



*The Voice of the Private Sector in Kenya*

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# Kenya Tea Development Agency

## Increasing the Climate Resilience of Farmers



Photo Credit: Deborah Murphy

**T**ea is a critically important sector of the Kenyan economy, accounting for up to 20 percent of export revenues in 2011. The sector has important economic and social impacts at the community level because small-scale farmers produce 60 percent of the tea. The sector is highly sensitive to climate change and tea producers are coping with reduced erratic rainfall, hail and frost as well as rising temperatures that affect yields and productivity. The tea sector also contributes to climate change through use of energy, especially for drying the leaves. The Kenya Tea Development Agency (KTDA) is working to increase the climate resilience of its farmers to secure supply chains and reduce energy costs for factory processes, addressing adaptation and mitigation goals of Kenya's National Climate Change Action Plan 2013-2017.

### Actions to Address Climate Change

KTDA recognizes the threat posed by climate change to its supply chain and has introduced climate change activities on farms and in factories to help secure the long-term prosperity of Kenya's tea sector.

### Adaptation

KTDA has worked with partners to improve climate resilience in the tea sector in various ways:

- **Assessment of vulnerabilities to climate change and development of a climate-compatible strategy for the tea sector**, through cooperation with the Ministry of Agriculture, Tea Board of Kenya and Tea Research Foundation with support from the Food and Agriculture Organization.
- Development of new drought-tolerant, high-yielding tea varieties that are available to KTDA smallholders, working with the Tea Research Foundation of Kenya.
- **Smallholder farmer training on climate risk and adaptation measures through KTDA's extension officers and training programs**, in cooperation with the Ethical Tea Partnership and linked to retailers, such as Marks and Spencer that want to maintain their supply chain. Smallholder farmers are responding to climate risks by infilling with drought resistant tea varieties, conserving biodiversity and promoting improved cookstoves to help reduce deforestation.

- **Rainforest Alliance certification** improves market access for Kenyan tea while helping farmers adapt to climate change. The fifty-four Kenyan tea factories that are Rainforest Alliance certified and individual tea farmers that supply these factories have complied with international standards including ecosystem conservation, worker rights and safety, wildlife protection, water and soil conservation, agrochemical reduction, decent housing, and legal wages and contracts for workers. Rainforest Alliance field schools help farmers meet standards and increase resilience by introducing new cash crops and income streams.

### Mitigation

On the mitigation side, KTDA is moving toward cleaner and more sustainable forms of energy, largely driven by the rising cost of electricity.

- The high cost of diesel oil and the need for a sustainable wood-fuel supply led to KTDA's **Tree Planting Project**. Since 2001, KTDA has acquired land for woodlots near its factories and encourages its 560,000 smallholder farmers to plant trees. Each

### Box 1: Kenya Tea Development Agency Limited (KTDA)

KTDA is the leading management agency for small-scale tea farmers in Kenya. KTDA aims to provide effective management services to the tea sector for efficient production, processing and marketing of high quality tea. KTDA manages 65 tea factories that purchase tea from about 560,000 small-scale farmers who each own about a half-acre of tea.

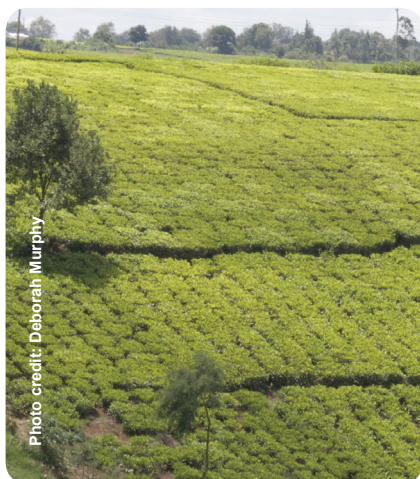


Photo credit: Deborah Murphy

of the 65 KTDA-managed factories works with community group nurseries to plant trees and provides the seedlings to tea farmers at subsidized rates. Seventy per cent of the seedlings are fast-growing exotic species, mainly eucalyptus, that will meet the factories' wood-fuel needs while providing additional income for farmers. The remainder are indigenous species for conservation. Through the tree planting campaign, KTDA-managed factories had acquired 13,880 acres as of February 2013, which represents 34 per cent of the total land targeted. Of this, 7,185 acres (52 per cent) has been planted with managed forests that provide sustainable wood-fuel for tea factories.

- **Development of small hydro plants** is another KTDA initiative to address high electricity costs. KTDA plans to implement ten small-scale run-of-river hydropower projects to provide a clean and reliable source of electricity to tea factories and the national grid. The first plant, to be commissioned in 2014, will supply four factories near the Gura River. This work builds on the experience of the pilot project at the Imenti Tea Factory in Meru, where the one megawatt small hydro plant has reduced the factory's electricity bill by almost 60 per cent.

KTDA has been recognized for its environment and climate change initiatives. The agency was awarded the Total Kenya Eco Gold Challenge award in 2013 for planting millions of trees under its fuel wood and environmental activities. Also in 2013, KTDA was named the winner of the Sustainable Finance Award, presented by the Financial Times and International Finance Corporation, for applying innovative and commercially viable solutions to solve sustainability challenges in Kenya's smallholder tea sub-sector. Such recognition can significantly enhance a firm's brand, which may help in increasing export market share.

### Business Benefits of Climate-smart Actions

KTDA is taking important steps to prepare its factories and farmers for climate shifts. The Rainforest Alliance certification process encourages climate-friendly practices that result in improved prices and productivity. Certified tea attracts a small premium, estimated at 10 cents a kilogram for tea from the Momul factory. Certified farms have seen their productivity increase from 1 kilogram to 1.2 kilograms per bush.

The tree planting campaign helps farmers adapt to climate shifts by stabilizing the tea microclimate and increasing soil fertility. Planting native trees on steep slopes or degraded lands reduces vulnerability to heavy rains or prolonged droughts, helping to build farm resiliency to extreme weather. Infilling with drought resistant varieties improves productivity and increases tea's resilience to climate change.

The shift from fuel oil to wood from managed forests, supported through the tree planting campaign, provides an additional income stream to smallholder tea farmers who sell wood-fuel to factories. The shift saves each factory about 56 per cent in energy costs per year resulting in a total of Ksh 480 million per year. This and the move to hydropower reduce greenhouse gas emissions. Removing

four tea factories from the national grid in the Gura river region is expected to reduce emissions by about 38,400 tonnes of carbon dioxide per year.

KTDA has demonstrated that the tea industry can adapt to climate change while insuring sustainable livelihoods for smallholder farmers. These climate-friendly actions help the tea industry enhance its brand, attract a premium through certification, reduce operating costs by switching to own-sourced renewable energy, and safeguard tea productivity and profitability. Addressing near-term energy costs and long-term supply chain vulnerabilities through mitigation and adaptation activities makes good business sense for KTDA farmers and factories.

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*For further information, please contact Victor Ogalo, KEPSA ([vogalo@kepsa.or.ke](mailto:vogalo@kepsa.or.ke)) or Deborah Murphy, IISD ([dmurphy@iisd.ca](mailto:dmurphy@iisd.ca)). Information about KESPA and its work can be found at [www.kepsa.or.ke](http://www.kepsa.or.ke). Information about IISD and its work can be found at [www.iisd.org](http://www.iisd.org).*

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