Indigenous knowledge, perceptions and management of climate change in South Central Zimbabwe

Introduction

- Study perceptions and knowledge of climate change over the last 25 years (1980-2005) in a small scale rural economy
- Main focus is on rainfall, temperature, wind pattern changes
- The study covers 28 villages, approx. 1680 hh
- Population approximately 20 000

Research Methods

- Participatory rural appraisal
- Questionnaires
- Analysis of meteorological records (temp., rainfall, wind patterns)
- Literature review
- Comparisons (PRA and Scientific data)

Thematic Areas

- Rainfall, wind, temperature (for bot dry and wet years)
- Animal behaviour
- Abundance
- Fertility, survival
- Vegetation distribution
- Adaptation to climatic variations and coping strategies

Prel. Research Findings

- Rainfall
- Informants note with concern dramatic reduction in annual rainfall
- Rainfall (water) is a major problem, affecting livelihoods
- Rainfall unpredictable, seasons have changed
- Very localised, does not cover large areas like in the past
- More rainfall or less, different from experiences
- Pentads have changed giving farmers less room to plan their farming activities

Findings (contd)

- Temperature
- The area is getting hotter over the last 25 yrs
- High temperatures perceived as associated with high soil temperatures
- Temperature unusually high, e.g. less frost (veta) in winter
- High temperatures no longer associated with good rainfall
- High temperatures associated with headaches, dizziness, wilting of crops, etc
- Hot and dry winds also very common, hence less rainfall

Findings (contd)

- **Wind**
- Unpredictable, too windy, cold, dry
- Comes in every direction, very unusual
- More cyclones being observed
- Causing more destruction to homes and crops
- Becoming more dusty
- More wind before rains, sometimes chasing away expected rains
- More easterlies, northerlies preferred

Findings (contd)

- **Animals**
- Behaviour changing e.g. baboons attacking domestic animals
- Baboons moving to new territories, especially found in open velds instead of mountainous areas
- Birds nesting closer to homes
- Birds becoming more greedy, to the extent of eating maize in fields
- New spp., of birds that feed from toilets
- Fish disappearing from rivers (lack of protein)
- Frogs have also disappeared from local rivers because of dessication, only seen in the middle of the rainy season
- Storks which used to come in large numbers also rare resulting in more cattle affected by ticks, more locusts
- More termites throughout the year, competing with livestock for grass
- Wild animals more aggressive because of shortage of food in the bush

Socio-economic effects of CC

- Poor harvests
- Only lucky ones harvest something from their fields
- High livestock mortality, especially young ones
- Low fertility, even when fertility is high the offsprings are very weak and small
- Droughts causing social stress, weak morals and increased exposure to HIV/AIDS
- Poverty among people, things have just changed for most people

Climate Change Control

- Pen feeding of livestock
- Growing drought resistant crops e.g. millets and sorghums
- Moving away from cash crops pushed by dealers
- Cultivating smaller pieces of land
- Adopting soil and water conservation technologies
- Cultivation in small irrigation schemes available than in dry-lands
- Moving into non-agricultural activities e.g., cold panning
- Traditional rituals e.g. rain-making ceremonies but trust in them declining, especially among the youths and educated

Key Issues

- Strong recognition that climate change is happening and affecting livelihoods
- More resources being put to mitigate effects of droughts and reduced soil fertility
- Efforts towards ecological restoration hampered by lack of communal will
- People now more interested in money generating activities to meet immediate needs
- Access to information very poor, lack of electricity, TVs (1/65hh), radios (2/65hh) and news papers (rarely read), also compounded by high prices of electric batteries
- Poor understanding of macro-economic factors and outside forces affecting daily lives and climatic changes
- Weak institutional capacity to coordinate any environmental activities