United Nations Framework Convention on Climate Change

Private Sector Initiative actions on adaptation

Title of case study*	Conservation of forests and mangroves with economic diversification as a mean to adapt to climate change
Date of submission*	31/05/2013
Name of organization(s)*	Bunge
NWP Objective* *Select the objective(s) of the NWP that the case study responds to.*	The objective of the Nairobi work programme is to assist all Parties, in particular developing countries, including the least developed countries (LDCs) and small island developing States (SIDS), to: x **improve their understanding and assessment** of impacts, vulnerabilities and adaptation to climate change; and x **make informed decisions on practical adaptation actions and measures** to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability.
Objective of case study* *Describe the specific objective of case study.*	Demonstrate the feasibility of conserving forests and mangrove through economic diversification while integrating local communities with a multinational corporation in a business case. This is done in order to search for a sustainable example of adaptation to climate change impacts. The project will support Afro-Colombian communities to develop and implement a conservation project of 46,000 hectares of forest that will foster adoption of sustainable agriculture and forestry to adapt to climate change.
Actions* *Describe the activities to meet the case study objective, highlighting organizations, communities and/or experts to be engaged.*	1. By protecting the forests and mangroves, the area's vulnerability to erosion and expected sea level rise as impacts of climate change is reduced 2. Implement/strengthen climate change resilient local agriculture/cocoa crops which are produced by local communities on a profitable/sustainable way. This provides them with higher incomes and improves their living standards. Furthermore, this brings sustainable growth for the local economy 3. Build a business case proving the integration of local/aboriginal communities in a multinational value chain, while providing both parties with sustainable growth and development 4. Monitor and study the changes in crops and soil while maintaining a seed bank of other varieties that will be more resilient to climate change 5. Provide training to farmers on better farming practices to improve both quality and yield and to diversify their activities 6. Monitor appearance of diseases in the region that are a consequence of climate change
Expected results* *Describe the envisaged outputs/benefits of the case study/*	*1. Strategies to fight against climate change impacts.* Conservation strategies to restore ecosystems vulnerable to climatic adversities. The project will create corridors to guarantee genetic flow throughout the 46,000 ha. It will also restore mangroves, as a way to protect from flooding due to sea level rise / changes in precipitation regimes. This will guarantee the conservation of local plant and animal species. These ecosystems provide nurseries to many of the fish species that feeds / economically sustains the local community. *2. Strengthening of agricultural / agroforestry to combat climate change.* The project will support/enhance the cocoa plantation and production practices to guarantee additional revenue. This will enable the community to conserve the forest and avoid future degradation. The project will invest in cocoa production (4000 tons/year), which will strengthen capacity building so that improved hybrids of cocoa will thrive under prevailing climatic conditions. The nursery will have technical advisory from a top cocoa partner

	and constant cross-breeding of the most resistant crops. Quality / yield improvements are goals with the focus on planting seeds resistant to the local conditions. It will provide economic support to cocoa growers, in a way that competitive qualities and quantities will be produced and exported. Advisory includes the best certification according to the buyer's needs. The project also will broaden the products that the community grow for income diversification. A seed bank of other varieties that will be more resistant to climate changes will be kept. Agroforestry practices will also be implemented. This implies a combination of trees, bamboos, palms and other non-timber forest products. Agroforestry will enhance diversification and contribute to improve nutrition and food security. The surplus of produce can either be used as part of the family diet or as means to achieve additional income depending on the season and climatic conditions. Agroforestry will total about 5,000 ha. *3. Capacity building and improving access to information about climate change*. This will lead to information on the most urgent requirements for addressing climate risks at the local level. The on-going continuous education and capacity building programs for the communities in the project area are essential adaptation strategies. This strategy reduces vulnerability of livelihoods and empowers communities for active participation in decision-making process: workshops with the communities will be conducted periodically throughout the project development in which different aspects on climate change will be dealt with. Training and better practices courses will be delivered to the farmers to enhance quality and yields. A partnership with an experienced global cacao producer and trader has been established including the deployment of a cocoa agroforestry expert. Only by implementing basic and easy cocoa plantation management practices could increase the current yields significantly / reduce diseases. *4. Monitor/control disease appearance.* Palm oil was cultivated with success and no major influence of plagues or diseases were found in the last 30 years. Later a combination of factors including increased humidity, rainfall and rising water levels around palm plantations led to an exponential increase in a disease called Phytophthora Palmivora (aka PC) that attacks palm and proliferates in humid conditions. Because of this, the oil palm in the region was almost entirely destroyed by the disease and the small farmers were directly affected. This project will monitor the recurrence of crops diseases and human diseases and try to contain cases at the local level while being capable to give an early warning if any disease arises.
Indicators of achievement* *Describe any quantitative and/or qualitative indicator to show that the objective of the case study has been achieved.*	A. Evolution of tonnage of sustainable cocoa produced B. Metrics on soil nutrients C. Assessment of community approval of the process D. Log of diseases /plagues affecting the production
Region(s) relevant to case study*	☐ All regions ☐ Africa ☐ Arab States ☐ Asia ☐ Caribbean ☐ Central America ☐ Europe ☐ Least Developed Countries ☐ North America ☐ Pacific ☐ Polar regions ☐ Small Island Developing States x South America

Country(ies) relevant to case study	Colombia
Business sector of the organization(s)*	☐ Intergovernmental organization ☐ National/regional programme/initiative ☐ Non-governmental organization x Private sector entity ☐ Research institute ☐ UN organization/agency
Adaptation sector relevant to case study*	x Capacity building, education and training ☐ Energy ☐ Finance and insurance x Food, agriculture, forestry and fisheries x Human health x Oceans and coastal areas x Science, assessment, monitoring and early warning ☐ Technology and Information & Communications Technology (ICT) x Terrestrial ecosystems ☐ Tourism ☐ Transport, infrastructure and human settlements x Water resources
Adaptation activity delivered by case study*	x Capacity building x Climate-resilient development planning x Communications and awareness-raising x Disaster risk reduction x Early warning systems x Education x Financial support ☐ Humanitarian assistance x Knowledge management x Monitoring and evaluation x Pilot adaptation programmes/projects x Risk/vulnerability mapping x Training
Work areas of the NWP*[1] *Select among the nine work areas of the NWP that apply to the case study.*	x Adaptation planning and practices ☐ Climate modelling, scenarios and downscaling x Climate-related risks and extreme events x Data and observations x Economic diversification x Methods and tools x Research x Socio-economic information x Technologies for adaptation
Target group*	☐ Academics ☐ Children x Communities x Policy makers ☐ Practitioners x Private sector ☐ Women

*** Mandatory fields**

[1] More information on the Nairobi work programme work areas is available at: <http://unfccc.int/nwp>

Agroforest field inside the project. Photo: Maria Paula Navas

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