



## The Millennium Challenge Corporation and Climate Change

Climate change is a serious challenge that requires a global response. The Millennium Challenge Corporation (MCC) recognizes that climate change is an increasingly important part of the development agenda. Poor countries and poor communities are in danger of suffering disproportionately from the effects of climate change. They are faced with the challenge of preparing for, coping with, and responding to sea-level rise, increased volatility in weather patterns, increased disease burdens, water scarcity in arid and semi-arid regions, and other well-documented risks. Extreme weather events can set countries back years in their efforts to accelerate economic growth and reduce poverty. Climate change also presents developing countries with the challenge of accessing secure and affordable energy in the context of global efforts to identify carbon reduction opportunities. Climate change is therefore both an environmental and a development issue, which MCC considers important in assessing and ensuring the effectiveness and sustainability of its programs.

MCC conducts its appraisal of grant proposals from eligible countries within the broad framework of country ownership, gender analysis, environmental and social assessment, investment appraisal standards, and economic analysis. MCC is currently seeking broad input – from the academic community, public and private sector practitioners, researchers at think tanks and NGOs, and key stakeholders in the environmental community – on how it can systematize and refine its general approach toward climate change issues. Specifically, MCC is exploring how it might include integrating climate considerations into project development and design and during the appraisal process for compact investments. As part of this effort, MCC will consult with other donors, nongovernmental organizations, and other external stakeholders as it seeks to ensure climate change is addressed as part of MCC's programs.

### **MCC's Actions to Date**

MCC has conducted its appraisal on compact proposals from eligible partner countries within the framework of its Environmental Guidelines and sector-specific due diligence standards. In a number of cases, either the country's proposal or the results of MCC's assessment raised climate change related issues, which influenced analysis and program design.

Six compacts approved to date – Georgia, El Salvador, Nicaragua, Mozambique, Morocco and Tanzania – include specific components or activities that are intended to have a positive impact on the global carbon balance. In addition, these six compacts have the potential opportunity to link project beneficiaries to revenue streams generated from carbon finance. MCC is in the process of working with industry experts and other donors to provide the implementing units in these countries with appropriate guidance and support to ensure that potential benefits are captured.

## Millennium Challenge Corporation Compacts

### Georgia



In Georgia, MCC is working with the government to improve a situation dangerous for the population's health and safety as well as the environment. The nearly \$50 million Energy Rehabilitation Activity is designed to rehabilitate the natural gas pipeline to improve the security of the gas supply and reduce losses of natural gas from the system, thereby reducing the emissions of methane, a greenhouse gas. Progress toward achieving the second objective during the compact term is reflected as a condition for MCC disbursement: technical losses from the pipeline must be reduced from five percent to two percent over the course of the compact.

Consistent with MCC's requirement that partner countries develop and implement their own MCC compact program, the Georgian Oil and Gas Corporation (GOGC), which operates the pipeline on behalf of the Georgian government, is designing and supervising the repairs. GOGC has already achieved the compact target for reduced technical losses, which represents a significant financial savings and reduction in greenhouse gas emissions.

### El Salvador



In El Salvador, the Production and Business Services Activity, which includes assistance to small farmers, will develop the forestry sector through investments in trees as on-farm productive assets for small and medium-sized farms. This activity has additional benefits of soil conservation, strengthening natural resource management, and providing potential opportunities for carbon credits. These investments will be supported by technical assistance and training in production and maintenance techniques, as well as marketing of products where appropriate. Investments could include commercial tree plantations for wood and wood products, as well as up to 5,000 hectares of fruit tree crops, including avocado, tahiti lime, chile plum, nanzi, custard apple, and marmalade plum.

### Nicaragua



The government of Nicaragua intends to use approximately \$12 million in MCC funds to address critical watershed and reforestation needs in the Leon and Chinandega provinces. There has been an accelerated degradation of the soils in Nicaragua's northern region, especially in the upper and middle grounds of watersheds, due to extensive deforestation, inadequate land use, and overexploitation of natural resources.

MCC grants will support activities that will improve water supply in micro watersheds with the goal of fostering higher-value sustainable agriculture in the upper watershed areas of the region as well as supporting Nicaragua's effort to promote a reforestation campaign and reduce forest fires. This will help families in the region develop higher value agriculture with year-round irrigation, and, in the long term, protect downstream areas from damage caused by environmental degradation on the hillsides and the loss of forest cover.

Possible investments include the establishment of at least 7,000 hectares of forest cover including exotic and native fruit and forestry varieties; construction of at least two small irrigation dams to serve approximately 500 hectares of agricultural land; ongoing preparation of 17 municipal environmental development plans consistent with national legislation; the ongoing preparation of four management plans for protected areas in Leon; and the training, operational support and transfer of firefighting equipment to volunteer brigades in support of a national forest fire fighting campaign. In order to maximize the impact of these investments, MCA-Nicaragua has retained a consultant to help identify carbon finance opportunities that may be available to these forestry projects and their beneficiaries.

## Morocco



In Morocco, the estimated \$300 million Fruit Tree Productivity Project includes funding for an assessment to determine whether and how the project's beneficiaries can qualify for and benefit from carbon offset credits from the compact's tree planting activities. Specifically, MCC is funding a study to determine this project's potential to qualify for carbon offset credits, recommend actions that stakeholders should take to link into the carbon finance market, and develop any guidelines that must be instituted. Some \$19 million in carbon credits could result from the proposed planting investments.

One of the four activities in the Fruit Tree Productivity Project is focused on the intensification and rehabilitation of approximately 55,000 hectares of rain-fed fruit trees and the expansion of fruit tree production (including olive and fig tree production) on approximately 120,000 hectares. The primary goal is to increase and stabilize farm incomes in target areas by facilitating the shift to tree crops. The activity includes: intensifying and rehabilitating existing olive, almond and fig orchards; expanding tree crops by converting hillsides planted with low-value, erosion-prone, annual cereal crops to new high-value, terraced, perennial orchards; and training and providing technical assistance for producers, their families and producer associations. Funds have also been allocated to provide scientific support and monitoring to the project, marketing assistance, and the development of cooperatives and agribusiness organizations.

## Mozambique



The government of Mozambique will use MCC funds to replace approximately 8,100 hectares of diseased coconut trees with the Mozambique Green Tall variety. Mozambique is an internationally significant exporter of coconuts and coconut products. Grown in Zambézia and Nampula Provinces, coconut is one of the few crops growing on the impoverished, sandy, and sometimes saline coastal soils of northern Mozambique. It has unique value as a low input, environmentally beneficial, year-round source of nutrition, income and shelter for coastal communities.

In the late 1990s, outbreaks of Coconut Lethal Yellowing Disease were confirmed in areas of commercial small-holder plantings in coastal Zambézia. By 2003 about one percent of the total area was affected but with several new disease outbreaks in both provinces. Disease-affected areas in Zambézia have expanded considerably since 2003, and new outbreaks are present in Nampula as well. At the present rate of spread, more than 50 percent of

the coconut area is likely to be lost over the next nine years. Currently, about five percent of the total coconut area of Zambézia is likely to be affected, although in certain areas there is no remaining production. Trees that are no longer productive must be removed and replaced. Unless sustained measures are taken over a large area, coconut cultivation will cease in large areas of central Mozambique, with the resulting loss of export earnings and rural livelihood for over 1.7 million people in coastal Zambézia and Nampula.

Additionally, the Farmer Income Support Project will offer technical advisory services, to improve the productivity and yield of aging and under-productive palms in small farm plantings. There may be opportunities to improve smallholder incomes through carbon offset, which may be monetizable over five years to supplement smallholders' income until replanted trees reach productive age. MCC is consulting with carbon credit experts and will be providing MCA-Mozambique with guidance on options for Mozambique to pursue to qualify for carbon offset credits.

## Tanzania



In Tanzania, MCC funds will be used to implement a \$206 million energy sector project consisting of three activities designed to improve reliability and quality of power, and extend electricity to communities and businesses not currently served.

In the absence of a viable indigenous source of energy, Unjuga Island in Zanzibar has the option of utilizing diesel-powered generation or importing power from the mainland. The Zanzibar Interconnector Activity will install a submarine cable from the mainland to Unguja to supplement and eventually replace the existing 20-year old cable, providing a reliable and non-polluting source of power to this high-value tourist destination. The cable will improve the productivity and quality of life for the island's population.

The Malagarasi Hydropower and Kigoma Distribution Activity will construct a small run-of-river hydropower plant in the Kigoma region of Tanzania, which is not connected to the national electric grid and is currently served by old diesel powered generators. This activity will displace costly, inefficient, and polluting diesel power generation with affordable, reliable, and clean renewable hydropower, relieving a major constraint to investment in the Kigoma region.

The Distribution System Rehabilitation and Extension Activity involves upgrade and improvement of the distribution system to address growing demand in six secondary cities. This activity is being undertaken against the backdrop of substantial electricity losses and power capacity that is increasingly supplied by fossil fuel generators. Consequently, all three energy sector project activities offer potential opportunities to generate carbon credits.