Template for comments

Date: 27.1.16	Document: ActionAid Submission on UNFCCC concept note for "Agriculture CDM"

TABLE FOR COMMENTS

Name of submitter: _____Teresa Anderson_____

Affiliated organization of the submitter (if any): _____ActionAid International_____

Contact email of submitter: _____teresa.anderson@actionaid.org_____

0	1	2	3	4	5	6
#	**Para No./ Annex / Figure / Table**	**Line Number**	**Type of comment** **ge = general** **te = technical** **ed = editorial**	**Comment (including justification for change)**	**Proposed change (including proposed text)**	**Assessment of comment (*to be completed by UNFCCC secretariat*)**

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1	Para 4		ge	Agriculture is not appropriate for inclusion in carbon markets. The CDM already suffers from an oversupply of credits and is on the verge of collapse. This has undermined ambition in real climate action and emissions cuts. Adding agriculture to the CDM will not only further exacerbate the oversupply and further threaten the CDM, but it will further threaten climate change. Actions in the land sector and agriculture, especially soil carbon sequestration, are particularly at risk of lack of environmental integrity, as temporary biological sequestration of carbon should not be seen as equivalent to permanent reductions of GHG emissions from fossil fuels. The role and potential of the land sector has been overstated. The CDM has failed to benefit developing countries or climate change. Overall, this paper indicates insufficient understanding and depth of the issues and challenges. It gives the false impression that an Agriculture CDM is both achievable and appropriate. It fails to sufficiently examine: i) The strengths and weaknesses (in terms of environmental integrity or social impacts) of various methodologies. ii) Whether Agriculture should be included under the CDM at all. It fails to even note that the many technical and social challenges remain unresolved.	Include additional section(s) that strongly acknowledge(s) that it may not be appropriate to have an Agriculture CDM, as many technical, social and economic challenges remain unresolved. The risks and problems of an Agriculture CDM must be carefully considered, and there must be a clear option not to have an Agriculture CDM at all. This should be reflected in the conclusions, as well as throughout the paper.	

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2	Para 7		Te	The potential of soil carbon sequestration is in fact limited. Recent studies have shown many estimates to have overstated the potential. Carbon storage on land as a means to "offset" CO2 emissions from burning fossil fuels is scientifically flawed. Fossil fuel CO2 emissions are irreversible; however land based carbon sequestration is temporary. The capacity of terrestrial ecosystems to store carbon is finite and the current sequestration potential primarily reflects depletion due to past land use. Avoiding emissions from land carbon stocks and refilling depleted stocks reduces atmostpheric CO2 concentration, but the maximum amount of this reduction is equivalent to only a small fraction of potential fossil fuel emissions. The concept of "permanence" as addressed in the CDM should therefore recognise the long time scales involved and the inability to offset fossil emissions with land carbon sequestration. Current rules on non-permanence should not be weakened to facilitate trading of land-based carbon credits. Refs: - Fern 2014 "Misleading numbers – the case for separating land and fossil based carbon emissions." - Mackey et al, 2013, Untangling the confusion around land carbon science and climate mitigation policy, Nature Climate Change 3 552-557 - Archer, D et al. Atmospheric lifetime of fossil fuel carbon dioxide. Annu. Rev. Earth Planet. Sci 37, 117-34 (2009) - Kee Lam et al, 2013, Scientific Reports " The potential for carbon sequestration in agricultural soils is technically and economically limited." - Powlson et al, 2011, European Journal of Soil Science "Soil carbon sequestration to mitigation climate change: a critical re-examination to identify the true and false"	Acknowledge this concern in relevant sections of the text throughout the paper.	

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3	Para 7 i (new sub-para)		Te/ ed	Agriculture is not appropriate for inclusion in carbon markets. The CDM already suffers from oversupply, and addition of temporary soil carbon sequestration credits that are at high risk/ certainty of reversals can further weaken trust in the environmental integrity of the CDM as a whole.	Agriculture is not appropriate for inclusion in carbon markets. The CDM already suffers from oversupply, and addition of temporary soil carbon sequestration credits that are at high risk/ certainty of reversals can further weaken trust in the environmental integrity of the CDM as a whole.	

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4	Para 7 ii (new sub-para)		Te/ ed	With the challenges of counting emissions reductions and distributing offset payments to multiple small-scale farmers, there is a risk that an agricultural CDM would favour large-scale farmers or monocultural farming practices. This could effectively serve to subsidize large-scale farmers and undermine the competitiveness, livelihoods and diversity of smallholder farmers, leading to a decline and disappearance of small-scale farmers and the social, economic and biodiversity benefits that they bring to communities.	With the challenges of counting emissions reductions and distributing offset payments to multiple small-scale farmers, there is a risk that an agricultural CDM would favour large-scale farmers or monocultural farming practices. This could effectively serve to subsidize large-scale farmers and undermine the competitiveness, livelihoods and diversity of smallholder farmers, leading to a decline and disappearance of small-scale farmers and the social, economic and biodiversity benefits that they bring to communities.	

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5	Para 7 iii (new sub-para)		Te/ ed	Monitoring of soil carbon has been found to be particularly challenging, as soil sequestration can vary enormously on even small plots of land, and is at high risk of reversals. Thus data, even when accurate, may easily go out of date. MRV processes often require the use of "proxy" numbers as estimates, which are not based in actual numbers and have dubious environmental integrity. High transaction costs associated with MRV make soil carbon prohibitive for MRV and trading.	Monitoring of soil carbon has been found to be particularly challenging, as soil sequestration can vary enormously on even small plots of land, and are at high risk of reversals. Thus data, even when accurate, may easily go out of date. MRV processes often require the use of "proxy" numbers as estimates, which are not based in actual numbers and have dubious environmental integrity. High transaction costs associated with MRV make soil carbon prohibitive for MRV and trading.	

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6	Para 7c		Ge/ ed	Current CDM methodologies are based on scientific principles of environmental integrity and permanence. These scientific principles should not be ignored and undermined. These limitations were identified under the Marrakesh Accords. Even though there is greater political interest in an Agriculture CDM, the science has not changed since Marrakesh. The rules defined by the Accords must therefore still hold. Before asking how to address the methodological challenges, it may be more appropriate to first ask whether or not the CDM should be going down this route in the first place.	Current CDM methodologies are based on scientific principles of environmental integrity and permanence that cannot be easily addressed. It is not necessary, possible nor appropriate to bypass the Marrakesh Accord principles.	
7	Para 7d		Ge/ te	Absolutely correct. These uncertainties mean that it may be impossible to ensure environmental integrity.		
8	Para 7 f		Te/ ed	The perception that mitigation projects may affect or cap agriculture production may be false in some cases, but may be true in others. This paper fails to show evidence that such perceptions will always be untrue.	Option 1: Delete para 7f Option 2: Delete "false" so that it reads "Project development is hampered by the perception that mitigation projects will affect or cap agriculture production.	

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9	Para 7g		Te / ed	Developing countries may be unconvinced of the benefits that CDM may bring. The last World Bank report to give disaggregated data, "State and Trends of the Carbon Market 2010" showed that in spite of a total global carbon market volume of $144 billion, only 0.2% of this figure actually went to project-based transactions. Carbon consultants, MRV costs and financial speculators took the lion's share of the market volume, which meant that developing countries failed to benefit.	Add to the end of the paragraph: "and may be unconvinced of the benefits that CDM may bring. The last World Bank report to give disaggregated data, "State and Trends of the Carbon Market 2010" showed that in spite of a total global carbon market volume of $144 billion, only 0.2% of this figure actually went to project-based transactions, which meant that developing countries failed to benefit."	

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10	3.1		Te/ ed	References and assumptions about soil carbon capacity should be examined more closely. Carbon storage on land as a means to "offset" CO_2 emissions from burning fossil fuels is scientifically flawed. Fossil fuel CO_2 emissions are irreversible; however land based carbon sequestration is temporary. The capacity of terrestrial ecosystems to store carbon is finite and the current sequestration potential primarily reflects depletion due to past land use. Avoiding emissions from land carbon stocks and refilling depleted stocks reduces atmostpheric CO_2 concentration, but the maximum amount of this reduction is equivalent to only a small fraction of potential fossil fuel emissions. The concept of "permanence" as addressed in the CDM should therefore recognise the long time scales involved and the inability to offset fossil emissions with land carbon sequestration. Current rules on non-permanence should not be weakened to facilitate trading of land-based carbon credits. Refs: - Fern 2014 "Misleading numbers – the case for separating land and fossil based carbon emissions." - Mackey et al, 2013, Untangling the confusion around land carbon science and climate mitigation policy, Nature Climate Change 3 552-557 - Archer, D et al. Atmospheric lifetime of fossil fuel carbon dioxide. Annu. Rev. Earth Planet. Sci 37, 117-34 (2009) - Kee Lam et al, 2013, Scientific Reports " The potential for carbon sequestration in agricultural soils is technically and economically limited." - Powlson et al, 2011, European Journal of Soil Science "Soil carbon sequestration to mitigation climate change: a critical re-examination to identify the true and false"	Note that IPCC AR4 assumptions about global soil carbon capacity have been questioned in subsequent papers. Note that fossil fuel emissions are permanent, while land-based sequestration is temporary. This poses a significant challenge to the concept of offsetting using soil carbon. Many stakeholders are not convinced that these challenges can be sufficiently addressed.	

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11	Table 2 Biochar	**NS 217**		The environmental integrity of biochar as a sequestration strategy is highly questionable. Serious questions about the sources and likely alternative use of biomass to create biochar apply to many biochar projects. Claims that agricultural waste residues would otherwise be treated as waste are rarely true, because they are usually put to alternative agricultural use for improving soils. The soil carbon sequestration benefits from biochar are highly questionable due to the high risk of reversibility. Furthermore, the scaling up of biochar approaches and the need for increased biomass could drive land grabs.	Delete NS217	

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12	3.4.1		Te/ ed	Hundreds of civil society organisations working on agriculture, land, food and farming issues have expressed their profound concerns with the GACSA. The GACSA does not contain any criteria or definitions for what can or cannot be called "climate smart agriculture". Industrial approaches that increase GHG emissions and farmers' vulnerability by driving deforestation, using genetically modified (GM) seeds, increasing synthetic fertiliser use or intensifying industrial livestock production, all use the label of "climate-smart agriculture" to promote their practices as solutions to climate change Groups are concerned that Companies with activities resulting in dire social impacts on farmers and communities, such as those driving land grabbing or promoting GM seedsalready claim that they are "climate-smart." The Global Alliance on Climate-Smart Agriculture may serve to promote space social and environmental offenders in agriculture, thus exacerbating climate change instead of addressing it. Only 10% of UNFCCC member countries are GACSA members. However the majority of private sector members are representatives from the synthetic nitrogen fertilizer industry. See: http://www.climatesmartagconcerns.info for a series of civil-society letters opposing the GACSA. The most recent letter (Sept 2015) was signed by over 350 organisations.	Delete paragraphs 17-20	

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13	Table 4 Croplands – plant management		Ge/ Te/ ed	Concerns over this methodology and pilot project have been pointed out in the following briefings: IATP, 2011: Elusive promises of the Kenya Agricultural Carbon Project http://www.iatp.org/documents/elusive-promises-of-the-kenya-agricultural-carbon-project IATP, 2011: Soil Carbon Sequestration for Carbon Markets: The wrong approach to Agriculture http://www.iatp.org/documents/soil-carbon-sequestration-for-carbon-markets-the-wrong-approach-to-agriculture	- Ensure that there is an additional section that acknowledges the weaknesses and inherent problems of these methodologies. Indicate that they are not appropriate for scaling up or inclusion in CDM. - Delete all methodologies under "Croplands – plant management"	
14	Table 4 Croplands – nutrient management		Ge/ Te/ Ed	Although fertilizer companies may claim that they can reduce fertilizer use on agricultural crops, and that this should be eligible for carbon emissions, any fertilizer application is harmful to the climate. Not only is N-fertiliser production highly energy intensive, but N-fertiliser has been shown to kill of soil microbes and reduce carbon in soils, thus contributing to climate change. This reduction in soil carbon reduces the water carrying capacity of soils and increases crops' vulnerability to climate change. Incentivising and subsidizing fertiliser use (even reduced use) through CDM credits would be a particularly perverse and counter-productive climate strategy.	- Ensure that there is an additional section that acknowledges the weaknesses and inherent problems of these methodologies. Indicate that this is not appropriate for scaling up or inclusion in CDM. - Delete methodology VCS: VM0017 - Delete methodology ERF: Estimating sequestration of carbon in soil using default values (model based soil carbon)	

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15	Table 4 Croplands – tillage/ residues management		Ge/ Te/ Ed	In addition to the challenges of retaining and measuring soil carbon (see above) these methodologies may include the use of Genetically Modified Organisms (GMOs) such as those promoted by Monsanto, particularly soya, maize and canola seed 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. It is questionable, however, to claim 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.	- Ensure that there is an additional section that acknowledges the weaknesses and inherent problems of these methodologies. Clearly indicate that GMOs are not appropriate for scaling up or inclusion in CDM. - Delete methodology CS: Increasing soil carbon through improved tillage practices.	

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16				GM crops are opposed by many farmers, countries and civil society organisations for many 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 gene. 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 use and develop crops that can adapt to the multiple challenges of climate change. 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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17	Table 4 Biochar application		Te/ ed	The environmental integrity of biochar as a sequestration strategy is highly questionable. Serious questions about the sources and likely alternative use of biomass to create biochar apply to many biochar projects. Claims that agricultural waste residues would otherwise be treated as waste are rarely true, because they are usually put to alternative agricultural use for improving soils. The soil carbon sequestration benefits from biochar are highly questionable due to the high risk of reversibility. Furthermore, the scaling up of biochar approaches and the need for increased biomass could drive land grabs. See: Biochar Land Grabbing – the impact on Africa. (Biofuelwatch , African Biodiversity Network, Gaia Foundation – 2010) http://www.gaiafoundation.org/sites/default/files/documents/biocharafricabriefing.pdf	- Ensure that there is a section that acknowledges the weaknesses and inherent problems of these methodologies, such as the scientific, environnmental and social challenges of biochar. Indicate that this is not appropriate for scaling up or inclusion in CDM. - Delete methodology for Biochar application.	