

# The Economics of Ecosystems and Biodiversity *Agriculture & Food* (TEEB AgriFood)



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## KENYA PILOT STUDY

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## Presentation Outline

- Introduction: Agriculture-Climate change-Water Catchment areas in Kenya
- Highlights of some laws/regulation/ Policies/ strategies
- Experiences of TEEB agri-food IKI project in Kenya
  - Inception workshop
  - Consultations prior and after workshop
  - Selection of the study site
  - Development of communication strategy

## Agriculture-Climate change-WCA

- Kenya's economy and people livelihood is highly dependent **on the natural resources**, with a heavy reliance on climate sensitive sectors including agriculture, tourism and energy.
- Rain-fed agriculture accounts for 98% of the agricultural activities in the country.
- Over 70% of rural livelihoods are dependent on rain-fed subsistence agriculture, thus **vulnerable to climate variability and change**.
- **Agriculture sector is the mainstay of the economy, contributing about 26% of GDP, and accounting for 65% of Kenya's total exports**
- It also contributes to more than **18% of formal employment, and over 70% of the informal employment** in rural areas.
- Agriculture sector is also the biggest user of **freshwater resources** (MEMR, 2012).
- **Water Catchment Areas (WCA)** thus plays a significant role in agricultural production through provision of water directly and indirectly (water cycle).

## Laws/Policy/regulations/strategy framework

- **In Kenya's Vision 2030**, we acknowledge the need to increase productivity in the agricultural sector to **ensure food security** for a rapidly increasing population, and **improve processing** to add value to the agriculture sector and increase farmer incomes.
- **BUT growth of agriculture** output is faced many challenges including **soil erosion, soil infertility, low productivity, agro-biodiversity loss and climate change** (Mulinge et al., 2016).



Photo Credit: L. Njoroge, NMK

- In To address some of the challenges Kenya government has put in place laws/policies/regulations/ strategies:

<b>Kenya Constitution 2010</b>	<p>Gives the environment and natural resources management a special place</p> <ul style="list-style-type: none"> <li>-<b>Bill of rights Article 142: a clean and healthy environment</b></li> <li>-<b>Stipulates that efforts should be made to maintain a tree cover of at least 10% of land area in Kenya</b></li> <li>-<b>States that Kenya should establish systems of environmental impact assessment, audit and monitoring of the environment</b></li> </ul>
<b>Vision 2030</b>	<p>Long term development plan aimed at making Kenya a phosphorus nation- implemented thro' 5-year medium Term Plans.</p> <ul style="list-style-type: none"> <li>-Conservation of WCAs is one of the priority programs</li> </ul>
<b>The “Big Four” Agenda (2018-2022)</b>	<p>Manufacturing, Food and nutrition, Housing &amp; Universal Healthcare</p> <ul style="list-style-type: none"> <li>-AgriFood project is closely aligned with the <b>Food and nutrition Agenda</b></li> </ul>

<b>The Agriculture Act (Cap 318)</b>	Principles legislation governing agricultural activities: <b>Agriculture Farm Forestry Rules 2009</b> to promote farm forest.
<b>Agriculture Sector Development Strategy (ASDS), 2010-2020</b>	<ul style="list-style-type: none"> <li>-ASDS is the overall national policy for the agriculture sector in Kenya</li> <li>-Promote an innovative, commercially oriented and climate-smart modern agriculture- growth 7%, reduce poverty by 30%.</li> <li>-NB: Agriculture Sector Growth and Transformation Strategy (ASGTS) – in the making!</li> </ul>
<b>Kenya Climate Smart Agriculture Strategy, 2017-2026</b>	Aims for the sector to “adapt to climate change, build resilience of agricultural systems while minimizing emissions for enhanced food and nutritional security and improved livelihoods.
<b>National Environment Policy, 2013</b>	-Better quality of life for present and future generations through sustainable management and use of the environment and natural resources.





Photo Credit: NMK

## TEEB-KENYA

- Despite Kenya's well-intended policies, plans, legislation and institutional framework on environment and agriculture, there exist barriers to arrest deteriorating natural ecosystems
  - Low level of awareness on dependency of agriculture on ecosystem services
  - The economic values of those values
  - The risks associated to the deteriorating in quality of natural ecosystem



Photo Credit: L. Njoroge, NMK

## TEEB-KENYA

- The objective of a TEEBAgriFood study in Kenya is to **measure, quantify, and value the FULL benefits and costs of agricultural activities** around Mau Forest complex.
- The information will to inform government policies, initiatives, incentives or regulations by **providing a full cost accounting** of food systems and ecosystem services.
- The overall objective is to promote cohesive policy approach to maximize productivity, improve livelihoods, and reduce negative impacts on the environment.



Photo Credit: L. Njoroge, NMK



**Kenya journey towards mainstreaming values of  
nature in decision making in agri-landscapes**  
**21-22 Feb 2018**

## TEEB-KENYA

- OUTCOME of the inception and subsequent consultation workshops
  - Created awareness and seek support among the stakeholders

The Economics of Ecosystems and Biodiversity (TEEB) - Kenya Implementation  
Supporting Biodiversity and Climate Friendly Land Management in Agricultural Landscapes

### Inception and Scoping Workshop Report



21-22 February 2018

## TEEB-KENYA

- OUTCOME of the inception and subsequent consultation workshops
  - The project structure was adopted and formed Steering Committee members (SCM) consisting of:
    - Ministry of Environment and Forestry (To **Chair The Steering Committee**)
    - Ministry of Agriculture and Irrigation (**Co-Chair**)
    - Ministry of Lands and Physical Planning
    - Ministry of Water and Sanitation
    - The National Treasury
    - Kenya National Farmers Federation (KNFF)
    - Kenya Associations of Manufacturers
    - National Museums of Kenya (NMK)- **Secretariat /Coordination of the Project**
    - *UN Environment- Ex Officio*



## TEEB-KENYA

- OUTCOME of the inception and subsequent consultation workshops
  - The scoping/study area options for the next phase of the project were proposed and decided by SCM namely- Mau Forest Complex



- Gazetted Forest Reserve in 1954 under Forest Act
- Largest remaining indigenous forest and water tower ca. over 400,000 hectares
- The main catchment area for rivers draining Lake Victoria and Rift valley lakes: Lakes Nakuru, Turkana, Natron, Bogoria, Baringo
- The Kericho County to the West, Narok to the South, Nakuru to the North and Bomet to the South-West.
- Support agriculture (wheat, maize, Tea and livestock rearing), hydro power, urban water supply, tourism (wild beast) and wildlife.
- Cultural value: Home to Ogiek people, derived their livelihood from the forest.

- Mau Forest complex rich in biodiversity and associated values
  - 169 species records of birds, 19 species of reptiles and amphibians, 23 mammals, 113 species of butterflies
  - Pollinators and
  - Gene banks- wild plants relatives of crops



Terer et al. 2016



A. *Rubus apetalus* fruit (Wild blackberry)



B. *Dioscorea schimperana* (wild yam)



C. *Ensete edule* (wild banana)



D. *Eleusine indica* (Wild millet)



## TEEB-KENYA

### ■ Communication strategy for the project

- Convey relevant data and information to various audiences to achieve its goals and objectives.
- Enhance the visibility of TEEB-Kenya project and to rally key stakeholders to promote land-use practices and trade-offs that take economic values of nature into consideration.

### • TEEB Project Communication Objectives:

- Create awareness about TEEB-Kenya among all key stakeholder groups
- Influence the attitude of all key stakeholder groups towards TEEB-Kenya project
- Create awareness about the various land-use scenario models among all stakeholder groups



## TEEB-KENYA

- TEEB-KENYA aspires to influence the behavior of all key stakeholder groups to promote land use decisions that take into consideration the value of nature
- ✓ *scenarios that will guarantee better harvests and sustainable livelihoods for current and future generations*

# THANK YOU



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- Private sector
- UN bodies
- Other Kenya government ministries