



# climate change solutions

## demonstrating REDD+ and adaptation at the sub-national level chiapas, mexico



The state of Chiapas in southern Mexico is rich in its biological, landscape and cultural diversity, yet is one of the economically poorest and most vulnerable states in Mexico.

As such, the society is committed to developing in a sustainable manner. Conservation International (CI) is playing a strong role in supporting this green economic strategy by demonstrating the importance of building a science-based initiative to tackle climate change. The State Government is taking action to understand the sources and potential future impacts of greenhouse gas emissions to inform the establishment of the policy frameworks necessary to address climate change.

The Sierra Madre Mountains of Chiapas is one of the most important coffee production areas of Mexico, and much of the remaining forest cover outside of protected areas is located on coffee farms that consist of traditional, shade-grown production systems. Conserving these production systems helps preserve traditional cultural practices and maintain local livelihoods while contributing to the mitigation of climate change through preserving carbon storage in the trees.

Recognizing this potential, the state-level Secretary of Environment, Housing and Natural History (SEMAVIHN) and the Federal Secretary of the Environment and Natural Resources engaged CI to help confront climate change in Chiapas. CI and government entities are working with several academic institutions, Starbucks Coffee Company, the Global Environment Facility and local NGOs to implement a robust approach to climate change mitigation and adaptation that includes research, policy work, and community engagement activities.

Underpinning the work is a scientific effort to inform the development of climate change mitigation and adaptation strategies. Working with partners, CI has completed a state-wide inventory of greenhouse gas emissions, future emissions projections due to land-use change activities and models of future climate change scenarios. Results of the inventory indicate that nearly 62% of Chiapas' emissions come from land-use change, namely deforestation and forest degradation.

CI, in collaboration with SEMAVIHN, has engaged multiple partners to build upon this research and facilitate and coordinate the development of an institutional framework for climate change mitigation and adaptation for the state of Chiapas. This effort is the first of its kind in Mexico to generate cutting-edge scientific information and involve stakeholders from various levels and multiple sectors to develop a climate change action program at the state level. CI is supporting the creation of the institutional structure—an inter-secretarial commission—which includes representatives from the secretariats of environment, agriculture, finance, health, and infrastructure, among others.

To demonstrate how climate change mitigation and adaptation efforts can have tangible benefits for people, CI is working with government, corporate, NGO and coffee producer partners to develop forest carbon projects in the coffee growing areas of the Sierra Madre. After successful work with Starbucks to promote coffee production practices that protect

biodiversity and improve the livelihoods of coffee farmers, CI has expanded this work to include carbon sequestration and link local farmers to voluntary carbon markets. As a result, farmers are receiving tangible, economic benefits from their climate change mitigation activities including reforestation and agroforestry practices. In addition, CI is working with partners to support farmers in developing and implementing climate change adaptation strategies by conducting vulnerability assessments and modeling climate scenarios and their impacts on coffee cultivation.

Recent new efforts include watershed-level management planning to ensure conservation strategies target provision of high quality fresh water in the region in addition to reducing carbon emissions. CI and partners are working with watershed committees to improve their management and to ensure long-term water provision from the Sierra Madre Mountains. The initiative will also mainstream ecosystem services and biodiversity into land-use policies, as well as increase access by farmers to payment-for-ecosystem-services mechanisms that provide incentives for land-use decisions that conserve ecosystem services and biodiversity values and improve local livelihoods.

CI's work in Chiapas demonstrates how an effective climate change strategy that includes REDD+ and adaptation can affect change at both the policy level and within local communities. Through strong partnerships, rigorous science and long-term commitment to building local capacity, Chiapas is succeeding in its effort to be a world leader in the development of necessary policies, institutions and projects that provide multiple benefits to people and biodiversity while mitigating and adapting to climate change.

# demonstrating how **healthy ecosystems benefit human well-being** in Chiapas Mexico

## human well-being

- increased ability of farmers and communities to adapt to climate change
- access to long term supply of clean freshwater
- a sustainable development framework that guides policy decisions at the state level



## ecosystem services

- increased freshwater supply
- maintain and increase carbon stocks



## healthy ecosystems

- conservation of cloud forest and montane ecosystems housing high levels of endemic species
- freshwater systems providing 30% of Mexico's freshwater
- endemic and threatened species