

Towards regulating climate smart agriculture: lessons from Australia's Emissions Reduction Fund

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Seminar: A Stocktake on the Emissions Reduction Fund
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Introduction

- Who am I and what am I doing here?
 - Horizon 2020/Marie Skłodowska Curie Global Fellowship (academics mobility & advancing EU's policy areas)
 - Aim: identify the main elements of a regulatory framework that enables, facilitates and stimulates the transition of conventional farm practices toward 'climate smart' practices in the EU
- Set up of my presentation:
 - Some background on climate change-agriculture-food security
 - Research into experiences with Australia's Carbon Farming Initiative/Emissions Reduction Fund: lessons?
 - What does the CCA's 'Toward a Climate Policy Toolkit' say?
 - Take home messages

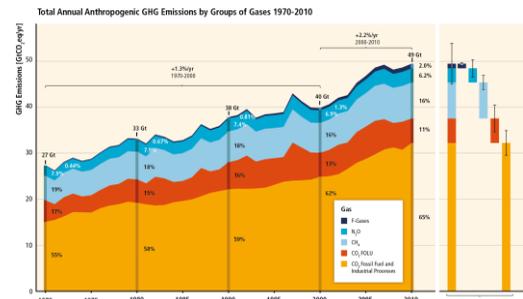


Background: climate change & food security

- Agriculture contributes to climate change
 - Contribution agriculture, forestry and other land use (AFOLU): about 25% of all anthropogenic emissions
 - Non-CO₂ emissions:
 - methane: livestock, rice cultivation (25x impact CO₂)
 - nitrous oxide: synthetic fertilizers, manure on soils and pasture (300x impact CO₂)
 - CO₂ emissions: deforestation, peatland drainage
 - But: also important source of carbon sequestration (soils and vegetation: crops, grassland, trees)
 - Global emissions from agriculture have been rising since 1990 (down in Europe, up in Asia)



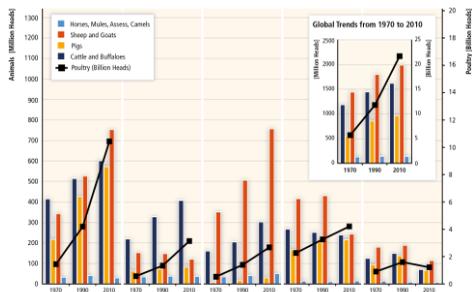
Contribution AFOLU to global GHG emissions



Source: P. Smith et al., Agriculture, Forestry and Other Land Use (AFOLU). In: Climate Change 2014: Mitigation of Climate Change, WGII, IPCC AR5 (Cambridge University Press)



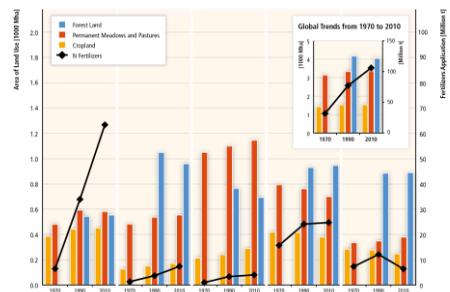
Sharp increase livestock (esp. poultry in Asia)



Source: P. Smith et al., Agriculture, Forestry and Other Land Use (AFOLU). In: Climate Change 2014: Mitigation of Climate Change, WGII, IPCC AR5 (Cambridge University Press)



Sharp increase use of synthetic fertilizers



Source: P. Smith et al., Agriculture, Forestry and Other Land Use (AFOLU). In: Climate Change 2014: Mitigation of Climate Change, WGII, IPCC AR5 (Cambridge University Press)



Bring in the law: Paris Agreement (2015)

- International agreements on climate change:
 - UNFCCC (1990)
 - Kyoto Protocol (1997)
 - Paris Agreement (2015)
- Agriculture not mentioned, except: mitigation policy cannot negatively impact on food security
- Paris Agreement:
 - well below 2°C or at 1.5°C (Art. 2) ≈ 90% emission reduction
 - transition to net zero carbon emissions worldwide
- Agriculture pivotal (reduce emissions & increase sequestration)
- Domestic policies largely lacking (including in the EU)



Domestic law aimed at stimulating climate smart agriculture: Australia's unique approach

- Some countries now allow industries to obtain offsets from agriculture as part of emissions trading scheme (California, Alberta, Japan), recent, limited impact
- Australia has stand alone programme, five years of experience
 - Carbon Farming Initiative (CFI) / Emissions Reduction Fund (ERF)
 - Very complex piece of legislation: 300 pages of text of CFI Act, plus another 100 pages of CFI Rule, plus hundreds of pages on methodologies
- Basics:
 - Emission avoidance and sequestration projects can generate credits
 - Only when covered by accredited methodology, contains standards to ensure that emission cuts are:
 - Additional, measurable, verifiable
 - Extensive rules on monitoring and reporting
 - Clean Energy Regulator (CER) issues credits after 1st reporting period
 - Credits can be purchased by CER under carbon abatement contracts, through reversed auctions (x amount of abatement, against y costs)



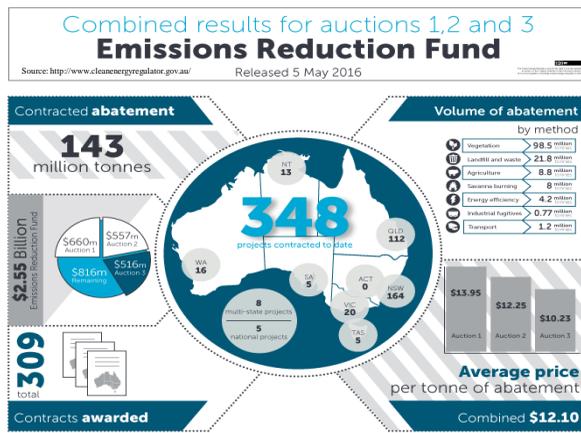
Research into experiences: methodology

- Desk study: legislation, government documents, Climate Change Authority CFI review (2014)
- Case studies of selected CFI/ERF-projects
 - Goal: better understanding of projects, back ground info for interviews
- Interviews with key players within different stakeholder groups:
 - Government (CER, Dept. of Environment)
 - Farmers (NFF, Australia Pork)
 - Consultants (Carbon Farmers of Australia, Corporate Carbon, Climate Friendly)
 - Financial and accountancy (Rabobank, Baker & McKenzie)
 - NGOs (The Climate Institute)



Experiences carbon farming: successes

- Successful, but only after 2015 change of policy (ERF instead of carbon market):
 - 630 projects, most on vegetation, most on agricultural lands, 143 million tonnes of CO₂-e abatement
 - stimulated farmers to move to climate smart agriculture
 - advanced knowledge (soil carbon for instance)
 - many co-benefits: economic, climate resilience, biodiversity
 - regulatory framework is robust and ensures integrity
 - real reductions (monitoring)
 - additional reductions (beyond business as usual, projects wouldn't have happened otherwise *mostly*)
 - high level of compliance (auditing system works well)



Experiences carbon farming: limitations

- Lack of accepted methods for many branches in the sector
- The large majority of small farms is not involved
 - 'aggregation' practiced, but has several problems
 - 'whole of farm'-method suggested as a solution for small farms
- High overhead costs, for government and farmers
 - Complexity: farmers need consultants
 - More automated monitoring and reporting systems needed
- Government budget alone can never fund sector wide transition to CSA: private funds have to come in (options: tightening safeguard mechanism for industry/energy sector, linking to ETS, or financing through carbon tax revenue)
- Doubtful whether CSA will solve all problems (production increase may offset reductions achieved): dietary changes?



What does the CCA's special review say?

- *Towards a Climate Policy Toolkit* (Climate Change Authority, August 2016):
 - ERF offsets scheme for agriculture and land use is a good instrument, keep it!
 - New method development & research should be supported by Australian government
 - Safeguard mechanisms create demand for land-based offsets
 - Until such demand occurs, government should keep on purchasing ACCUs
 - State and territory governments should create synergy between ERF and their natural resource management policies so as to encourage farm productivity, carbon storage and reduce emissions (in other words: promote climate smart agriculture)

Take home messages

- Farmers have to implement structural changes with long term impact on their business: a reliable, long term policy required!
- Policy should not focus on getting emissions reductions alone, but on adaptation, food security, landscape conservation, biodiversity, and jobs as well: create resilient, sustainable farms
- Accepted climate smart agriculture-methods should also foster long term innovation and create economic, social and environmental co-benefits, science has to be central in the development of methods
- Current rules on monitoring, reporting and verification are very good, automated systems need to be further developed
- Thank you Australia! Lessons from Australia's approach to carbon farming are relevant for the rest of the world, including the EU

Questions and discussion

