Up scaling Climate Smart Agriculture

Climate-smart agriculture for food security

June 10th 2011 Bonn

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Outline

- Introduction – Characteristics of the Kenyan Agric Sector
- Legal Provisions/ Ongoing efforts/ activities

and

- Climate Smart Agriculture- Triple win
- Plans for up scaling- Support by WB
- Challenges
- Conclusion
- Way forward for COP17

Introduction- Characteristics of Kenyan Agric Sector

- Agriculture is a fundamental pillar for sustainable development in Kenya
- Only 20% of Kenya's landmass is medium to high potential
- Farming supports about 80% of 39.8m Kenyan population
- About 98% of agriculture is rain fed

Introduction cont'd

- Only 2% is on irrigated systems
- High irrigation potential which is yet to be exploited
- Agriculture in Kenya relies heavily on a wide range of natural resources and ecosystem services
- It is vulnerable to changes in weather and climate
- Majority of farmers are small scale with low levels of investments
- Food, horticultural and cash crops are grown

Contribution of Agriculture

- It Contributes 24% to Real Gross Domestic Product,
- 60% export earnings,
- 70% employment creation,
- 70% of raw materials to industry,
- 45% government budget,
- poverty reduction and achievement of equity in the country dependent on it

Legal Provisions

- Agricultural Sector Development Strategy 2010 - 2020 (ASDS) was adopted in July 2010 and endorsed by 10 Agriculture Sector ministries
- ASDS takes into account National Climate Change Response Strategy (NCCRS)
- NCCRS spells out specific interventions for Agriculture

Legal Provisions continued

- In rolling out the NCCRS we have prepared a concept for quick start projects in Agriculture which include:-
- -Water harvesting for crop production
- -Agroforestry
- - Conservation Agriculture
- -Soil and Water Conservation
- - Agro-biodiversity
- - Research in respective areas

Legal Provisions cont'd

- Kenya signed the CAADP compact with a commitment to spend at least 10% of the national budget on agriculture and to achieve a GDP growth rate of at least 6% in the agricultural sector
- AU/CAADP requested World Bank to screen the existing 18 CAADP investment plans (incl. Kenya) to analyze what programs/interventions have a climate change dimensions and could lead to the "triple win"

Legal Provisions cont'd

- This exercise might lead to an increased resource flow for climate-smart agriculture
- Further to these there is need to develop specific policies to give a framework for various efforts in enhancing food security while adapting to and mitigating climate change.
- Kenya has a Food and Nutrition Policy
- The Ministry intends to develop a policy for Conservation Agriculture
- Kenya has a draft National policy on carbon investments and carbon credits trading

Adaptation and mitigation strategies in NCCRS

- **Promote irrigated agriculture**
- **Building or enhancing systems for conveying climate information to rural populations**
- **Addressing land degradation**
- **Promotion of Conservation Agriculture (CA)**
- **Diversifying rural economies to reduce reliance on climate sensitive agricultural practices**
- **Promoting greater agricultural research and development (R&D)**

Strategies in NCCRS cont'd

- Encouraging the production of drought tolerant and early maturing crops
- Increasing capture and retention of rainwater- water harvesting
- Development of an innovative Insurance Scheme
- Strengthening integrated pest management systems
- Development of proper food storage facilities to cater for surplus harvest

What the Ministry is doing

- Looking at Agriculture as part of the solution
- Promoting practices which increase productivity while enhancing adaptation and contributing to mitigation such as C A
- Promoting Agroforestry- Farm Forestry Rules, 2009
- Encouraging practices with less of external inputs where appropriate
- Promotion of drought tolerant crops, including orphan crops
- Soil and water conservation for intensification

Other Developments

- A project on Reducing Vulnerabilities to CC by GIZ. Main thrust is weather Index Insurance(WII) and support in adaptation
- WIND project by Bill& Melinda Gates : Focus is weather information and WII
- Institutional orientation: Climate Change Unit step up to coordinate, roll out initiatives and give strategic support to climate change activities
- This was previously a focal point

Climate Smart Agriculture

- This entails production systems that combine three aspects of increased productivity/food security, climate resilience and carbon sequestration.
- This essentially means farmers are getting better returns from increased yields on a sustained basis and further they contribute to mitigating climate change through the carbon sequestered within the production area
- Adapting to CC leads to Increased productivity and mitigation (which we refer to as CSA)

CSA cont'd

- The farmer does not need to make any conscious effort to sequester carbon but rather it is a by product of the sustainable land management practices that the farmer employs to realise high yield on a sustained basis in the face of CC
- Therefore there nothing new we are introducing with the concept of CSA
- Rather CSA brings out some hidden value in these sustainable agricultural production systems; that is the carbon

1.The Agriculture Carbon Project

- This is a project implemented by SCC Vi-Agroforestry in Western Part of Kenya
- The aim is addressing climate change adaptation and mitigation in agriculture sector among smallholder farmers to improve productivity for sustained food security and supply

Agric Carbon Project Cont'd

- The project begun as an Agroforestry project for sustainable land management
- The project has a capacity to target 60,000 smallholders farmers of land sizes 0.5 – 5 acres
- There is systematic support to farmers groups in enhancing productivity while ensuring sustainability
- The area of adoption is cropland or grassland
- The project has gone a notch higher in getting farmers to sell carbon through Biocarbon Fund

Agric Carbon Project Cont'd

- The project will progressively adopt Sustainable Agriculture Land Management practices on 45,000 ha to sequester carbon on both soil and biomass.
- Expected Emission Reductions/Carbon amount sequestered: The project has the capacity to sequester 1.2 m t CO2eq over 20 years, and averagely 60,000 tCO2e per year is sequestered.

Agric Carbon Project Cont'd

- Technical sequestration is assumed; that Sustainable Agriculture Land Management practice can sequester an average 1.4 tCO2e per ha per year.
- Price picture: 2-6 USD/tCO2
- Caution: The money from carbon sales is small for paying individual farmers but may be used at group level
- Therefore carbon should not be the highlight of these activities

Agric Carbon Project Cont'd

- The methodology for this is under development
- The project has been successful as witnessed from the fields and testimonies from participating farmers
- It is now time to up scale these good practices

2. Conservation Agriculture

- CA entails three principles; Minimum soil disturbance, a more or less permanent soil cover and crop rotations and or associations
- CA has been practiced and promoted in Kenya for quite some time now
- Benefits clear in terms of sustained increase in yields- up to 40% has been realised
- However the uptake of CA has been rather slow due to a number of constraints that were conclusively identified in a stakeholder consultation process with support of COMESA

CA Cont'd

- Framework for up scaling CA was developed with support from COMESA and ready for implementation
- The framework was structured such that it addresses the challenges and constraints identified which included:
- - CA technology- availability and cost
- - Inadequate Capacity for CA across and
- - Inadequate collaboration among the players

Components of the CA Project

- Adaptation and mitigation- Promotion of specific technologies
- Capacity Building- staff, farmers and collaborator
- Public Private Partnership (technology, value addition and support to other agencies), and
- Project management- coordination and management

Up scaling- World Bank Support for Readiness Mechanisms for Climate-Smart Agriculture

- The World Bank will support Kenya to design and implement a readiness process aimed at facilitating the widespread implementation of climate-smart agricultural programs
- This will be based on experiences of the pilot project implemented by SCC Vi-agro forestry in Western Kenya
- This is one of the first projects worldwide where smallholder farmers will have access to carbon revenues.

Objectives of the Program

- support for the development of an institutional framework facilitating climate-smart agricultural development;
- development of Monitoring, Reporting and Verification (MRV) guidelines for the agricultural sector at national level;
- Identification (and possibly testing) of financial instruments which have the potential to leading to scaling-up of these investments.

Challenges

- Cost of farm inputs and accessible credit facility
- Availability of planting materials for crops / trees
- Combination of crop/ livestock enterprises in CA
- Measurements of soil carbon- in CA and others
- some practices are labour intensive at the start
- Benefits take long to be realised- opposed to quick fixes
- What incentives to give farmers to encourage these practices without creating dependency
- Failed marketing systems- farmers don’t get value for their efforts

Conclusion

- since the poor are predominantly engaged in agriculture climate resilient agricultural investments are important
- In addressing food security there is need to promote sustainable land management practices including mitigation actions producing triple wins

Conclusion cont'd

- In responding to climate change, there is nothing new we are doing in Kenya.
- All we are doing, is what we have always done with greater intensity, emphasis and focus
- This is because adaptation and mitigation to climate change is inherent in most sustainable land/ agricultural practices

Way forward for Durban

- The process leading-up to the UNFCCC COP 17 in Durban, provides a unique opportunity to highlight the critical role of Agriculture in achieving food security and climate change goals
- In particular it is vital that the Durban COP fully endorses the inclusion of agriculture under the Convention, enabling the use of climate finance for both adaptation and mitigation to be available to farmers around the world

The End

Thank you for your attention