

Towards a Regulatory Framework for Climate Smart Agriculture

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Background of the problem

Climate change, agriculture and food security are linked in three, interrelated, ways:

1. Emissions from agriculture contribute to climate change: between 20 and 25% of global emissions are from this sector. So far, most states, including the EU, have been reluctant to address these emissions. Agriculture also offers great sequestration potential, through crops and other vegetation on agricultural land and through soil carbon. The Paris Agreement goals of limiting average global temperature rise to between 1.5 and 2 degrees Celsius can only be achieved through drastic reductions of emissions and full and effective use of the sequestration potential.
2. Agriculture will be hit hard by the impacts of climate change. The IPCC predicts negative yield impacts for all major crops in tropical and temperate regions as well as an increase in irrigation demand of more than 40%.
3. Global food demand is rising sharply until 2050 due to population growth, greater affluence in countries like China and India, and increased biomass supply for energy production. At least a 40% increase in food production is needed. This increase will be hampered by the impacts of climate change (see 2), and will lead to an increase in greenhouse gas emissions (see 1).



This research project

The goal of this project is to identify the main elements of a regulatory framework that enables, facilitates, and stimulates the transition of conventional farm practices toward climate smart practices. Climate smart agriculture (CSA) is an approach to developing the technical, policy, and investment conditions to achieve sustainable agricultural development for food security under climate change (FAO 2013). Examples of CSA are: rotational grazing, introducing/preserving permanent vegetation, increasing carbon in soils, improve water retention, capture methane from livestock and convert to biogas, improve digestion of cattle, introduce resilient crops and crop rotation. The project has three phases. In phase 1, the Australian carbon farming initiative was evaluated, to find lessons and best practices for a future EU legal framework. Phase 2 researched the international law boundaries for a future EU policy on climate smart agriculture, with a focus on climate law, trade law, and disaster law. Phase 3 focuses on the EU Common Agriculture Policy and its climate policy, with the aim to develop the main elements of a future regulatory framework on CSA. The methodologies used are desk study, case studies and stakeholder interviews.

Results

Both the desk study and the empirical research into the experiences with the world's only comprehensive and long standing legislation on reducing emissions from agriculture, the Australian Carbon Credits (Carbon Farming Initiative) Act 2011, showed that the Australian legislation provides an elaborate legal framework that seems well suited to assess project applications and issue credits to participating farmers who, through these projects, generate real and additional emission reductions. Especially the switch from a purely market based mechanism to a mechanism under which the government buys up credits for a fixed price (in 2015), increased participation by farmers by reducing uncertainty about the revenue to be generated through the projects. The experiences in Australia form a reliable basis for recommendations to policymakers and regulators around the world who wish to develop a regulatory framework aimed at stimulating farmers to convert to farming practices that reduce greenhouse gas emissions or even to broaden climate-smart practices. The following lessons may be drawn:

1. A policy aimed at stimulating carbon farming has to be reliable and provide certainty for at least ten to twenty years. Farmers who want to introduce carbon farming have to implement structural changes to their farming practices with long-term impacts on their business.
2. A policy that has a wider focus on adaptation, food security, resilient and sustainable farm businesses, and securing and creating jobs in the agribusiness sector is likely to be more successful than one that only focuses on reducing emissions from agriculture.
3. Developing climate-smart methodologies that not only deliver real, additional, measurable, and verifiable emission reductions but also foster long-term innovation and create economic, social, and environmental co-benefits is essential for the success of any policy aimed at stimulating CSA.
4. Having a robust and reliable MRV system in place is, as with the ETS, essential. By contrast with most sectors, in agriculture, MRV is very site-specific and can be labour-intensive, especially in the case of carbon sequestration. Private consultancy businesses will have to play a major role here. Research is needed to develop reliable and less labour-intensive methods to assess the amount of emission reductions achieved or carbon sequestered.

Desk research into the current international law framework shows that:

1. The Paris Agreement, nor the UNFCCC, explicitly address the relationship between climate change and agriculture.
2. The WTO's Agreement on Agriculture and the Agreement on Subsidies and Countervailing Measures restrict domestic policies aimed at stimulating CSA.
3. International disaster law is not ready to address the expected increase in food shortages, especially in developing countries.



Towards EU legislation on CSA

Despite its fairly poor overall climate change policy, Australia has shown that it is possible to regulate for the reduction of emissions from agriculture and for increased sequestration in agricultural soil and vegetation on agricultural lands. In order to achieve the Paris Agreement objectives, the EU has to start developing policies and laws fast to unlock the potential of the agricultural sector, so that climate-smart agricultural practices are commonplace before production levels increase following the expected dramatic increase in demand for food products.

The Common Agriculture Policy's Green Direct Payment (1st pillar), and Rural Development Priorities (2nd pillar) can be used to drastically shift agricultural subsidies from conventional to climate smart farms. Extensive MRV rules need to be developed.

In addition, the EU ETS should be linked to the Effort Sharing Decision, so as to enable ETS installations to acquire offsets in agriculture, thus increasing funding for climate smart farmers.

Publications

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