

# THE IMPACTS OF CLIMATE CHANGE ON TEA PRODUCTION IN AFRICA

Tea is a major contributor to exports and the economy, as well as an important source of incomes for rural livelihoods in Kenya, Malawi and Rwanda. While the tea sectors of these countries are expanding, they are extremely vulnerable to the impacts of climate change. Tea plants are particularly sensitive to the climate, needing very specfic climate conditions for high production and quality, and for that reason are grown in particular agro-climatic zones. Tea plants are also affected by climate extremes such as heat waves, droughts or floods. Climate change is altering the average climate and the pattern of extremes, and this will have implications for tea production in the future.

This infographic outlines some of the potential impacts of tea production in three different possible future climates for the growing regions



## What this means for tea farmers:

### How will climate change impact the livelihoods of smallholder farmers?

If events such as heat waves, droughts and flooding become more frequent and more damaging, smallholders will face various challenges in maintaining tea crops. Over time, heavy rainfall and flooding can result in loss of soil nutrients, requiring additional costs through fertilizers to maintain productivity.

Similarly, increased occurrence of drought in the future may require investments in irrigation, which may be extremely expensive and will often require multiple farmers to group together in order to make it feasible.

These examples of higher input costs place strain of farmers. Farmers may not be able to afford these and other important adaptation options and/or farmers might have to diversify their crops and livelihoods. In extreme situations they may be forced to close their farms.

### How will climate change impact the financial return of large tea estates

Changes in the climate and increasing extreme weather events such as heat waves, droughts, or floods is likely to impact the financial return of large estates. Large farms will require extensive management in order to sustain soil quality and ensure water availability which could mean higher input costs required to maintain productivity of large estates.

Higher temperatures can impact labor productivity, both of pickers and factory workers, which may require invest-ments in cooling technologies.

The cost of adaptation to safeguard yields needs to be factored into investments. Adaptation options should be prioritised in line with development ambitions in the tea sector. The failure to adapt to climate change in a timely manner will severely impact return on investments.

### How to safeguard tea for the future

In order to ensure the sustainability of the tea sectors in Kenya, Malawi and Rwanda, interventions which address the impacts of climate change and build the resilience of tea farms is needed. The implementation of adaptation options which consider current and future climate risks for tea growing regions should be prioritised.

Adopting various climate-smart and good agricultural practices (such as soil and water conservat, mulching, pruning, using organic compost, etc.)will become increasingly important for both smallholder farmers and large tea estates.

Investments in farm establishment, expansion and in adaptation implementation needs to be informed by both the current and the future climate of the tea growing regions.