



The Nature Conservancy

Protecting nature. Preserving life.™



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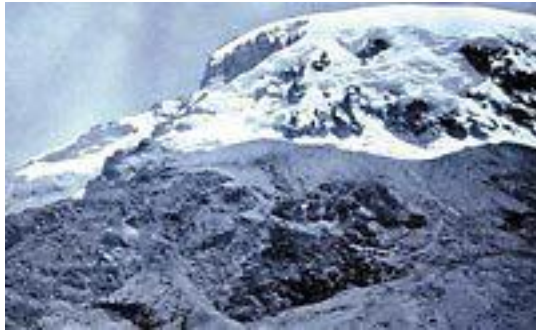


**FRANKFURT
ZOOLOGICAL
SOCIETY**

Empowering Communities to Adapt to Climate Change in Western Tanzania

Dr. Elizabeth Gray,
Climate Change Specialist, The Nature Conservancy

Mount Kilimanjaro:
90% loss of ice cover
Loss of 13000ha of
montane forest



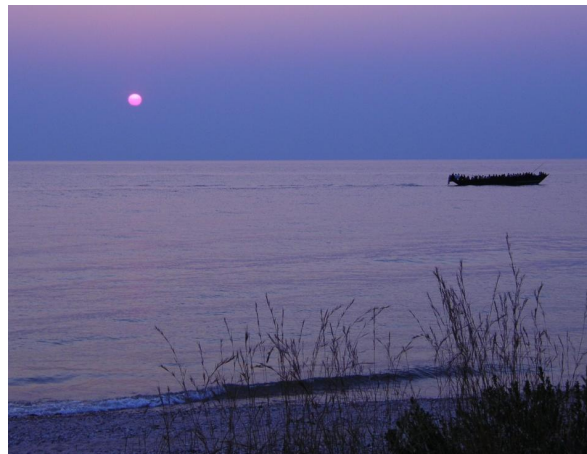
East Africa: increased
frequency of drought over
last 20 years



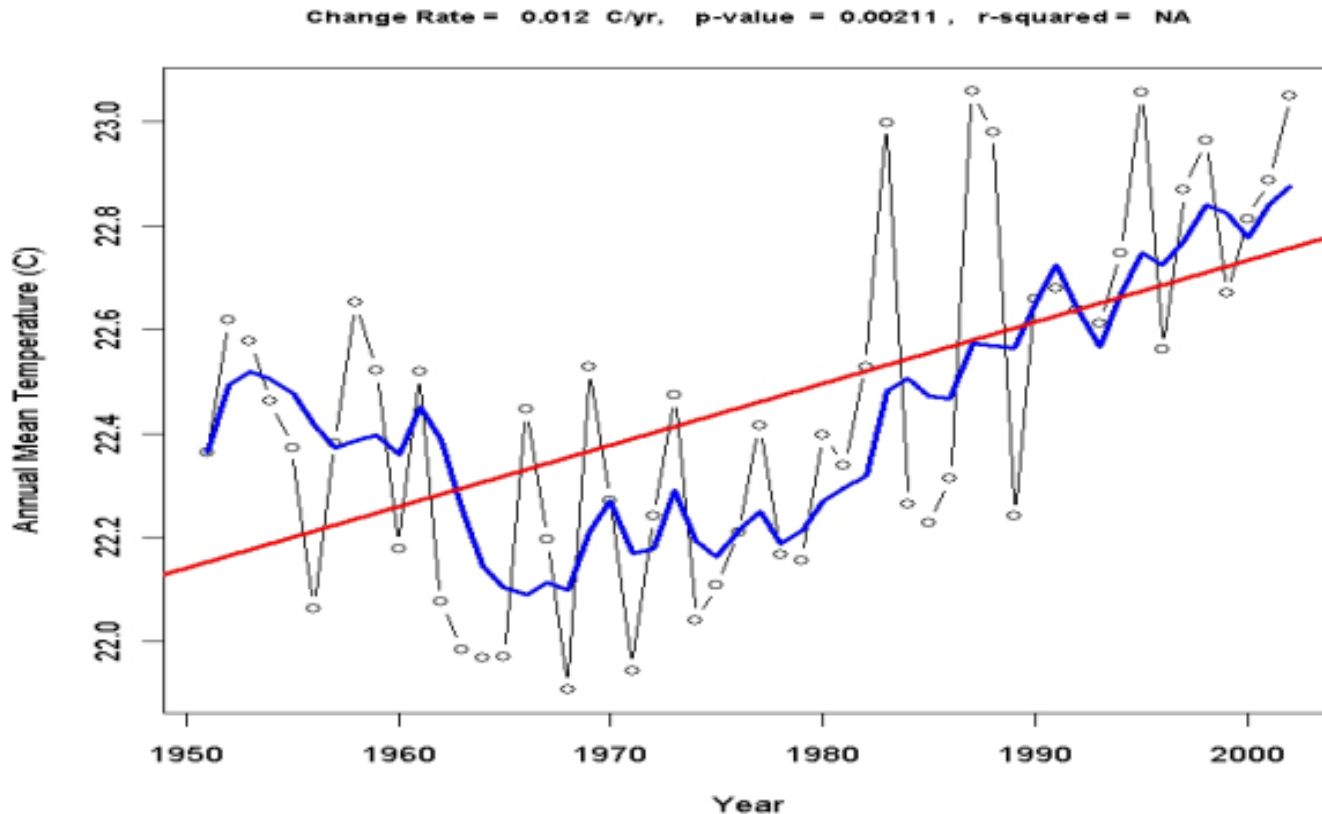
Kenya: decline of birds in
mountainous regions



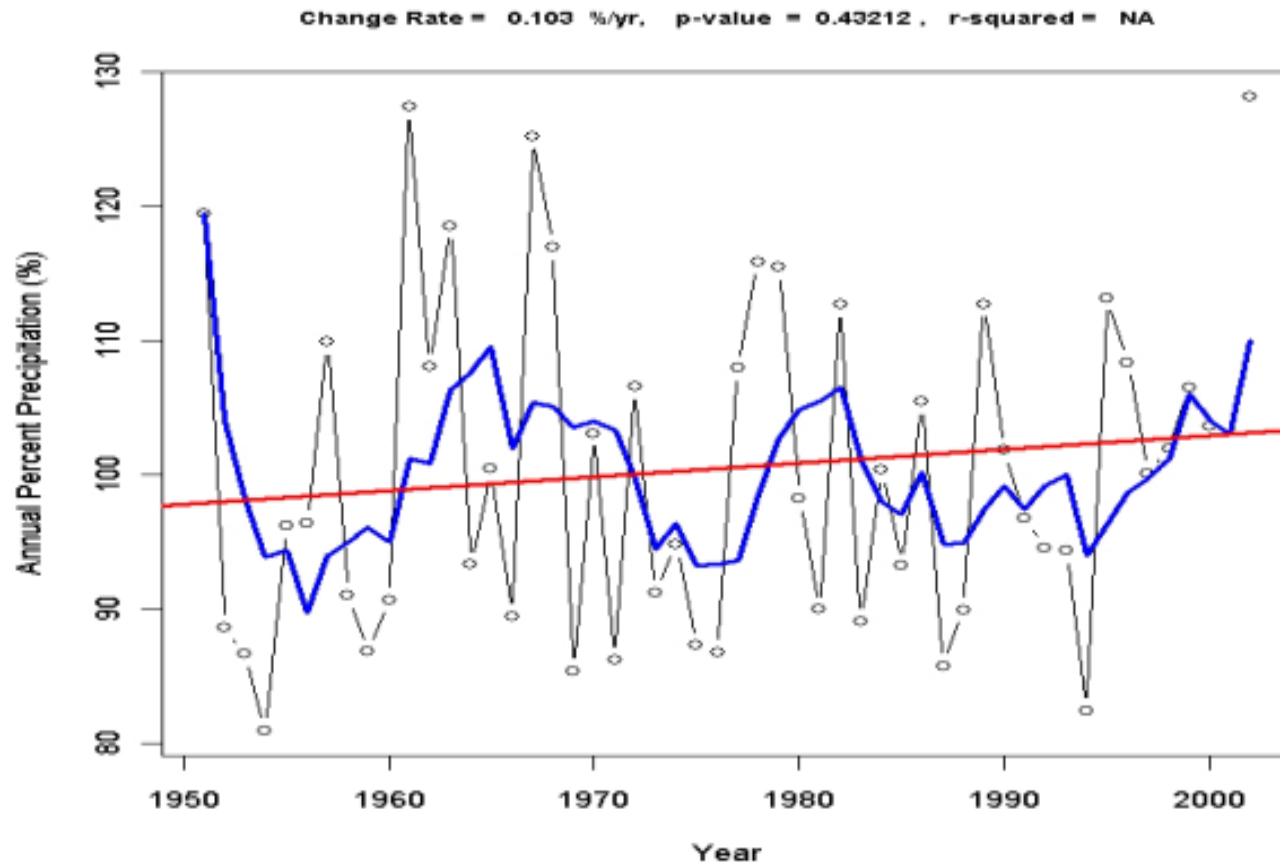
Lake Tanganyika: declining
fish catches



Average yearly temperature since 1950s

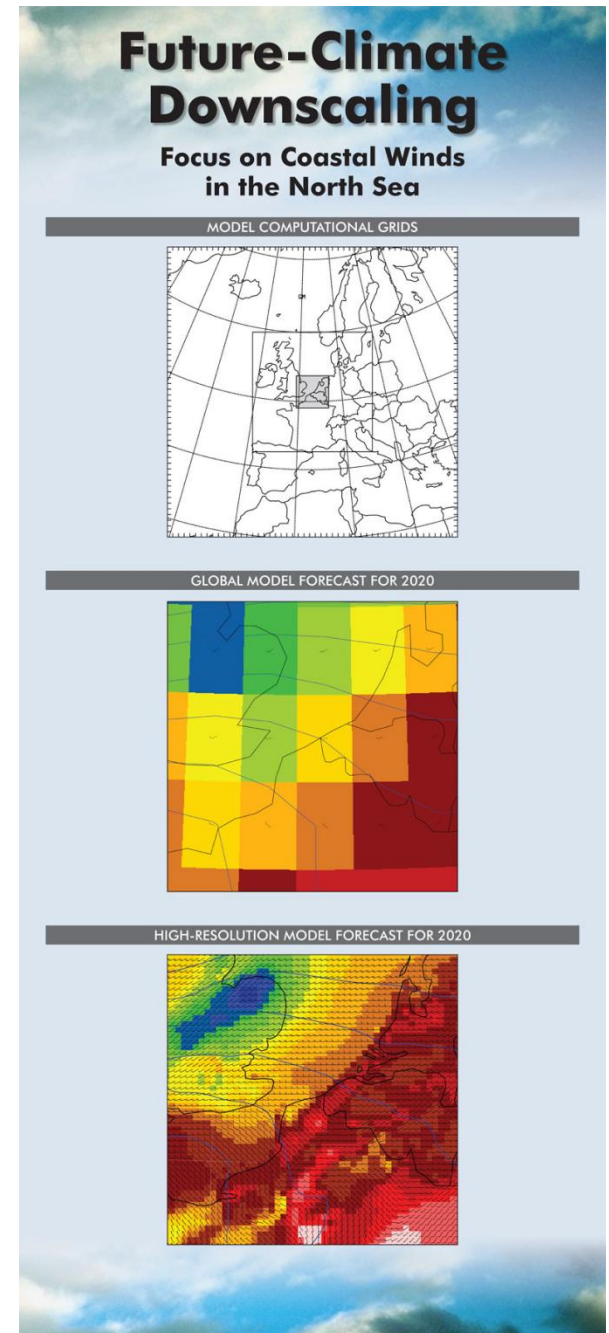
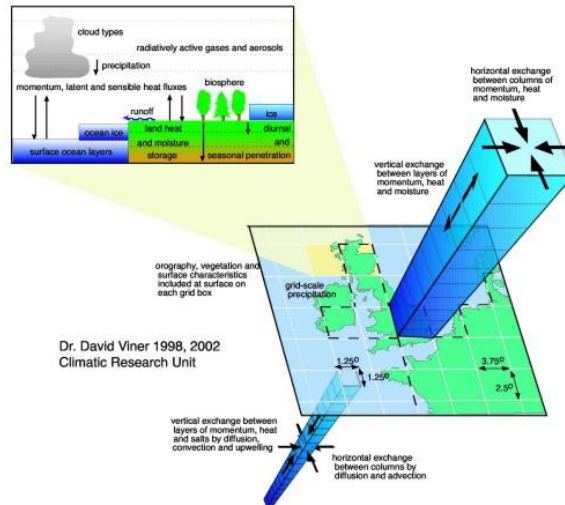


Average yearly rainfall since 1950s

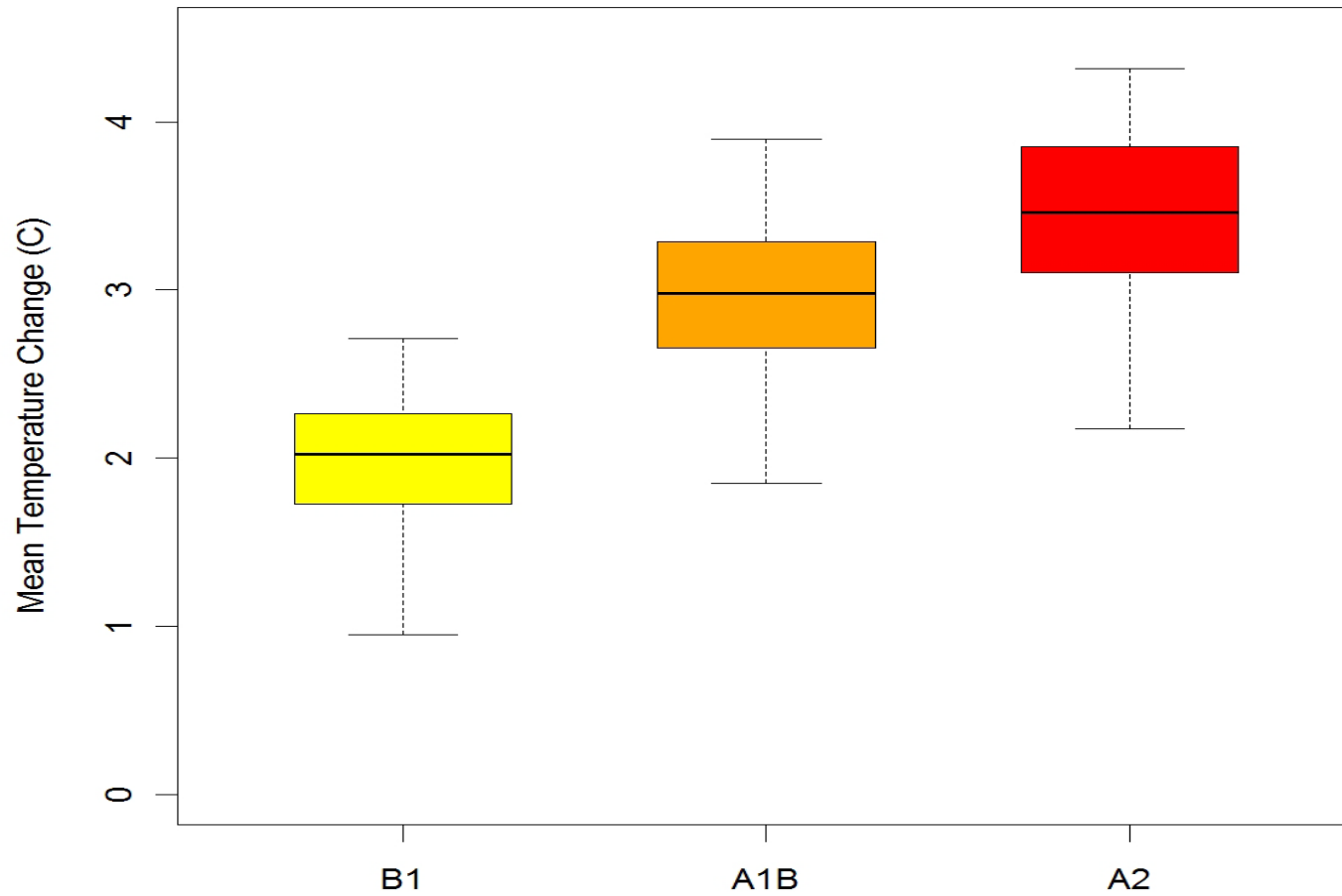


Future Climate Projections

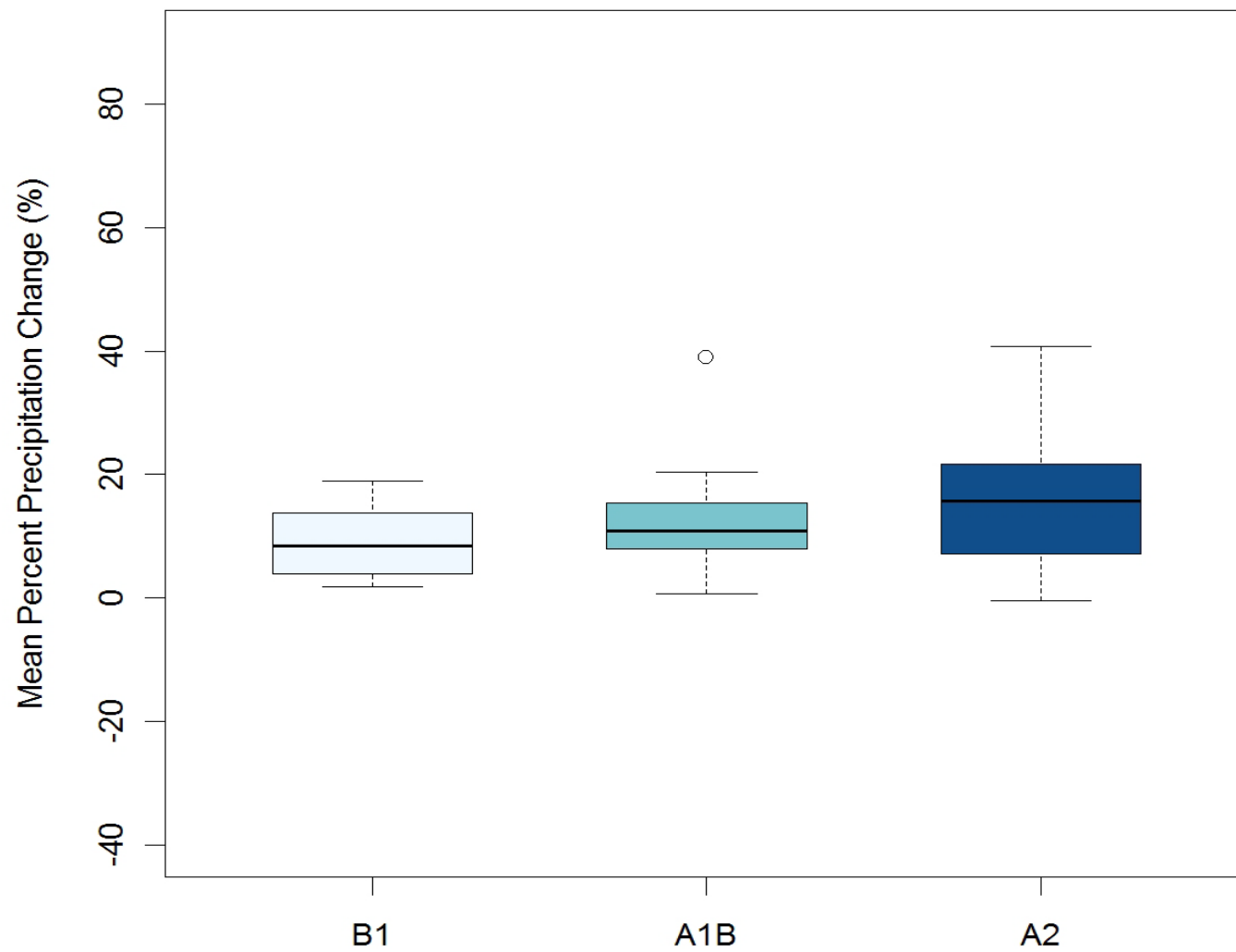
- Use information about historical climate and statistical techniques to interpolate to finer spatial scale.



End-of-Century: Annual Temperature Change



End-of-Century: Annual Precipitation Change



Synthesis of Climate Forecasts

- Temperatures will continue to rise, across all seasons
- Annual rainfall may not vary, but we will see changes in frequency, intensity & predictability
- Wet seasons will become wetter; dry seasons will become drier
- Despite increased rainfall, it will become more arid



Conservation Projects and Protected Areas of Western Tanzania

Ecosystems of the Greater Gombe Ecosystem and Greater Mahale Ecosystem















Greater Mahale Ecosystem



**Rainfall patterns change –
More unpredictable**

Montane Forest

Incidence of fire
increases

Moisture
decreases

Increased Temperature

Animal
movement
increases

Miombo Woodland

Incidence of fire
increases

Riverine System

Hydrological system becomes
erratic –
Oscillating levels of flow

Freshwater Systems

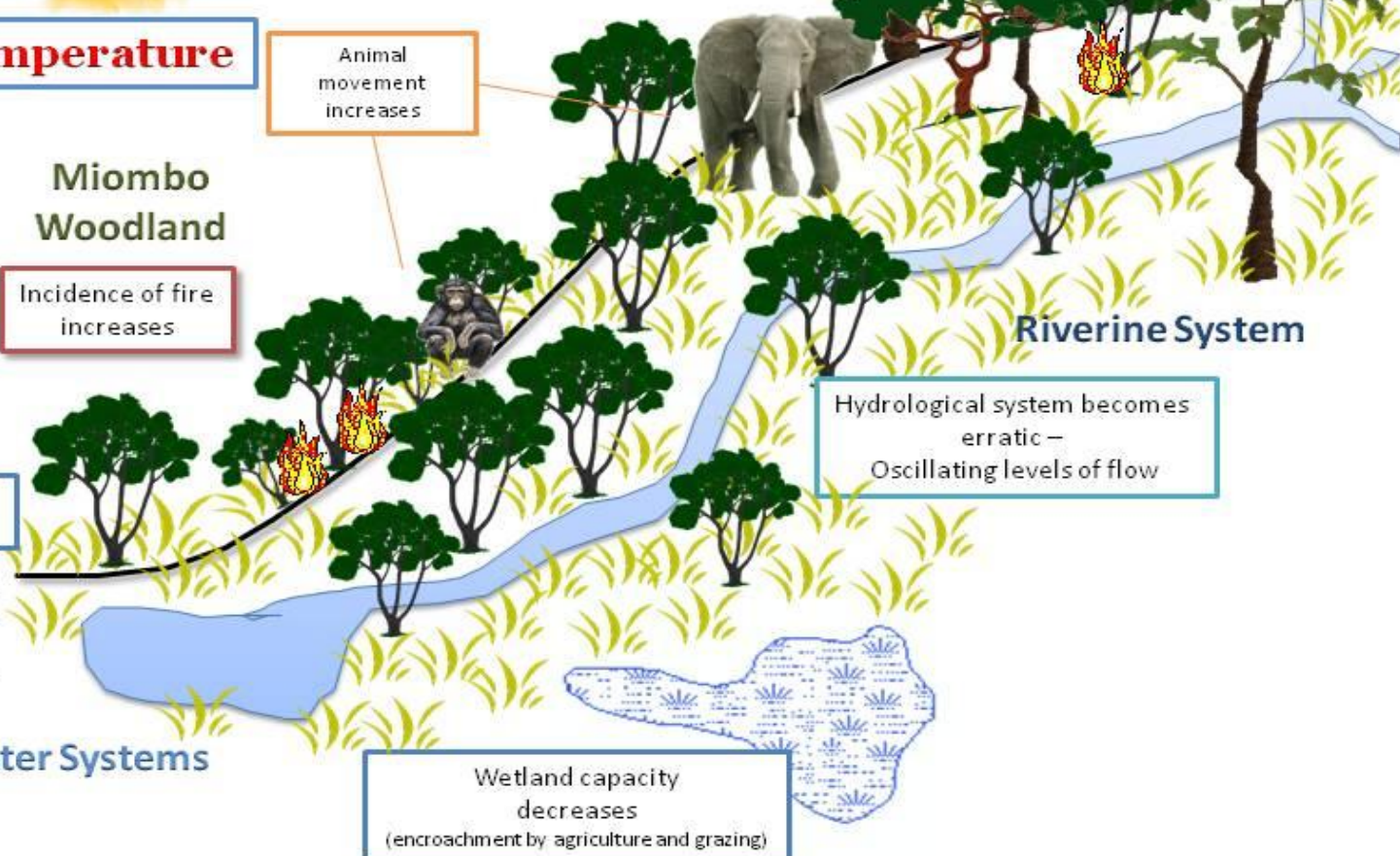
Wetland capacity
decreases
(encroachment by agriculture and grazing)



Decreased water
level

Increased
stratification

Declining fish
catch





- Land use planning
- Fisheries
- Policy
- Agriculture
- Wildfire
- Poaching
- Corridors
- Energy

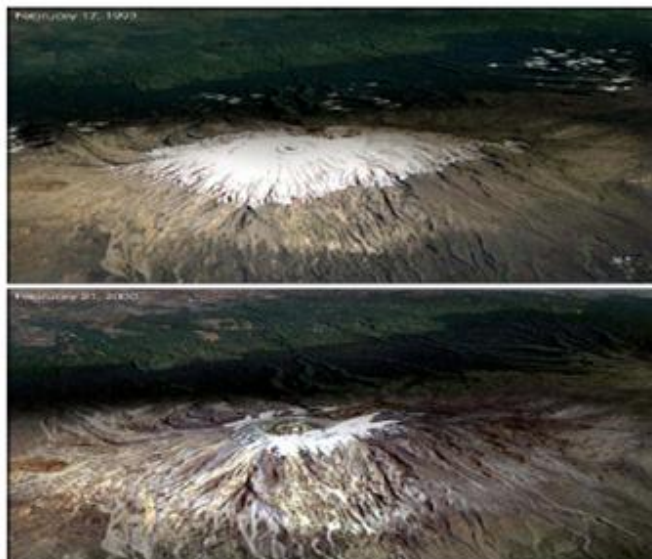






UNITED REPUBLIC OF TANZANIA

NATIONAL ADAPTATION PROGRAMME OF ACTION (NAPA).



VICE PRESIDENT'S OFFICE,

Division of Environment, January 2007

A serene sunset scene over a body of water. The sky is a deep blue with a bright orange sun low on the horizon. A small boat is visible on the water to the right. In the foreground, there are dark, silhouetted reeds or grasses. The text "Thank You" is centered in the middle of the image.

Thank You