

# Challenges in the Formulation of Climate Change Adaptation Policy Framework that Responds to Local Conditions

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Director

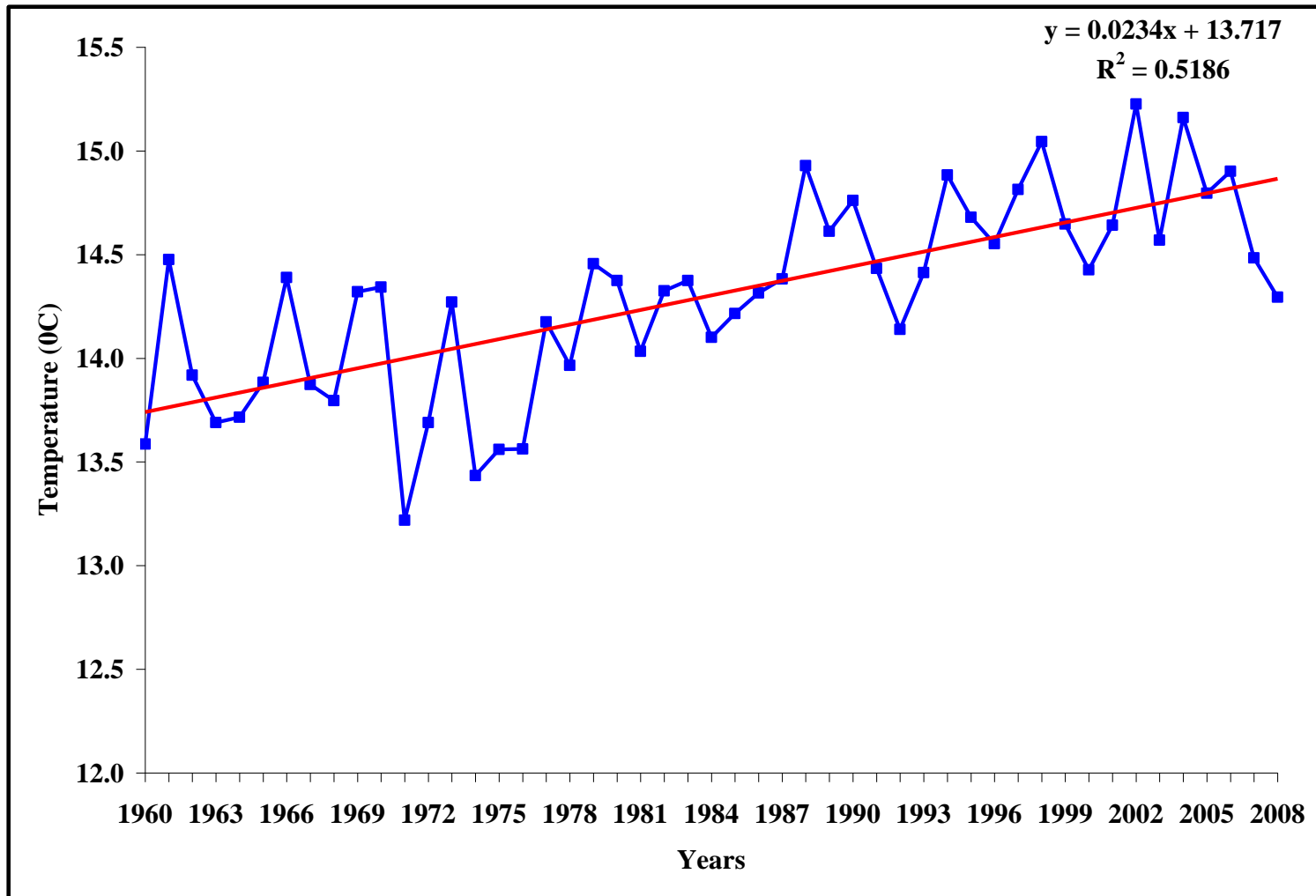
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# Introduction

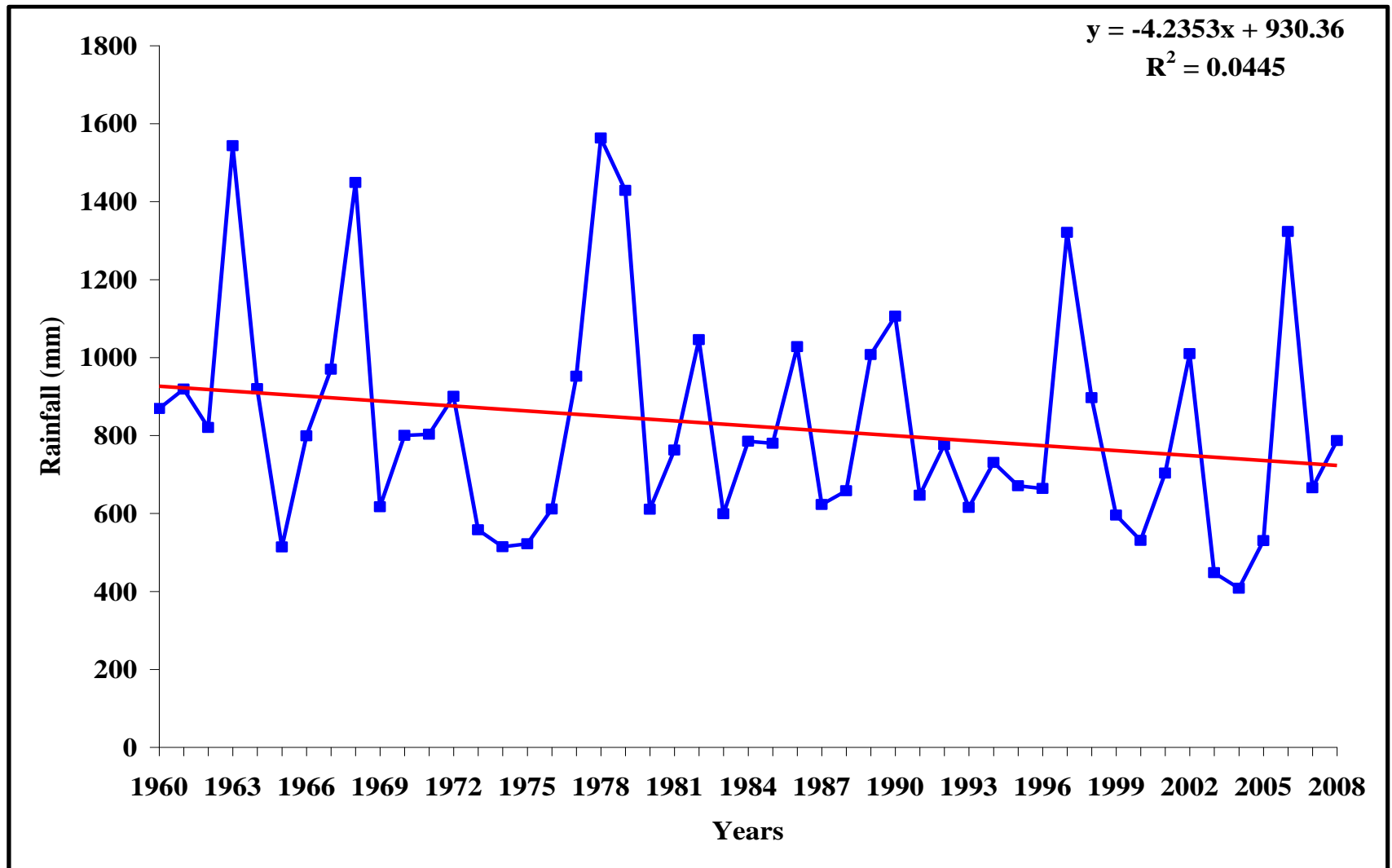
- Climate change is a reality and is affecting livelihood of communities
- Examples are temperature increase and altered rainfall systems
- Such impacts are likely to be severe in the future

## Arusha mean Annual Tmin time series between 1960 and 2008



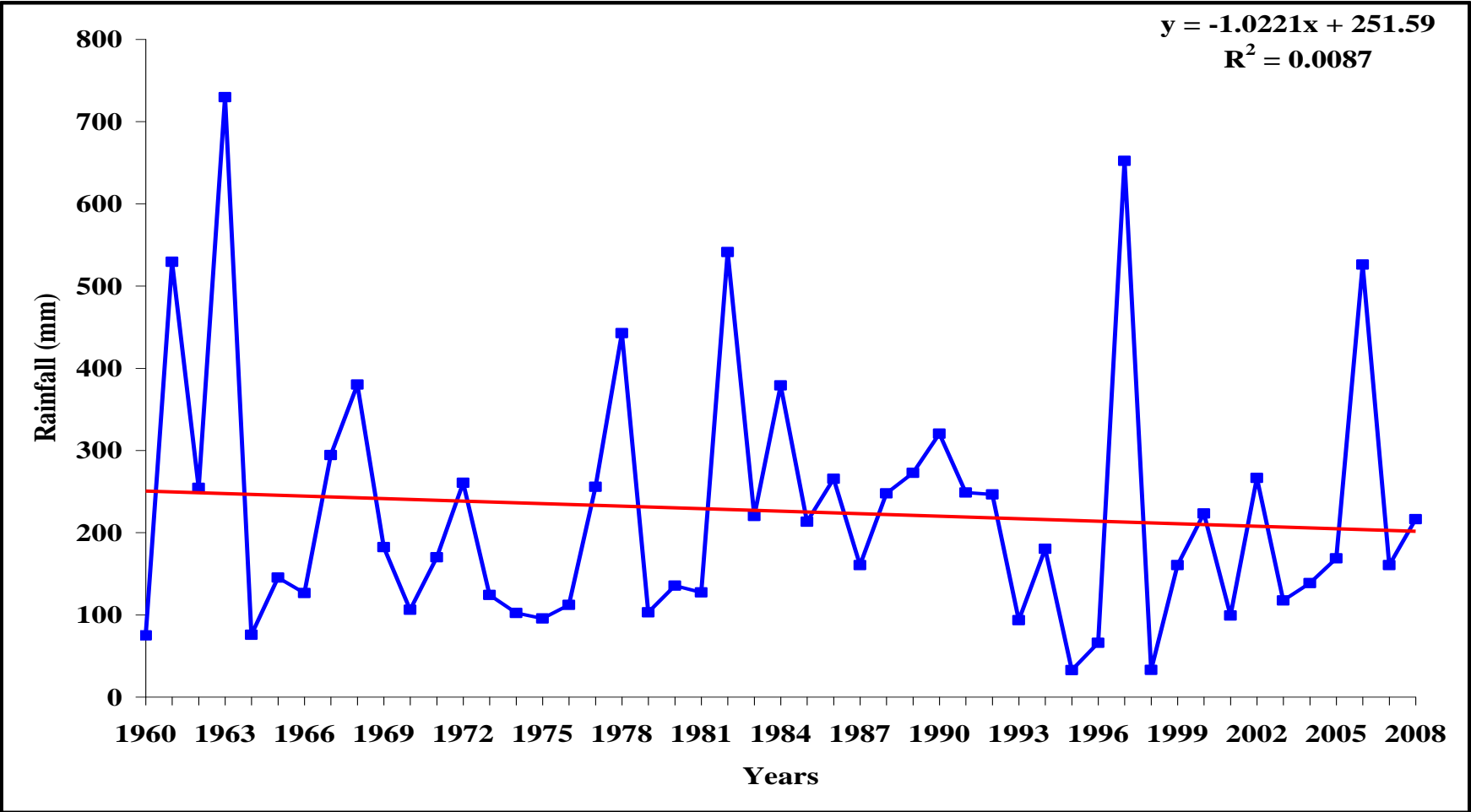
Source: Kibona (2010)

# Arusha annual rainfall time series



Source: Kibona (2010)

# Arusha October-December rainfall timeseries



Source: Kibona (2010)

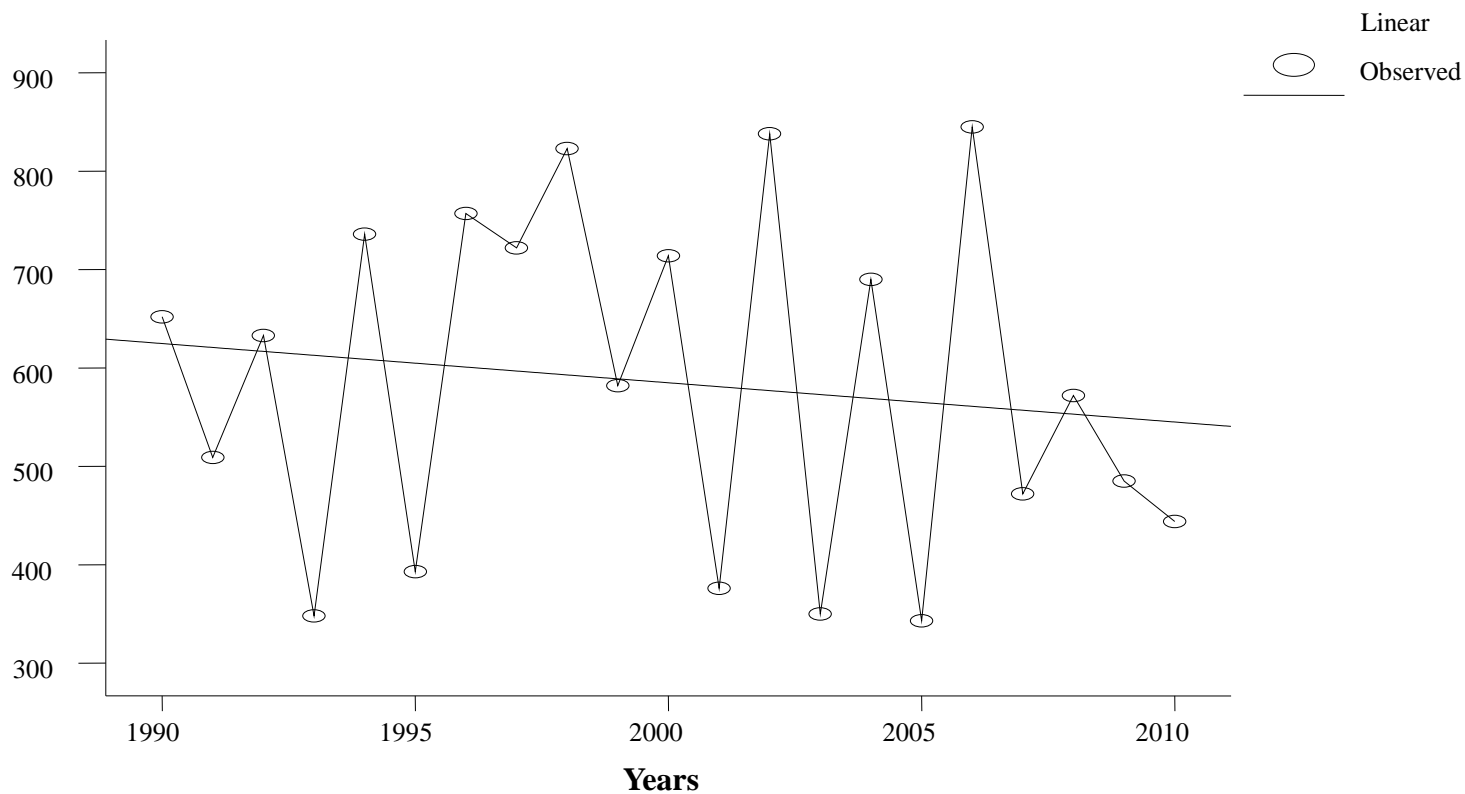
# Need for Adaptation Framework to Address Climate Change Impacts

- Climate change adaptation framework has to be put in place to address these climate impacts
- Information is a key for policy formulation. The question is;
  - What type of information?
  - At what temporal and spatial scale?
  - How can it be shared?

# What Type of Information

- Adaptation is site-specific
- At the individual and community level, thus;
  - It is crucial to harness local knowledge in designing adaptation strategies.
  - However, local knowledge are rarely taken into consideration by policy makers in designing adaptation strategies
  - Very few institutional mechanisms exist to mainstream traditional coping and adaptation mechanisms.

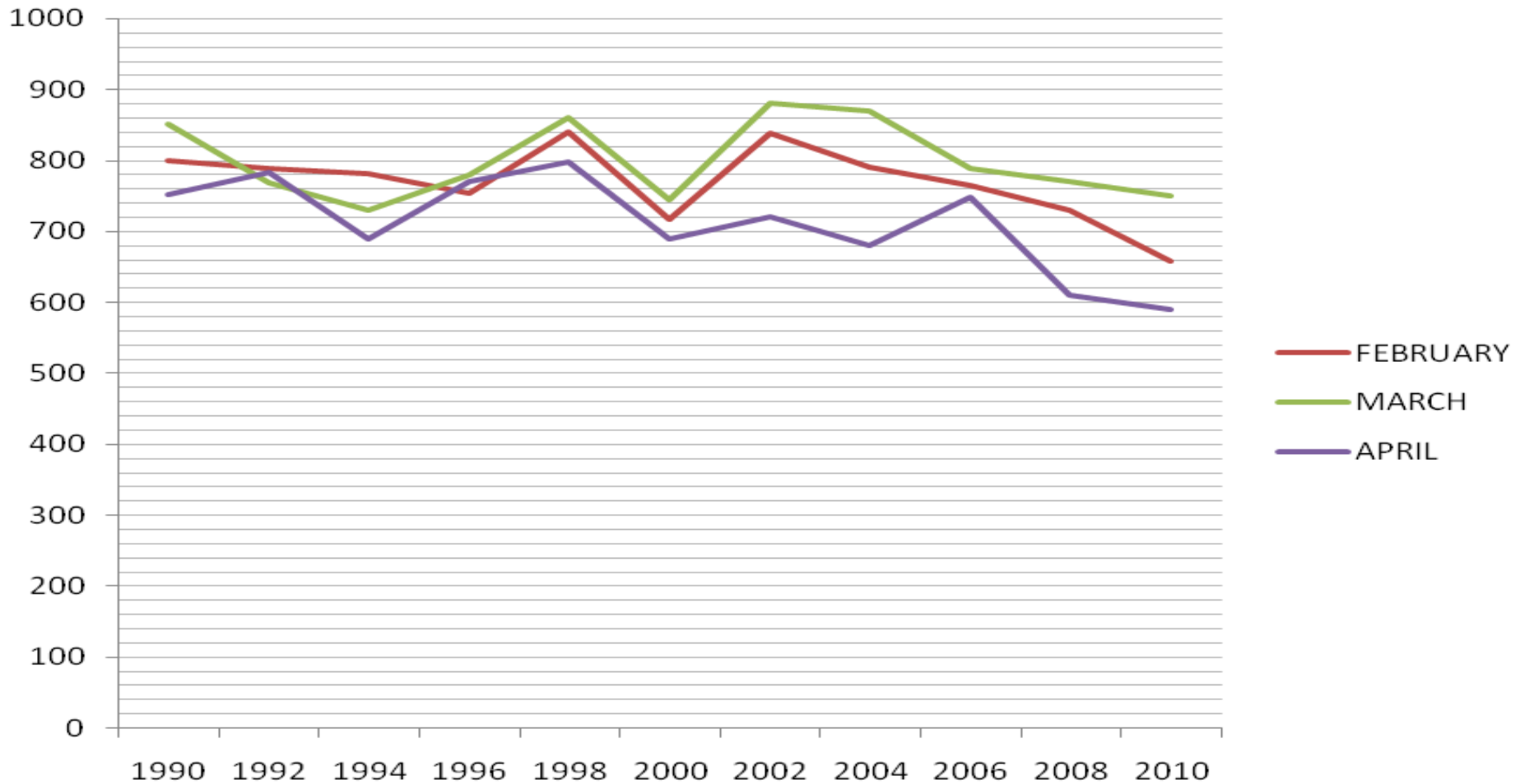
# Mean Annual Rainfall Trend at Kongwa Meteorological Station



**Source: (Mkonda 2011)**

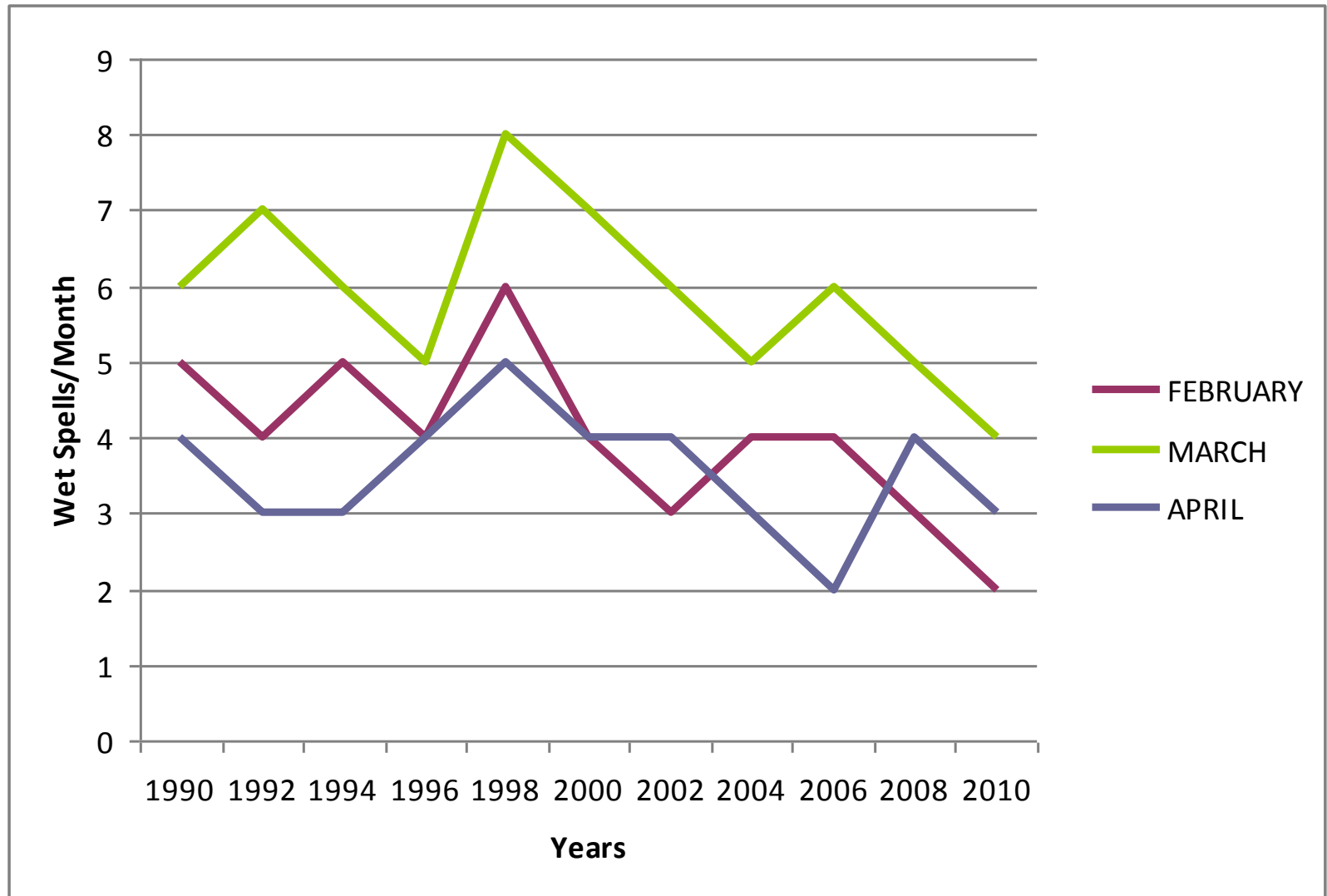


# Mean Monthly Rainfall Trend at Kongwa Meteorological Station

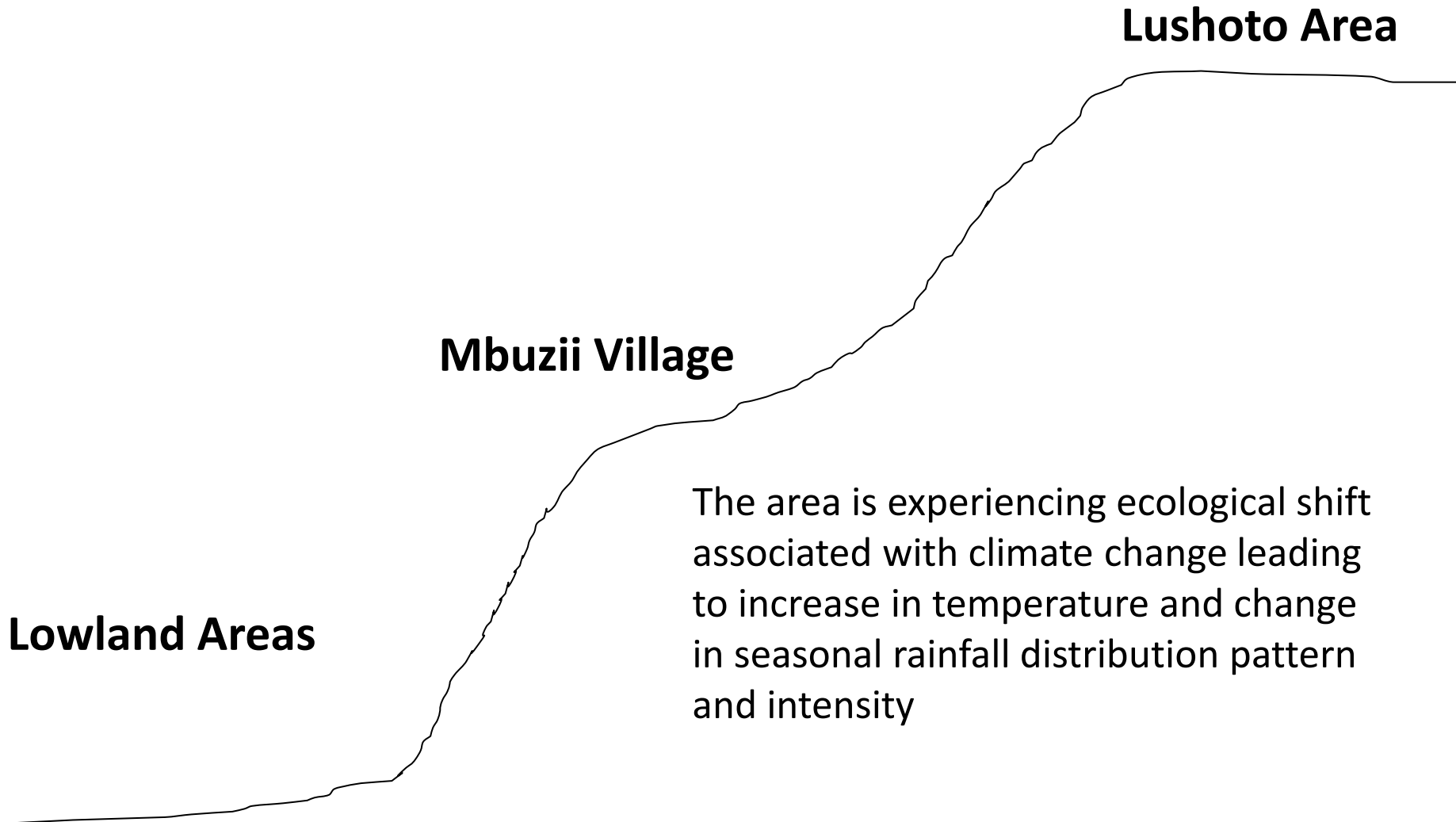


**Work in Progress (Mkonda 2011)**

# Number of wet Spells in Kongwa Meteorological Station



# A story of three Friends Sharing Experiences



# Experiences of the First Person

- Experience of the first person residing on the foot slopes of the Usambara Mountains
  - Frequent droughts, less and intense rains, rivers drying and floods from the upper slopes blaming his colleagues (**NOT HAPPY AT ALL**)

# Experiences of the Second Person

- Experience of the second person on the middle slopes (Mbuzii Village);
  - No longer growing coffee but growing maize and beans twice a year because it is warmer than before
    - Very happy as he gets food and market is readily available as compared to coffee
    - However, unhappy with more work to control soil erosion due to increased rainfall intensity

# Experiences of the Third Person

- Experience of the third person residing on the upper slopes (Lushoto Area)
  - Still growing coffee
  - rainfall gives them space as it does not rain continuously,
  - it is not as cold as it was before,
  - experiencing new crop trees bearing fruits such as papayas, mangoes – GOOD NEWS FOR HIM

# Need for Climate Scientist

- Dialogue cannot be concluded without climate scientists
  - They are sharing the past and present
  - They should also share the possible future for them to position themselves for the anticipated changes and associated impacts (adaptation)

# The story gives the following

- Importance of local knowledge
- Spatial complexity
- Consideration of temporal changes (past, present and future)



# How do we capture a full story at a national level

- Need for impact and vulnerability assessment
  - Cluster the set of information based on geographical units
  - Need for climate information to complete the stories
    - Calling for Regional and international collaboration

# How can information be shared?

- Planning with People and not for People
  - We need to plan together (communities, scientists and policy makers)
  - Multi-stakeholders dialogues should provide avenue for such collective planning

# How do we ensure planners and decision makers are on board

- Impart climate change adaptation knowledge to planners and decision makers (seminars, short courses, etc)
- Integration of climate change adaptation in the training programs
- Development of climate change adaptation courses

# Thank you for listening

