

A large, spreading acacia tree with a thick, light-brown trunk and a wide, flat canopy of green leaves stands in the foreground. The background shows a vast, open savanna landscape with rolling hills and a mix of green and yellowish vegetation under a bright sky.

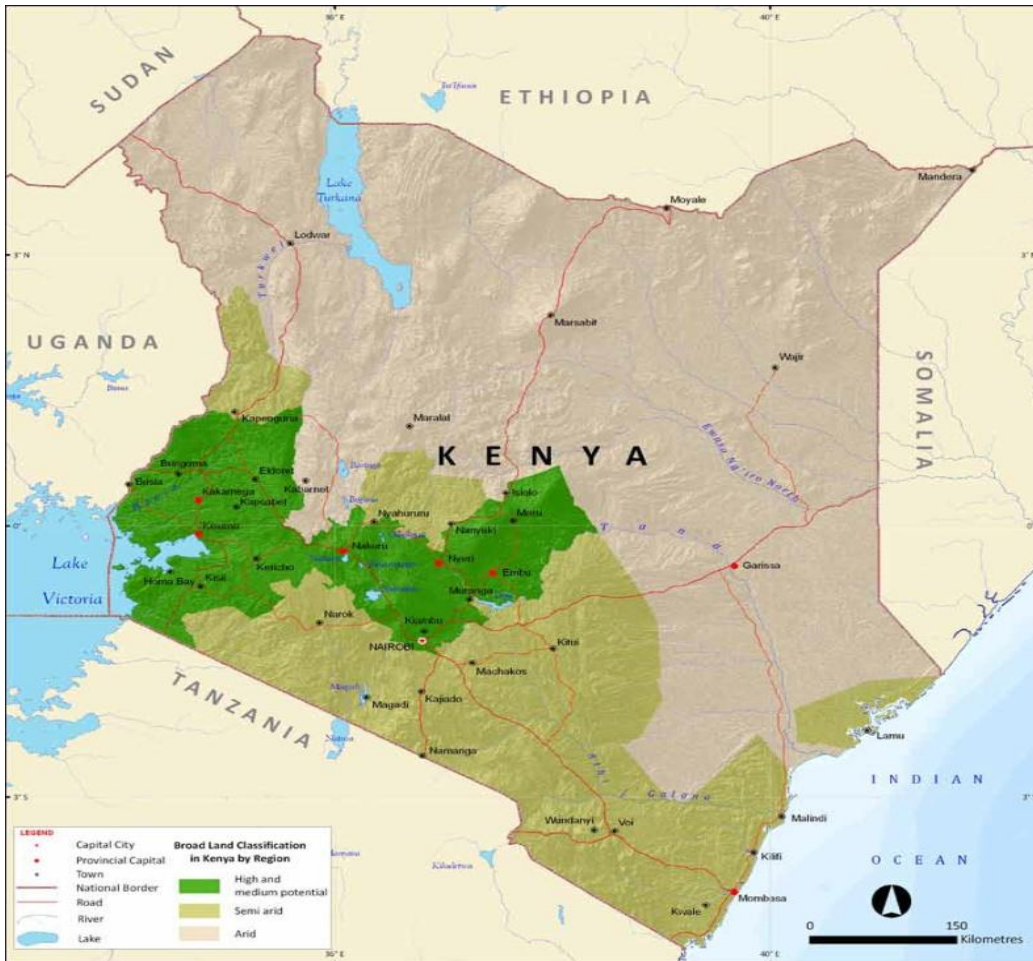
# Drivers of Ecosystems Degradation

Cyrus Mageria

MINISTRY OF ENVIRONMENT  
WATER AND NATURAL  
RESOURCES - KENYA



# General introduction



- Area 582,642 sq km
- Population 40 million
- 30 % arable land
- 80% classified as arid and semi arid areas
- 10-12% of the land area is designated protected area

# Kenya Biodiversity Perspective

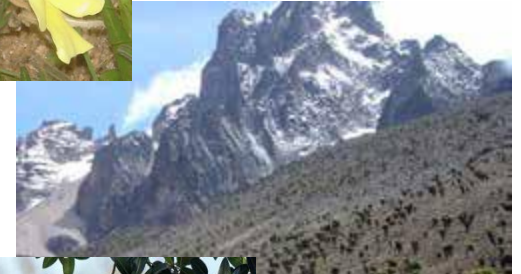
- Kenya is endowed with an enormous diversity of ecosystems ( variety of flora & fauna)
- fundamental to national prosperity
- Kenya is a mega bio-diverse country
- Home to over 35,000 species of flora and fauna.
- major biodiversity hot spots are within protected areas (national parks, reserves and sanctuaries)
- 70 % biodiversity occurs outside PA



# Kenya Ecosystems

Some of the ecosystems

1. Forest :highly fragmented and degraded  
Much of the forest cover was lost
2. Montane ecosystems: accounts for 10%  
varies in height from 1 500m to over 5 000m
3. Woodlands: cover some 15% , Rich in biodiversity
4. Marine: Have several habitats and also include coastal areas
5. Wetlands: cover 3 to 5 % of the land area of Kenya
6. Dry lands : covers about 70% , Rich in biodiversity and support livelihoods
- 8.Deserts: highly water-stressed



# Drivers of ecosystem degradation

Drivers	Impacts	consequences
<b>Social</b>		
<ul style="list-style-type: none"> <li>•Rapid population growth</li> <li>•Poverty</li> <li>•Lack of alternative livelihoods</li> <li>•Cultural attitudes</li> <li>•Consumption patterns</li> <li>•Illiteracy, and awareness</li> <li>•Community alienation/marginalization</li> </ul>	<ul style="list-style-type: none"> <li>•High demand for goods and services</li> <li>•Loss of biomass</li> <li>•Increased resource conflict</li> <li>•Loss of system productivity</li> <li>•Habitat fragmentation</li> <li>•Environmental degradation of ecosystems</li> </ul>	<ul style="list-style-type: none"> <li>•Biodiversity loss</li> <li>•Loss of Ecosystems integrativity</li> <li>•Loss of goods and services</li> <li>•Loss of regulating function</li> <li>•Loss of revenue</li> <li>•Loss of livelihoods</li> <li>•Increased poverty</li> </ul>

# cont

Drivers	Impact	Consequences
<b>Economic</b>		
<ul style="list-style-type: none"><li>•Expansion of agricultural and settlement land</li><li>•Natural resources extraction.</li><li>•Land use changes</li><li>•changes in Production patterns</li><li>•Overharvesting and overfishing</li><li>•Water abstraction</li><li>•Foreign markets and international trade</li><li>•Tourism development</li><li>•Invasive species</li></ul>	<ul style="list-style-type: none"><li>•Habitat fragmentation</li><li>•Extinction of species</li><li>•Increased erosion and sedimentation,</li><li>•Deterioration of water</li><li>•quantity/quality</li><li>•Decline in harvestable resources</li><li>•Loss of aesthetic value</li><li>•Increased pollution</li></ul>	<ul style="list-style-type: none"><li>•Loss of natural resources</li><li>•Threat to biodiversity</li><li>•Invasive species</li><li>•Loss of revenue</li><li>•Increased poverty</li><li>•No of endangered species increase</li><li>•Ecosystems degradation and loss</li><li>•Loss of livelihoods</li></ul>

Drivers	Impact	Consequences
<b>Climate Change</b>		
<ul style="list-style-type: none"> <li>•Increased greenhouse gases</li> <li>•Increased sea and surface temperature</li> </ul>	<ul style="list-style-type: none"> <li>•Loss of habitats</li> <li>•Loss of Biodiversity</li> <li>•Increased /reduced rainfall and flooding</li> <li>•More frequent droughts</li> <li>•Drying of rivers</li> <li>•Coral bleaching</li> <li>•Ocean acidification</li> <li>•Loss of tourism opportunities</li> </ul>	<ul style="list-style-type: none"> <li>•Loss of Ecosystems integrity</li> <li>•Threat to biodiversity</li> <li>•Food insecurity</li> <li>•Reduced biomass</li> <li>•Loss of revenue</li> <li>•Increased poverty</li> <li>•Loss of livelihoods</li> </ul>
<b>Legal and Institutional</b>		
<ul style="list-style-type: none"> <li>•Inappropriate/outdated legislation</li> <li>•Poor enforcement of legislation</li> <li>•Inadequate financial resources</li> <li>•Insufficient public involvement</li> <li>•Inadequate data</li> <li>•Inadequate implementation of regulatory instruments</li> </ul>	<ul style="list-style-type: none"> <li>•un sustainable exploitation of living resources</li> <li>•Loss of critical habitats/ecosystems</li> <li>•Undervaluation of ecosystem goods and services</li> <li>•Limited ability to think beyond immediate needs</li> <li>•Diminishing livelihoods</li> </ul>	<ul style="list-style-type: none"> <li>•Decline in harvestable resources</li> <li>•Decreased revenue</li> <li>•Increased conflicts</li> <li>•Increased poverty</li> <li>•loss of livelihoods</li> </ul>

# Measure Being Undertaken

## Legal

### 1. Constitution

- \* right to a clean and healthy environment
- \* obligates govt to Ensure sustainable exploitation, utilization, management and conservation of the environment and natural resources
- \* Encourage public participation in the management, protection and conservation of the environment

### 2. Policies and regulations

- a) Environment Management and Coordination Act
- b) Forest Act
- c) Wildlife Policy
- d) Wetland policy
- e) Climate change policy
- f) Agriculture policy
- g) National drought and disaster management policy
- e) Integrated Coastal Zone Management Policy ICZM



### 3. Strategies/Plans/Initiatives

- a) Vision 2013
- b) National climate Change response strategy
- c) Forestry master plan
- d) Water catchment rehabilitation and restoration master plan
- e) Various Master plan for various ecosystems
- f) NBSAP-CBD
- g) NAP-UNCCD

#### Other measures/initiatives

- a) Rehabilitation water catchment areas
- b) Rehabilitation of urban rivers
- c) National Drought Management Authority
- d) Sustainable Land Management programmes
- e) NRMP
- f) BMU
- g) Kenya Coast Development Programme
- h) Designation of Protected area and MPA
- i) Designation and gazettement of critical habitats and biodiversity hotspots
- j) Private public partnership in conservation e.g conservancies, ranches
- k) CSO/CBO

# Save your Ecosystems as you continue enjoying their Goods and Services



**Thank you all**