



**+ 1.) Implementing a site-specific adaptation strategy in Chiapas/ Mexico + + + + + + + + +**

So far the following key components to cope with climate change have been successfully implemented with the pilot group Más Café:



**1.) Maintain and extend the forest cover**

Deforestation represents a major risk to the local environment and to the sustainability of future coffee production, as shade trees are securing the coffee quality and are enhancing the resilience of the coffee ecosystem against climate impacts. The local producers have signed two agreements to ban burning practices in their area. In addition, Más Cafés nursery has been extended and technified to provide various communities with different types of native seedlings, enabling them to maintain and extend the surrounding forests.

Another implemented measure to reduce the deforestation rate is a project between the Mexican Environmental and Natural Resource Secretariat (SEMARNAT), Más Café and the cooperatives to minimize wood consumption for construction. This has led to two sensitization meetings with producers, two capacity building sessions and an additional reforestation project proposal. Moreover 40 women have been trained how to use energy-saving stoves, of which 300 have been made available to the communities. A training module on environmental awareness for the communities has also been developed and will be implemented in the second half of the year.

**2.) Pest Management**

Another concern for coffee producers is the increasing pest problem triggered by the changes of temperature and rainfall patterns, jeopardizing the level of quality and quantity of the coffee. The use of toxic agrochemicals to try to cope with this problem, creates even more problems, such as the contamination of the local environment and the health risk for those living in the area. Consequently, an alternative solution had to be devised and implemented. A common agreement has been put in place, regulating the use of toxic pesticides and replacing them with biological ones. Two cooperatives now work with "beauveria bassiana" - a fungus that grows naturally in soils and uses insects like the coffee berry borer as hosts leading to its death. Additionally, two collective vermi-composting units have been installed as well as over 800 on family level. This creates an essential source of organic fertilizer that is also important to prevent soil erosion. Further measures taken for pest management are the renovation of plants and plots, of which over 1000 hectares have already been renewed. The planned training module on environmental awareness will reinforce also this component of the adaptation strategy.

**3.) Carbon sequestration/ climate mitigation**

Part of the devised adaptation strategy is the analysis of the carbon sequestration potential as well as the training of promoter farmers on the possible sequestration procedures. Seven promoter famers have already been trained and another 15 are expected to complete training in the near future. Besides, there is a search in progress for initiating payments for environmental services. SEMARNAT already supports financially and further options are being assessed.

**4.) Use of renewable energies**

The use of renewable energies in Más Café's dry mill is being evaluated and a study on suitable sources of alternative energy is under way. A cost-benefit-analysis for the implementation of alternative energies following the identification of potential sources is planned.

**5.) Secure the coffee drying process**

The coffee drying process has been affected by the changing rainfall patterns that do not longer allow producers to sun-dry their coffee. Therefore, new techniques to make the process independent from weather conditions were identified through various national and international exchange visits. By now 20 solar driers have been installed at two cooperatives and a training module was put in place for improved wet processing at family level.

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For more information on the adaptation strategies please visit <http://www.adapcc.org/en/mexico.htm>

**+ 2.) Implementing a site-specific adaptation strategy in Piura / Peru + + + + + + + + + +**

So far the following key components to cope with climate change have been successfully implemented with the pilot group CEPICAFE:

**1.) Capacity building and technical assistance on implementing adaptation measures**



Based on an AdapCC seminar, held in March 2009 in Nicaragua, the trained promoters designed various training modules and a capacity-building programme to be implemented with CEPICAFE member cooperatives. The main objective of the trainings is to sensitize farmers for climate related risks, to reach a better understanding of their own vulnerabilities and to define appropriate measures to strengthen farmers' resilience and mitigate risks. Besides tools to implement the ROA process and training modules on integrated coffee management are carried out so that each community will be able to develop its own adaptation plan.

Training seminars to instruct 10 technical advisors at CEPICAFE level are already being implemented, aiming to train over 50 promoters at cooperative level and 200 farmers. Prevention measures being executed on 60 coffee farms include the installation of agro-forestry nurseries to improve shadow management. 138 farmers received financial support to realize a fertilization scheme. Another 40 coffee growers were technically assisted to improve their pest control methods. Additionally, woodlots and living barriers are being installed at 20 coffee plantations to prevent soil erosion and landslides. The construction of 30 sun-drying units to improve the coffee drying process is being planned.

**2.) Reforestation**

Due to the high rate of deforestation in the area, the coffee eco-system is threatened by environmental degradation and biodiversity loss, what makes it highly vulnerable against changing climate conditions. Hence, the second component contains measures to reforest degraded community land. Currently a reforestation plan is being developed, which includes the installation of tree nurseries in various communities. The selected communities will be able to reforest degraded community land and improve suitability for coffee growing, which will have a positive effect on the local ecosystems.

**3.) Carbon sequestration / climate change mitigation**

Part of the adaptation strategy is the development and implementation of carbon sequestration and climate change mitigation measures. Up to now, feasibility studies for climate friendly coffee certification have been carried out and a CO<sub>2</sub> project is being planned to generate carbon credits for the voluntary carbon market. Cafédirect will buy some of CEPICAFÉ's CO<sub>2</sub> credits up front to offset own emissions over the next 10 years. There is also an agreement between Cafédirect and CEPICAFE to reinvest 10% of the income from the pre-sales in implementing adaptation measures on coffee farms.

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For further information on the adaptation strategies please visit <http://www.adapcc.org/en/peru.htm>

**+ 3.) Implementing a site-specific adaptation strategy in Meru / Kenya + + + + + + + + + +**

So far the following key components to cope with climate change have been successfully implemented with the pilot group Michimikuru:



**1.) Diversification of food and income**

A dense tea monoculture, degraded lands and unsustainable agricultural practices have led to high climate vulnerabilities in the Michimikuru area. In cooperation with the Kenyan Ministry of Agriculture, alternative crops have been identified such as spinach and kale for subsistence and passion fruit for trade. Various sensitization workshops have been organized to encourage the adoption of the supplementary crops. Moreover, 15 demonstration units have been set up, displaying the crops that could be produced.

Besides the units should instruct farmers on good agricultural practices like double digging, mulching and the use of compost. Motivating farmers to change their agricultural practices and grow alternative crops is a key step towards achieving a more sustainable agricultural production system, diversifying food and income sources as well as securing food availability and reducing malnutrition in the region.

**2.) Biodiversity conservation and reduction of vulnerability**

The high rate of deforestation in the region is a major threat to local biodiversity as well as the production of tea. Firewood is a vital source of energy for local households and for processing the tea harvest in factories. Through the consumption of large quantities of firewood, local forests are being destroyed at an alarmingly high rate. To improve the conservation of biodiversity in the area, different seeds of the local flora have been collected and an existing local nursery is being expanded. Tree planting activities and sensitization workshops for biodiversity conservation have also been organized and for every river a scout was put in place to coordinate tree planting and to point out malpractices. Local schools have also been involved by setting up "Forest Corners" in their school yards to teach students the value of trees in their region.

**3.) Soil management**

Better soil management techniques are also being implemented in the pilot region. These range from the construction of terraces and embankments, to the application of manure and fertilizer and the reforestation of river banks. These measures are helping to reduce the risk of landslides and improve the availability of water.

**4.) Energy saving**

An additional aspect of the adaptation strategy is the development of energy saving techniques, informing the local community through sensitization meetings, training modules and demo units. Locals are being encouraged to adopt more energy efficient jikos (cooking stoves). Over 100 of them have already been constructed at family level. In cooperation with the Department of Social Services and Maendeleo Ya Wanawake (an umbrella organisation of women's groups), further sensitization meetings for women are being implemented. Furthermore training courses on the construction and sale of jikos is being provided, and the Michimikuru tea factory is looking into the possibility of providing an advanced payments scheme to assist its members in purchasing the jikos. + [back](#)

For further information on the adaptation strategies please visit <http://www.adapcc.org/en/kenya.htm>

**+ 4.) Expert Meeting 'Strategic Alliances for Climate Change Adaptation in Agriculture' +**

Good practices in coping with climate change are urgently required as different sectors are in need for site-specific adaptation and mitigation strategies and innovative partnerships. The on-going PPP "Adaptation for smallholders to climate change - AdapCC" can be seen as a pilot case: In cooperation with smallholder organizations in Latin America and East Africa site-specific adaptation strategies have been implemented. Approved tools for analyses at local level and options to adapt to climate change are available. Potential financing mechanisms for these strategies have been identified.

Further strategic approaches to cope with climate change in the agricultural sector already exist, for example to design an add-on standard module for smallholder coffee production in Kenya, which allows for climate change adaptation and mitigation. Methodologies to generate carbon credits through forestation and reforestation activities systems are developed and possibilities for carbon sequestration in agricultural production systems are being explored. Insurance solutions to reduce climate-induced risks for smallholder farmers are tested in various pilot projects.

**Objective and Concept**

The expert meeting aims to extend the regional and sectoral scope of the existing successful concepts. Further in-depth investigation and pilot testing is needed to enhance these approaches. We would like to explore possibilities for strategic partnerships between civil society, the public and private sector and discuss adequate forms of cooperation to support the implementation and financing of climate change adaptation and mitigation strategies. After presenting best practice approaches, main challenges and opportunities will be highlighted. In workshops, urgent topics will be addressed:

- + Climate and micro-insurances
- + Climate-friendly certifications and generation of CO2 credits
- + Adaptation in the agricultural sector

