



***Climate Change and the Tea Sector in Kenya:
Impact Assessment and Policy Action***
National Multi-stakeholder Workshop
29-30 April 2013, Naivasha



Overview of the FAO project: goals, approach, and implementation



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Seminar outline

- Project general objectives
- Project approach
- Outcomes of the inception workshop @ Nakuru 2012
- Project framework – a two phase program
- Project phase I - Biophysical assessments
- Project phase I - Socio-economic assessment
- Project Phase II – supporting a climate-compatible strategy for tea
- Expectations from the workshop



FAO CC-Tea Project objectives

- i) Generate evidence of climate change impacts on tea production in Kenya, through a series of biophysical and socio-economic analyses;*
- ii) Provide policy support to the Kenyan Government and facilitate a multi-stakeholder process for a strategy document on climate-compatible tea industry in Kenya (a component into a broader climate-smart agriculture policy);*
- iii) Strengthen capacity building for research, analysis and policy planning in Kenya to support climate change work in agriculture



FAO Project approach

Two principals guided this project:

- **Evidence-based** impact assessment; then action
 - a) Mobilise national and international expertise to carry out climate change impact assessment
 - b) Follow a multi-disciplinary area to CC impact assessment (biophysical, socio-economic, institutional)
 - c) Evaluate current policy processes toward CC
- **Participation** of national stakeholders in the process



Inception workshop: Nakuru 2012- outcomes

The FAO project was launched through an inception workshop held in Nakuru 7-8 February 2012

Workshop objectives:

- define an appropriate road map for the pilot project
- take stock of current knowledge on climate change in Kenya
- identify gaps in research and adaptation interventions

The stakeholders own expectations were:

- *Assessment of the impacts of climate change on tea to help the industry on how to absorb likely shocks,*
- *Identify critical interventions to address CC threats*
- *Identify enabling policies to allow sector adjust quickly to anticipated climate change impacts*
- *inclusiveness in project implementation.*



Inception workshop: Nakuru 2012

Some of the salient outcomes: Strengths and weaknesses of tea sector in light of changing climate

STRENGTHS	WEAKNESSES
Industry well structured	Reliance of rainfed production system
Sufficient labor	Monoculture production system
Way of information dissemination	Tea vulnerable (sensitive) to weather factors
The industry is still enjoying high revenue	Idle labor during the low seasons
Potential for adoption of other enterprises	Low value-addition & product diversification
Availability of research capacity/technology	Narrow focus of market
	Low domestic consumption
	Dissemination capacity for the technology
	Profiling the existing extension staff and provide relevant training



Inception workshop: Nakuru 2012

Required capacity to address climate change threats to the tea industry climate

AREAS FOR CAPACITY DEVELOPMENT	FAO Contribution
➤ Molecular breeding for drought, frost and hail tolerance	✓.
➤ Develop tea production models	✓.
➤ Develop models for extreme weather (frost/hailstorm)	✓.
➤ Water moisture management	
➤ Opportunities of irrigation of tea	
➤ Methodology for measuring Carbon in tea	✓.
➤ Carbon footprint for tea value chain	✓.
➤ Energy use efficiency along tea value chain	
➤ Database management	
➤ Policy to regulate the climate change issues	✓.
➤ Capacity for dissemination	
➤ Weak linkages between research-extension-farmers	



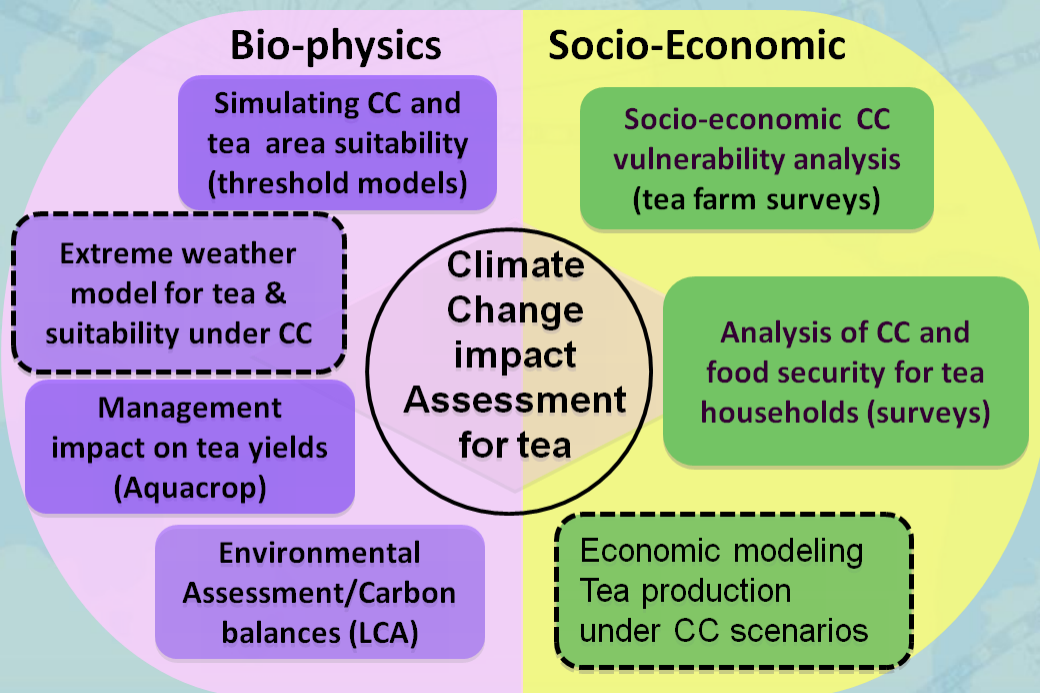
FAO Project on climate change and tea in Kenya: A two stage, multidisciplinary framework

STAGE 1

Analyses to establish the cc-tea yields links, quantify carbon footprint, and evaluate farmers vulnerabilities and adaptation to CC

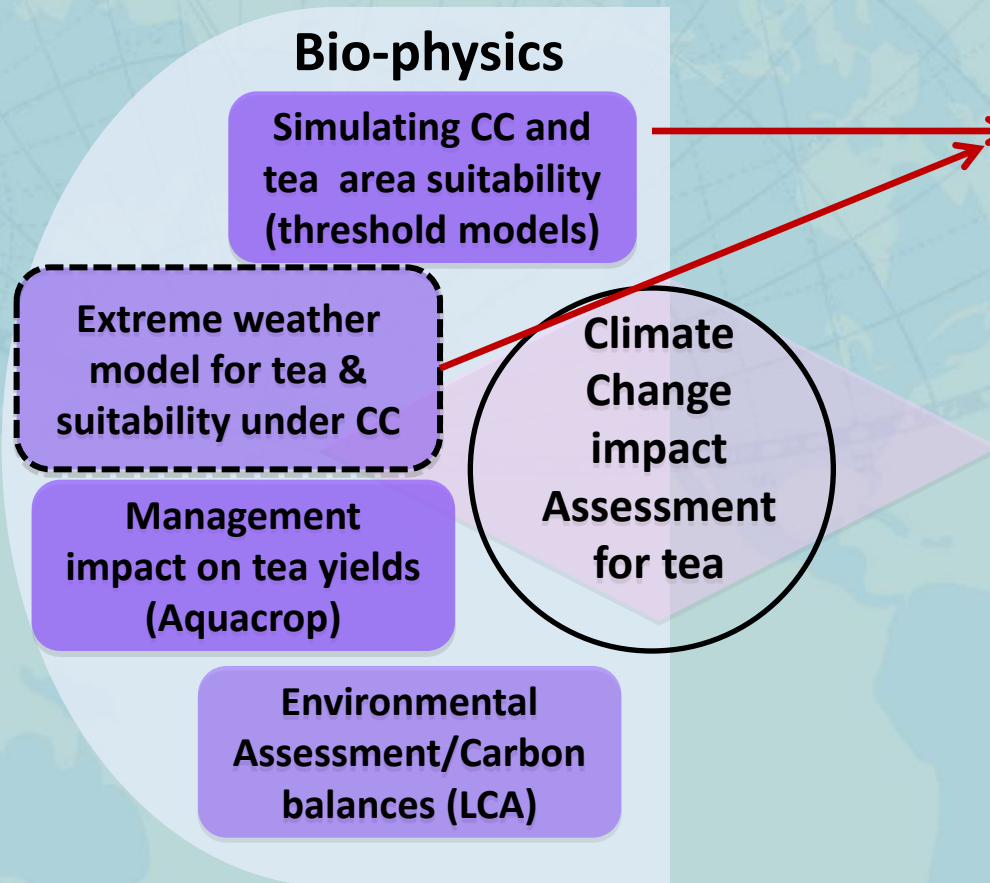
STAGE 2

A facilitated multi-stakeholder process, based on evidence, to derive a strategy for a climate-compatible tea in Kenya



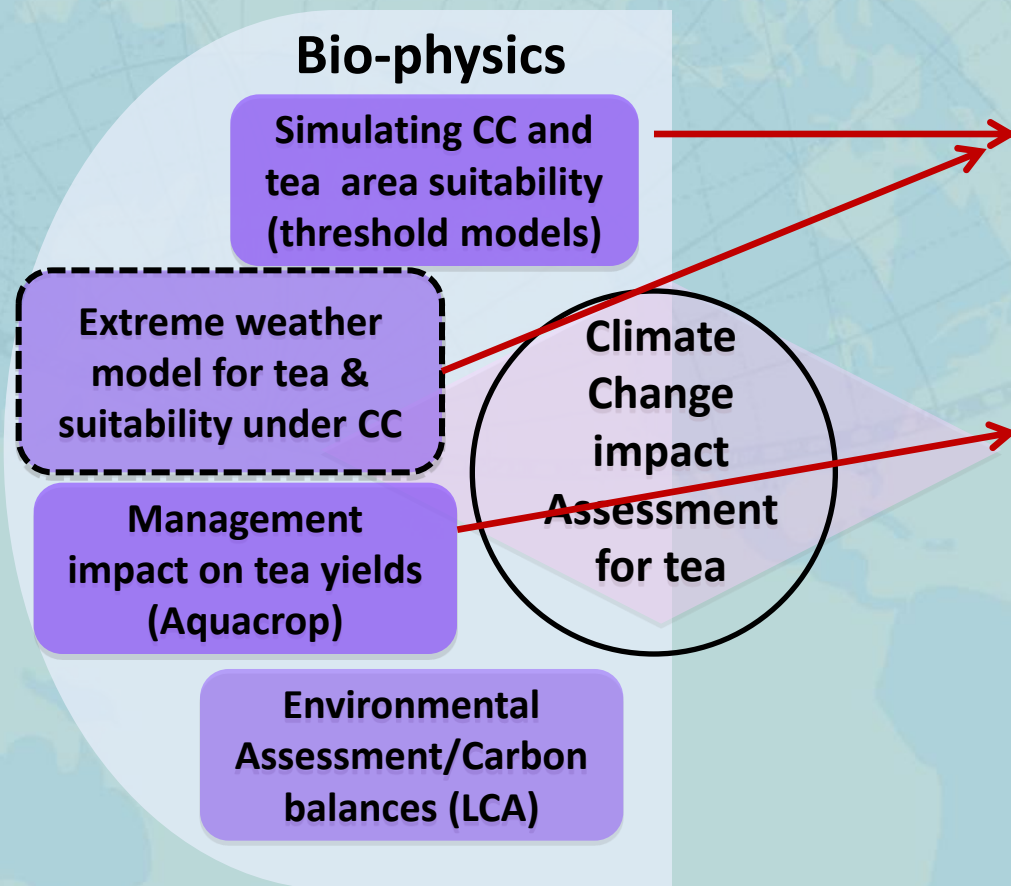
POLICY ACTION:
A multi-stakeholder led process to develop a strategy paper on climate-compatible tea sector for Kenya

Project phase I - Biophysical assessments



Linking changing temperature, soil moisture, radiation with yields;
A GIS-based analysis for CC-induced tea land suitability change
(partners: TRFK)

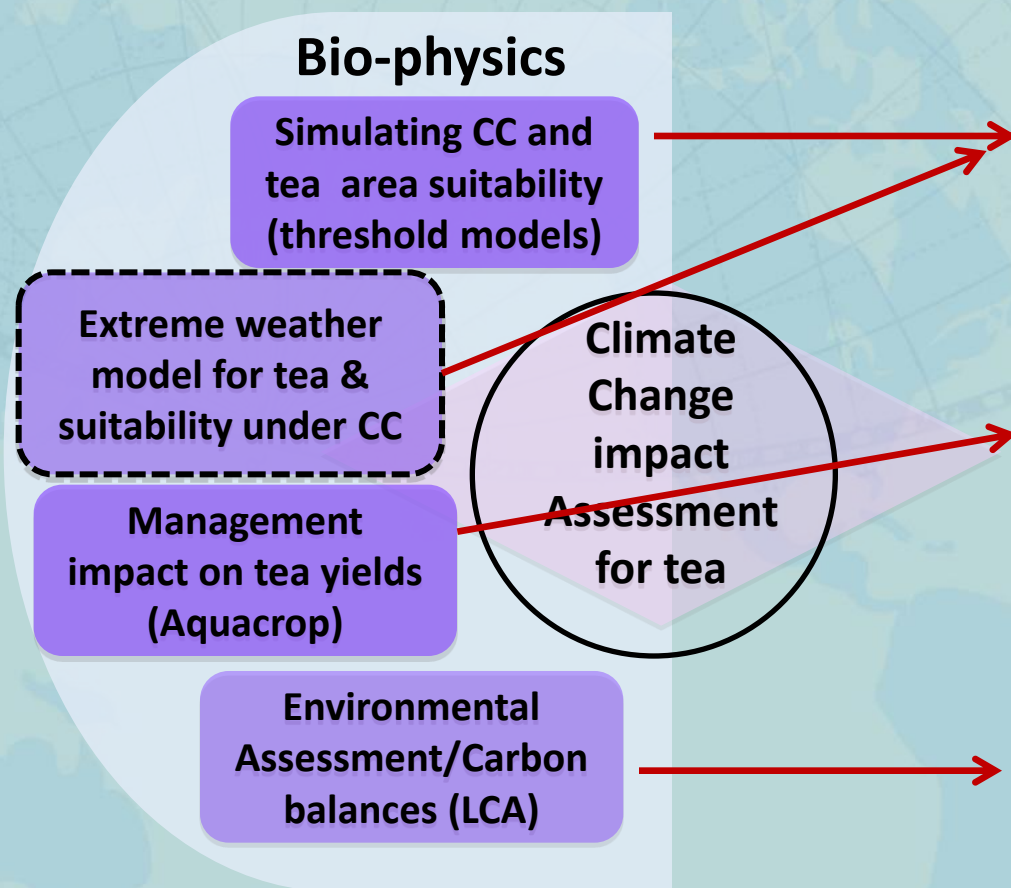
Project phase I - Biophysical assessments



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FAO supported the calibration of Aquacrop crop model for tea in Kenya; simulations of tea yields under climate and management scenarios
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A life cycle analysis (carbon footprint) estimated for small and large scale tea production and consumption in Kenya
(Partners: Azapagic/TRFK)

Project phase I - Socio-economic assessment

- A socio-economic baseline for tea producers vulnerabilities, economic options, food security and coping options
- 700 tea farms surveyed; all seven tea growing areas
- Identify autonomous adaptation options (crop diversification; resistant varieties, planting trees).

Socio-Economic

Socio-economic CC vulnerability analysis (tea farm surveys)

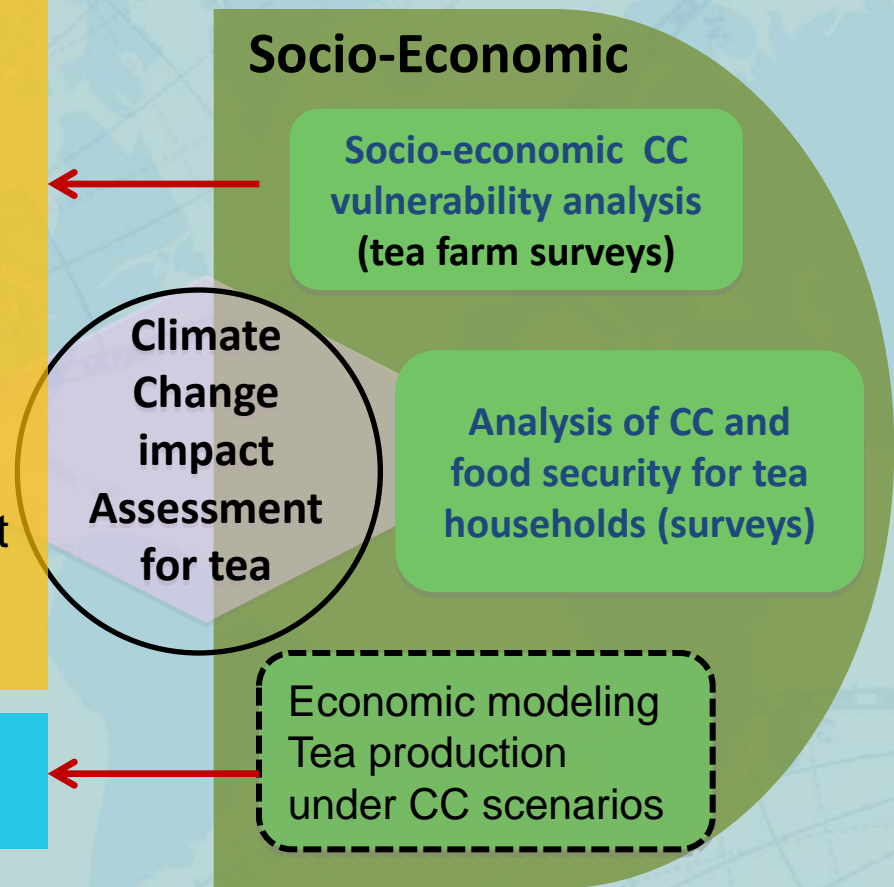
Analysis of CC and food security for tea households (surveys)

Climate Change impact Assessment for tea

Project phase I - Socio-economic assessment

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- 700 tea farms surveyed; all seven tea growing areas
- Identify autonomous adaptation options (crop diversification; resistant varieties, planting trees).

Planned adaptation through policies and incentives



Policy support – Towards a climate-compatible strategy for tea in Kenya

STAGE 2

A facilitated multi-stakeholder process, based on evidence, to derive a strategy for a climate-compatible tea in Kenya

POLICY ACTION:

A multi-stakeholder led process to develop a strategy paper on climate-compatible tea sector for Kenya

Three stages are followed in the multi-stakeholder process for strategy elaboration:

- **Stage 1** – draft 0 preparation (current of climate change linkages with tea; current policies and initiatives; inventory of stakeholders initial positions)
- **Stage 2** – draft 1 preparation; this is an inclusive, group process involving all national stakeholders involved in the tea industry and in climate change issues
- **Stage 3** – strategy document validation by relevant policy makers



FINAL Comments:

Expectations from the workshop

- What have we learned about linkages and possible impacts of climate change on tea?
- What can we learn from parallel projects; and what are possible synergies
- What implications can we draw for policy, and sector strategy to minimize CC impact on tea industry
- How can the FAO tea project be fitted within agriculture-wide initiatives on CC
- What lessons have learned from narrowly focusing on a particular sector when addressing climate change



A wide-angle photograph of a tea plantation. The foreground and middle ground are filled with rows of lush green tea bushes. In the background, several workers are visible, some standing and some sitting, engaged in tea picking. The landscape is hilly, with a line of trees and a few large, dark structures (possibly barns or sheds) visible in the distance under a bright, slightly overcast sky.

Thank you

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