The Secretariat for the Common Market for East and Southern Africa (COMESA) has developed a comprehensive approach and program initiative to address climate change within the context of its responsibilities and strategy for promotion of the Comprehensive Africa Agriculture Development Programme (CAADP). The Climate Initiative is divided in two parts, the first directed to Frameworks & Tools (for which funding is already secured), the second to Applications & Learning (to which this proposal is directed).

Introduction

African Heads of State – in cooperation with The New Partnership for Africa’s Development (NEPAD) - launched CAADP to address the pressing livelihood and landscape needs of the African continent. It focuses on four pillars of action thought to most rapidly improve the productivity, competitiveness, and development potential of African agriculture.

The NEPAD Secretariat has developed a road map to facilitate implementation of the CAADP agenda. While recognizing its own role as a facilitator and catalyst for resource mobilization, it assigned the major responsibility for implementation to the regional economic communities (e.g., COMESA) and their member countries.

Implementation is directed to improving the conditions necessary to achieve CAADP goals for agriculture and sustainable natural resource management – and the contribution that achievement in these areas can make to the Millennium Development Goals and to sustainable socio-economic growth at national, regional, and continental levels in Africa.

A country-based roundtable process has been established alongside the pillar frameworks to bring CAADP principles and values into country and regional agricultural and rural development processes.

CAADP, Pillar One

The COMESA Climate Initiative is put forward as an integral part of CAADP, Pillar One, whose purpose is to extend the area under sustainable land management and reliable water control systems, focusing on soil fertility, the moisture-holding capacity of soils, and an extension of the area under (small-scale) irrigation in order to raise output on a sustainable basis and contribute to the reliability of food supplies.
The TerrAfrica process represents an important complement and support to CAADP, Pillar One. It was launched by the Global Environmental Facility (GEF) and World Bank to support and strengthen the implementation of the UNCCD, CAADP and the NEPAD Action Plan for the Environment. Its mission is to restore soil fertility in a large part of the African continent, helping boost food security, increase farm incomes, maintain ecosystem services, and engage local communities in better managing their lands.

COMESA, for its part, has developed partnership arrangements with the World Agroforestry Center (ICRAF) and Worldwide Fund for Nature (WWF) to support its work related to CAADP, Pillar One. Many international conservation and development organizations have designed new projects and launched major new initiatives to address issues of biodiversity loss, deforestation, land degradation, agricultural productivity, and climate change. But rarely have these problems been addressed in as coordinated a manner as now proposed by COMESA, NEPAD, ICRAF, and WWF.

Context and Rationale

Several important changes have created this new opportunity to address persistent problems of rural poverty and environmental degradation, which have impeded development in much of Africa, while at the same time addressing the local threat of climate change and the global need for mitigation measures. First, climate change is increasingly recognized as a challenge to development, particularly in Africa where its effects may be most severe. Second, new technical knowledge is being rapidly accumulated in the fields of sustainable agriculture, land and water management. And, third, global requirements for reductions in greenhouse gases have led to expanding carbon markets that could be used to support more sustainable land use.

Climate, Agriculture, Land Use and Livelihoods

The United Nations’ Millennium Development Goals (MDGs) establish two interrelated objectives: poverty alleviation and environmental sustainability. The first MDG sets as an objective to halve the number of people living in poverty and suffering from hunger. The seventh MDG sets as an objective to integrate the principles of sustainable development into country policies and programs and to reverse the loss of environmental resources. Although the environmental target is not accompanied by quantifiable indicators, its attainment is both measurable and of fundamental importance for achieving the other MDGs, especially those
The Millennium Ecosystem Assessment underscores the seriousness of the challenge, finding that the demands on environmental resources are now so great that trade-offs among the services associated with them have become the rule—and that the problem posed by growing demand is compounded by increasingly serious degradation in the capability of environmental resources to provide the services demanded. The Assessment underscores the fact that environmental resource degradation tends to harm rural populations more directly than urban populations and has its most direct and severe impact on the poor.

There is a high correlation among poverty, resource degradation, and rural livelihoods. Over 1.2 billion people in the world live in extreme poverty, of which 900 million live in rural areas where their livelihoods depend on the consumption and sale of natural products. About two-thirds of the rural poor live in ecologically vulnerable areas. And of these, a high proportion live in dryland areas, 250 million of whom are directly affected by desertification and drought.

A significant proportion of the world’s poor are smallholder farmers suffering from the combination and interaction of economic and social deprivation and the degradation of their land and water resources. They are vulnerable people living in vulnerable places. Declining agricultural yields and drought (exacerbated by climate change) are major drivers of poverty among these populations. Under such conditions, poverty alleviation strategies must favor the development of agricultural and sustainable resource management practices that will improve the livelihoods of the rural poor and promote adaptation to climate change. See Annex I (“Climate Change and Poverty”, a background paper for the COMESA Climate Initiative).

Regional Response

Recognizing the regional challenge posed by climate change, the African Heads of State and Government at the African Union Summit in January 2007 called on all stakeholders - including governments, private sector actors, and civil society - to actively address climate change. These leaders highlighted the need to mainstream climate adaptation and mitigation into poverty reduction strategies and economic development plans. To put this recommendation into practice, and in response to COMESA’s initiative, the African Union, NEPAD, and COMESA have created a Working Group on Climate, Agriculture, Forests, Land Use and Livelihoods. Among the stated principles of the Working Group is that it “will build on Africa’s unique avenues and entry points in building capacity and delivering results in the areas of strategic approaches and methodologies, best practice, enabling conditions and innovative sources of finance for
addressing the interrelated challenges of development and climate change.”

Recognizing that climate change magnifies, intensifies and speeds up already serious threats to ecosystems and the people who depend on them, COMESA - working within the CAADP framework - seeks to promote and support adaptation, mitigation and related agricultural, land use and livelihood strategies in East and Southern Africa. See Annex II (“Agriculture, Land Use, Climate and Livelihoods”, a COMESA presentation in Washington, D.C., November, 2007).

New Knowledge

A number of advances in understanding and technical knowledge are brought together in the COMESA Climate Initiative. A rich cross-disciplinary exchange of ideas has begun, making it possible for the first time to apply a sophisticated, science-based approach to design and management of landscapes for both agricultural production and the preservation of ecosystem services. Lessons from past experience and new knowledge from the diverse organizations involved contribute to its design.

First, we now understand that conservation practices must not only control environmental degradation and desertification, but must also provide economic and social benefits. Efforts at land conservation over the last 30-40 years have met with little success, and there is now a general awareness of the need to develop more effective ways to implement sustainable land-use and management practices essential to controlling land degradation and desertification. Recent experience has shown that sustainable practices are much more readily adopted once the users of land and water resources perceive direct economic and social benefits from practices.

Second, agroforestry and other biological and agronomic conservation practices are increasingly being used to protect the natural resource base. Examples of such practices are planting hedges across the contour, denser plant populations, leaving crop residues on the soil surface, reducing tillage, sequential cropping, intercropping, and agroforestry for soil conservation. The use of physical conservation structures then becomes complementary to biological and agronomic practices. These systems can provide short-term economic benefits while farmers wait for traditional, longer-term forestry products. Agroforestry systems are most extensive in developing countries, where approximately 1.2 billion people depend directly on a variety of agroforestry products and services.
Third, carbon sequestration through the increase of carbon stocks, and particularly the conversion of unproductive croplands and grasslands to agroforestry, has the highest potential to soak up atmospheric carbon—at rates on the order of three tons of carbon per hectare per year. This conversion occurs in the process of replenishing the soil fertility of smallholder farms in sub-Saharan Africa, and in implementing tree-based alternatives to slash-and-burn agriculture at the margins of the humid tropical forest worldwide. The potential contribution of converting degraded croplands and grasslands into agroforestry systems is estimated to be 390 million metric tons of carbon per year by the year 2010. When the IPCC examined land conversion as means of sequestering carbon, it found that the greatest potential for carbon uptake is through the conversion of previously degraded lands into well-managed agroforestry systems. The potential land area suitable for agroforestry in Africa, Asia and the Americas may be as high as 1,215x 106 ha. The current area under agroforestry is estimated at 400 x 106 ha.

Climate Mitigation, Carbon Sequestration, and Markets

Interventions based on agriculture, forestry, and land use provide an important opportunity for mitigating greenhouse gas emissions. These interventions or projects are an approved approach for putting some parts of the Kyoto Protocol into practice—specifically the effects of activities facilitating the removal or sequestration of CO2 from the atmosphere, through photosynthesis, in new and growing plants. Under the Kyoto Protocol (Article 3.4) and other GHG protocols, these CO2 removals are tradable as emission offset credits.

A dramatic increase in the demand for carbon-emission reduction credits is predicted over the next decade as countries seek to meet national obligations under the Kyoto Protocol. This increase in demand will arise just as pressure is growing on the supply and price of carbon-emission reduction credits in the industrialized countries because most of the relatively cheap, end-of-pipe mitigation investments have been made in those countries. As a result, the comparative advantage for carbon-emission reduction credits is expected to shift from the industrialized to the developing countries, and even to the least developed countries. In the developing countries, there is large potential for generation of carbon-emission reduction credits through afforestation, reforestation, sustainable land use, agroforestry, and related livelihood activities.

Under the terms of the Protocol, credits can be issued for afforestation, reforestation, agroforestry, enhanced natural regeneration, re-vegetation of degraded lands, reduced soil tillage, and other agricultural practices to increase soil carbon or extend lifetimes of wood products (known together as LULUCF). Carbon markets, however, have failed to pick up on this opportunity. For example, even the World Bank’s Clean Development Mechanism (CDM), which enables industrialized countries to meet their GHG reduction targets at a lower cost through projects in developing countries, has not yet captured the real potential for GHG reductions in these countries. Despite enormous potential, less than one percent of
carbon-emission reduction credits are for agriculture, forestry, and land use (LULUCF). Although pressure is growing for the CDM to develop and exploit this potential, participation by the least developed countries has been constrained by:

- the absence of cost-effective measurement and monitoring systems for LULUCF projects;
- lack of knowledge of sustainable land management technologies, techniques and practices that sequester carbon;
- weak institutional capabilities and frequently perverse policies regarding LULUCF, sustainable land management, agroforestry, and often even the rural poor in most developing countries;
- slow adoption of agroforestry and livelihood strategies for sustainable land management;
- and relatively slow maturation of carbon markets for agricultural and land use projects.

The COMESA Climate Initiative addresses each of these five challenges in order to facilitate the development of pro-poor agroforestry and other land management projects that provide improvements to the productivity, competitiveness, and development potential of African agriculture - while at the time addressing climate adaptation and mitigation, including carbon sequestration - and to promote the acceptance of agricultural and land use projects into the world’s carbon markets. See Annex III (“Status of carbon sequestration projects in Africa: Potential benefits and challenges to scaling up”, ICRAF, 2006).

**Description of Initiative**

**Goal:** The overarching goal of the COMESA Climate Initiative is to contribute to the establishment of sustainable landscapes and livelihoods, including adaptation and mitigation to climate change. The multiple benefits of this Initiative will include promotion of sustainable agriculture and land-use practices, biodiversity conservation, maintenance of environmental services, successful adaptation to climate change, and improvements in rural livelihoods, in addition to the delivery of cost-effective and verifiable reductions in greenhouse gas emissions.

**Partnerships:** At the core of the Initiative is a network of committed institutional partners involved in the process of mobilizing and channeling financial resources and technical support for implementation. Partnership is one of the most important features of COMESA operations and this spirit likewise characterizes this Initiative. Important partners in addition to NEPAD, the TerrAfrica support structure, and WWF include the World Agroforestry Center (ICRAF), International Food Policy Research Institute (IFPRI), the Food, Agriculture and Natural Resources Policy Analysis Network (FANRPAN), Association for Strengthening Agricultural Research in Eastern and (ASARECA), Forum for Agricultural Research in Africa (FARA),
Strategy: COMESA will support the Millennium Development Goals and CAADP, by enhancing biodiversity in lived-in working landscapes through sustainable agricultural, agroforestry and forestry practices, and by enhancing and safeguarding the productivity of farm fields through sustainable land and water management.

but, recognizing climate change, both local and global, as a threat to these objectives, also by using these well-established approaches as adaptation strategies to climate change.

and, recognizing the role that carbon plays in agricultural and land management systems, as well as in the global climate regime, by linking mitigation strategies, especially carbon sequestration, to the goals listed above.

Specific Objectives: The specific objectives of the Initiative are to assist decision-makers, project developers and managers with mechanisms to:

- measure and monitor carbon sequestration, other greenhouse gasses, and related co-benefits for LULUCF projects in different landscapes (the measurement and monitoring tools being available also for more general use in landscape management);
- identify “better practices” for sustainable land management, LULUCF activities, and related livelihood strategies in different landscapes;
- identify land-use options that can better achieve human development and sustainability goals, while also assisting stakeholders to better understanding the trade-offs involved in decisions concerning climate, agriculture, land use and livelihoods;
- fashion and then align related institutional and policy interventions with the level of governance where they can be most effective (local, regional, national);
- carbon-proof all terrestrial activities in country CAADP programs (i.e., adaptation) and identify activities that could be made carbon eligible for carbon finance (i.e., mitigation);
- find finance from donor resources and develop the private sector carbon market for
land-use and land-use change projects in East and Southern Africa; and
- learn from - and contribute to - regional, continental and international understanding about sustainable agriculture, agroforestry, land use, and both climate adaptation and mitigation approaches, strategies and activities.

**Principal Components:** The initiative will address climate, conservation and livelihoods through two complementary approaches: at a broad global level to build knowledge and capacity and through place-based efforts in selected countries of Eastern and Southern Africa.

The Frameworks and Tools arm of the project will include components on Measuring and Monitoring, Best Practices, and Institutions and Policies. The Measuring and Monitoring component will resolve existing difficulties associated with measuring carbon sequestration in agroforestry systems—including sequestration in vegetation and soils—and with monitoring sequestration over the long-term. A Best Practices Toolbox will bring together in an easily accessible format existing knowledge and experience about agroforestry and other sustainable livelihoods that support climate change mitigation and adaptation. An Institutions and Policy Users Guide will likewise gather existing knowledge and experience regarding appropriate institutional and policy arrangements for promoting sustainable land use and carbon sequestration. This arm is already substantially financed through the Global Environmental Facility (GEF) and World Bank.

The Applications and Learning arm of the project will support the development of necessary institutions and policies, the integration of sustainable agricultural and land-use practices into agricultural development strategies, and the development of a market for LULUCF-based carbon credits. The components include: technical support for the Working Group for Climate, Agriculture, Forestry, Land Use and Livelihoods; Country Operations with a view to carbon-proofing all terrestrial activities under the CAADP umbrella and to developing a pipeline of carbon eligible projects (i.e., carbon readiness); a Financial Instruments component that will support the establishment of an African Carbon Fund to invest in carbon credits for LULUCF activities; and a Learning and Outreach strategy. The Applications and Learning arm is not yet funded.

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