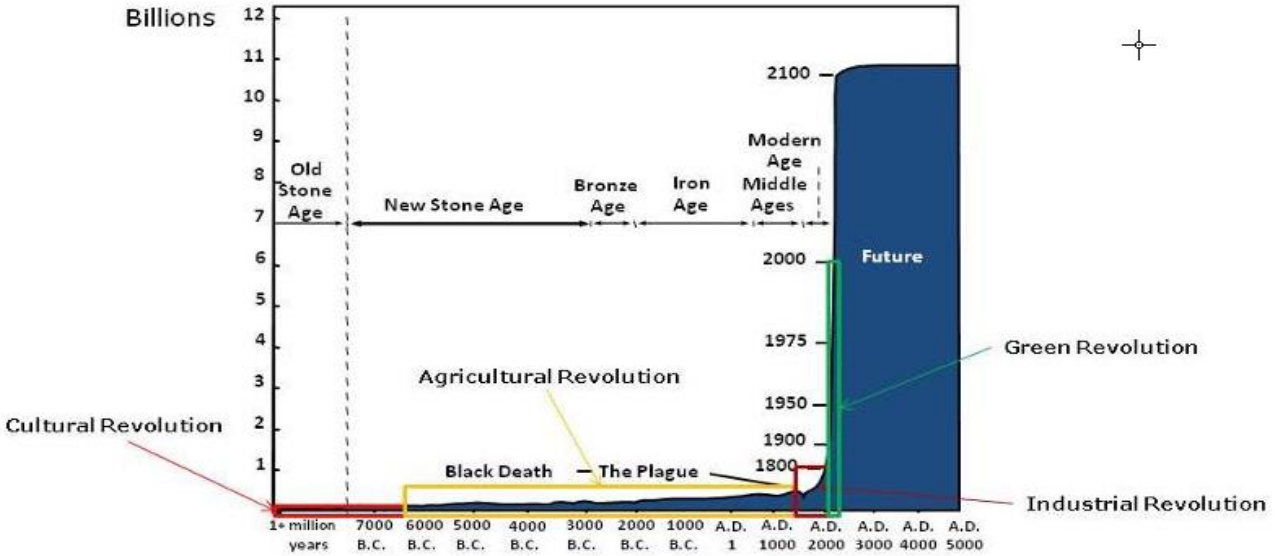
Climate Change, Ecological Interactions, Land Use Management and Social Impacts

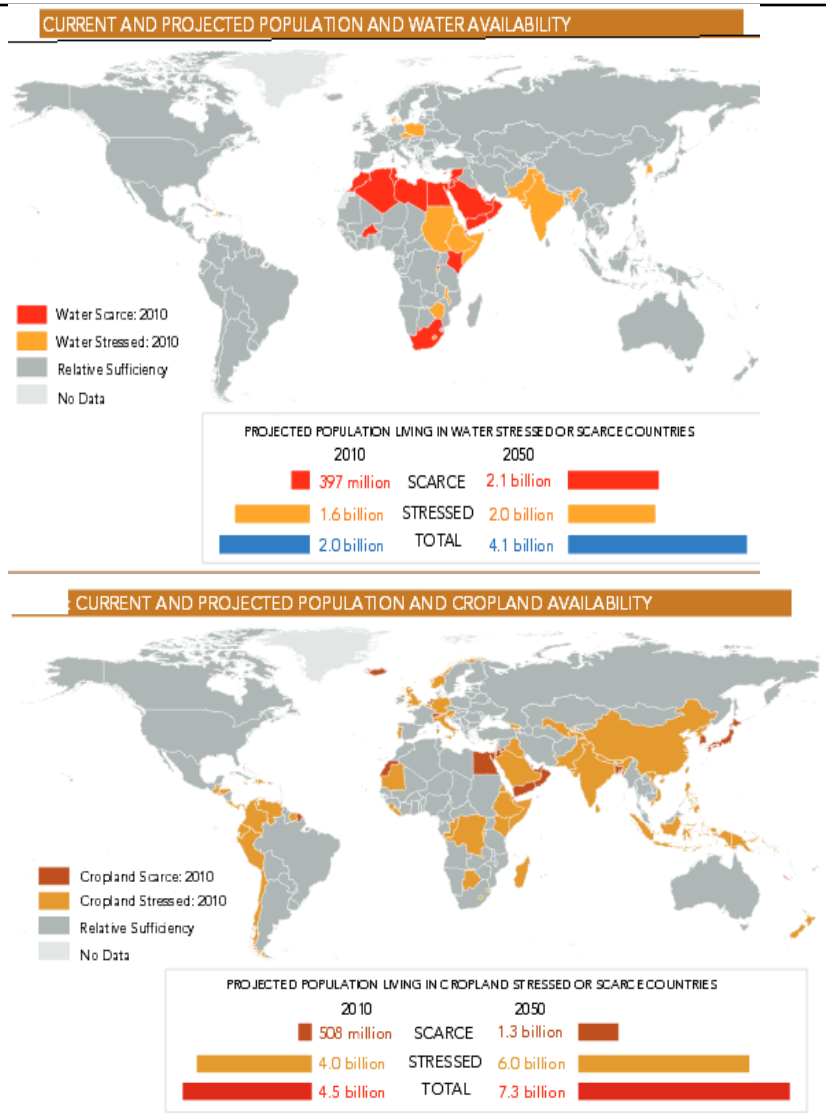
WHY CREATE

- A centaury ago, the natural world was viewed only to provision human needs and as an infinite sink for human wastes and pollutants.

- Today, human populations, along with their demand for space, commodities and amenities have increased >5 fold. The earth's ecosystems are being modified in new ways and at faster rates than at any other time in history.



World Population and natural resources



Increased demand for more resources requires intensive and wiser ecosystem management, particularly to support human needs in a more sustainable way.

New and rapid changes present significant challenges to our ability to predict the inherently uncertain responses and behavior of ecosystems.

Natural Ecosystem and current challenges

Changing Climate

Changing Land use

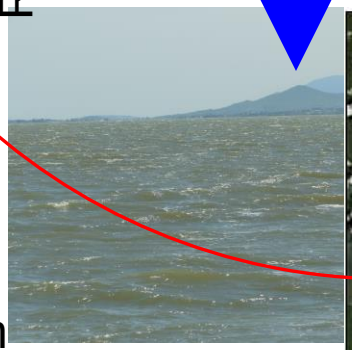
Changing Climate

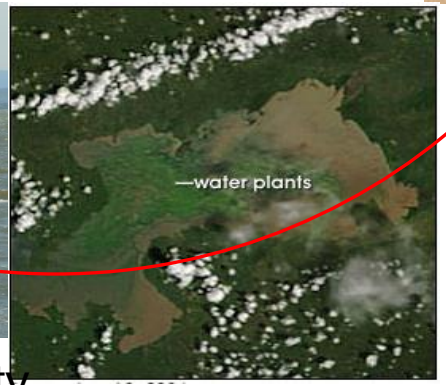
Increased drought

Reduced surface cover

Increased flooding

Increased runoff





Increased turbidity, fertility and eutrophication

Low water quality

Siltation and invasion by weeds

Today, there is increased awareness:

a) that there is a limit to the level of stress our natural ecosystems can sustain and still remain viable.

b) that ecosystems are more complex and difficult to manage than was thought before.

c) of the interconnectedness of natural ecosystems and

d) The need for interdisciplinary approach in sustainable ecosystem management.

Addressing myriads of global challenges demand new approaches in research and decision-making due to the complex nature of the interactions

Creating a platform for scientific interaction among researchers and institutions will enhance competency in the production, analyses and distribution of knowledge on global change impacts on ecosystems

The Consortium for Research in East African Tropical Ecosystems (CREATE)

Aims to:

1. act as a platform for information exchange on matters related to global change impacts on E. African Ecosystems

2. enhance research capacity through complementary knowledge and expertise, access to equipment and instrumentation

3. improve research capabilities through increased focus, new skills and techniques

4. enhance institutional complementarities.

The GOAL:

Attain Ecosystem management : driven by explicit goals, executed by policies, protocols and practices, made adaptable by monitoring and research based on our best understanding of the ecological interactions and processes necessary to sustain ecosystem composition, structure and function.

Today's meeting

- was designed to promote information exchange among three working groups which examine:

- 1. Process controls in natural ecosystems.
- 2. Agriculture oriented research activities.
- 3. natural science and economic trade-offs and impacts associated with land use shifts between agriculture and forestry.

Goals;

1. To consider possibilities of consolidating current research efforts

2. Identify additional partners that can contribute to a bottom-up approach - synthetic analysis of Kenyan land use systems, ecosystems and climate

Thank You for your attention