developing countries to take on mitigation commitments in agriculture, tend to be the most enthusiastic proponents of Climate Smart Agriculture. ***If Climate Smart Agriculture is endorsed in the UNFCCC, this could lead to greater mitigation obligations on developing country agriculture, while adaptation and food security suffer.***

The need to support agroecology

Agroecological approaches are the most effective means of adaptation. By improving the health, structure and nutrition of soil through the use of compost, manure, mulching or green manures, they reduce erosion, improve plant health, and increase the ability of soil to absorb and retain water in times of both drought and flood. Ensuring that farmers have access a diversity of locally-adapted seed varieties is also critical to ensuring that they can deal with a range of unpredictable changes in conditions, such as floods, late rains, or rising sea levels. ***Agroecological approaches are proven to improve the yields, livelihoods and environment of small-scale farmers in the face of climate change***¹⁵.

Furthermore, by reducing the use of greenhouse-gas emitting synthetic fertilisers, such climate-resilient sustainable agriculture approaches also reduce farming's contribution to climate change¹⁶. This approach must therefore be prioritised for both developed and developing countries.

The financing of adaptation efforts is a key issue for developing countries. Adaptation and food security efforts require substantial, stable, new and additional public finance. But Climate Smart Agriculture, driven in large part by agribusiness corporations seeking to develop new public-private partnerships could prove a distraction to public finance. Governments must be extremely wary of relying on the profit-driven private sector to deliver services as essential to future survival as the adaptation of food security.

14. IPCC (2012) Managing the risks of extreme events and disasters to advance climate change adaptation (SREX) http://ipcc-wg2.gov/SREX/images/uploads/SREX-SPMbrochure_FINAL.pdf

15. ActionAid & IFSN (2012) Fed Up: Now's the time to invest in agroecology http://www.actionaid.org/sites/files/actionaid/fed_up_-_nows_the_time_to_invest_in_agroecology.pdf

16. ActionAid (2012) Climate Resilient Sustainable Agriculture: a real alternative to false solutions http://www.actionaid.org/sites/files/actionaid/crsa_backgrounder_june_2012_design.pdf

Conclusion

The idea of 'Climate Smart Agriculture' may sound appealing to many organisations and governments. The concept is being heavily promoted through a range of international fora, including UN climate negotiations, in the hope that it will gain official UN endorsement. However, Climate Smart Agriculture should be approached with caution, as it may serve to green-wash agricultural practices that are known to be harmful to the climate and farmers.

There are no climate, environmental or social criteria for what can be called 'Climate Smart Agriculture.' The term can therefore provide a platform for powerful agribusinesses and governments to manipulate global concern about climate change, simply to promote their own interests. The result of this could well be an *increase* in climate change and vulnerability of farmers and food systems.

The new Global Alliance for Climate Smart Agriculture has been set up to provide a platform to promote and spread the idea of 'Climate Smart Agriculture' to countries and communities around the world. While some civil society groups in the global food movement hope to use the idea of 'Climate Smart Agriculture' and its international platforms to promote genuine agroecological solutions, they should be wary of unclear power and decision-making structures. The Global Alliance is likely to favour the agendas of agribusinesses and rich countries over those of farmers, NGOs and developing countries. There is therefore a significant risk that the presence of such groups on these platforms will be used to legitimise the very practices they may oppose.

We know that genuine, climate-resilient sustainable agriculture approaches that are grounded in agroecological practices are urgently needed to help food systems adapt to and mitigate climate change. But we must ask what additional real benefits these new emerging platforms for Climate Smart Agriculture could bring; the answer is still far from clear.

Growing interest in Climate Smart Agriculture is therefore creating confusion in the food movement. Farmer and civil society organisations must approach it with caution, and continue to ask key questions. Climate Smart Agriculture's clever name should not distract us from its inherent power imbalances, and the fact that it may offer more risks than benefits to the climate and our food systems. ***Endorsing these processes could prove to be a losing game, where the benefits are unclear and out of reach, but the negative consequences inevitable.***

NGOs and governments must avoid opening the door to false solutions under vague 'Climate Smart' rhetoric; instead they should be specific about mobilizing public finance and supporting genuinely agroecological solutions to climate change.



Shofikun weeds her vegetable garden, Bangladesh.
PHOTO: NICOLAS AXELROD/ACTIONAID

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