

A black and white photograph of a dry, hilly landscape. In the foreground, there is a prominent vertical crack in the soil, revealing a lighter-colored layer underneath. The background shows rolling hills with sparse vegetation under a cloudy sky.

# **Complex Adaptive Systems Management in southern Africa**

## **Challenges and Opportunities**

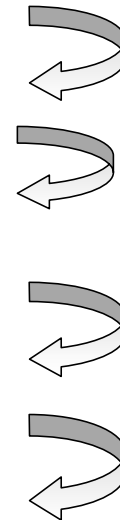
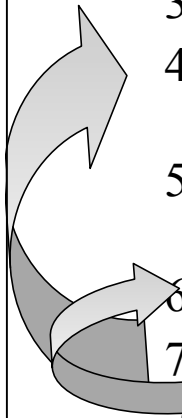
Christo Fabricius  
Rhodes University

# Managing CAS

## **Adaptive co-management**

1. Create awareness of the problem
2. Establish a vision, or plan
3. Identify champions
4. Establish knowledge networks through trust-building
5. Identify 'windows of opportunity', and establish the political will
6. Negotiate actions
7. Build knowledge, through adaptive learning

- **'Adaptive governance'**



# Decision making

## In an ideal world

- ☺ Knowledge is shared, and used for management
- ☺ Partners take responsibility
- ☺ Awareness is increased
- ☺ Learning is iterative
- ☺ Capital grows

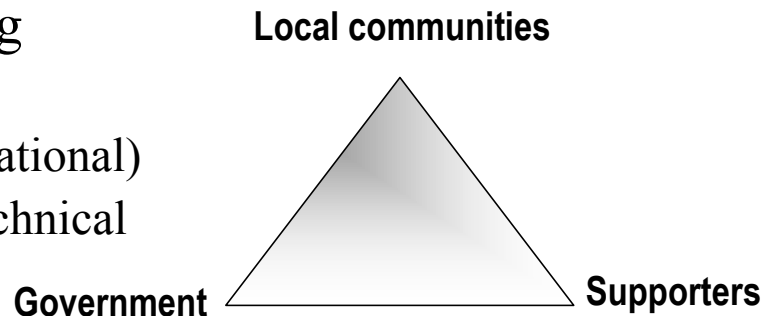


## **So southern Africa has three specific challenges**

- a) A dire need for transformation and re-organization (yes, it's only just started..)
- b) Dealing with unpredictability
- c) Adjusting for serious shortages in certain types of 'capital'

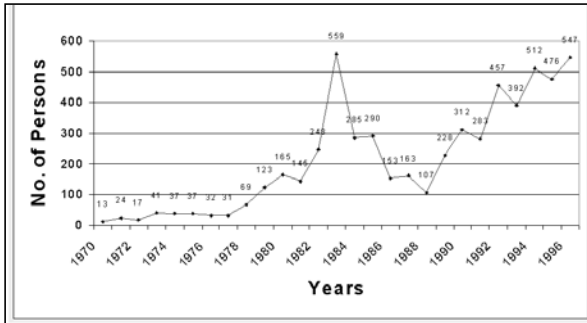
# The need for transformation

- Improved governance systems and institutions
- Improving the integrity of ecosystems (restoration, resilience management)
- Better decision making
  - Local communities
  - Government (local->national)
  - Scientists and other technical supporters



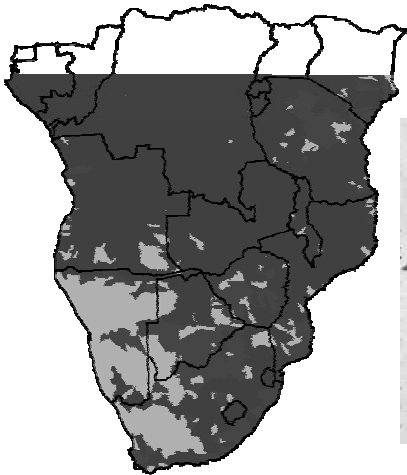
*(CSIR's 'Trialogue' model)*

# Unpredictability and high variances



# Patchy distribution of Capital - e.g. water in southern Africa

**Southern Africa region**



**Gariep Basin**

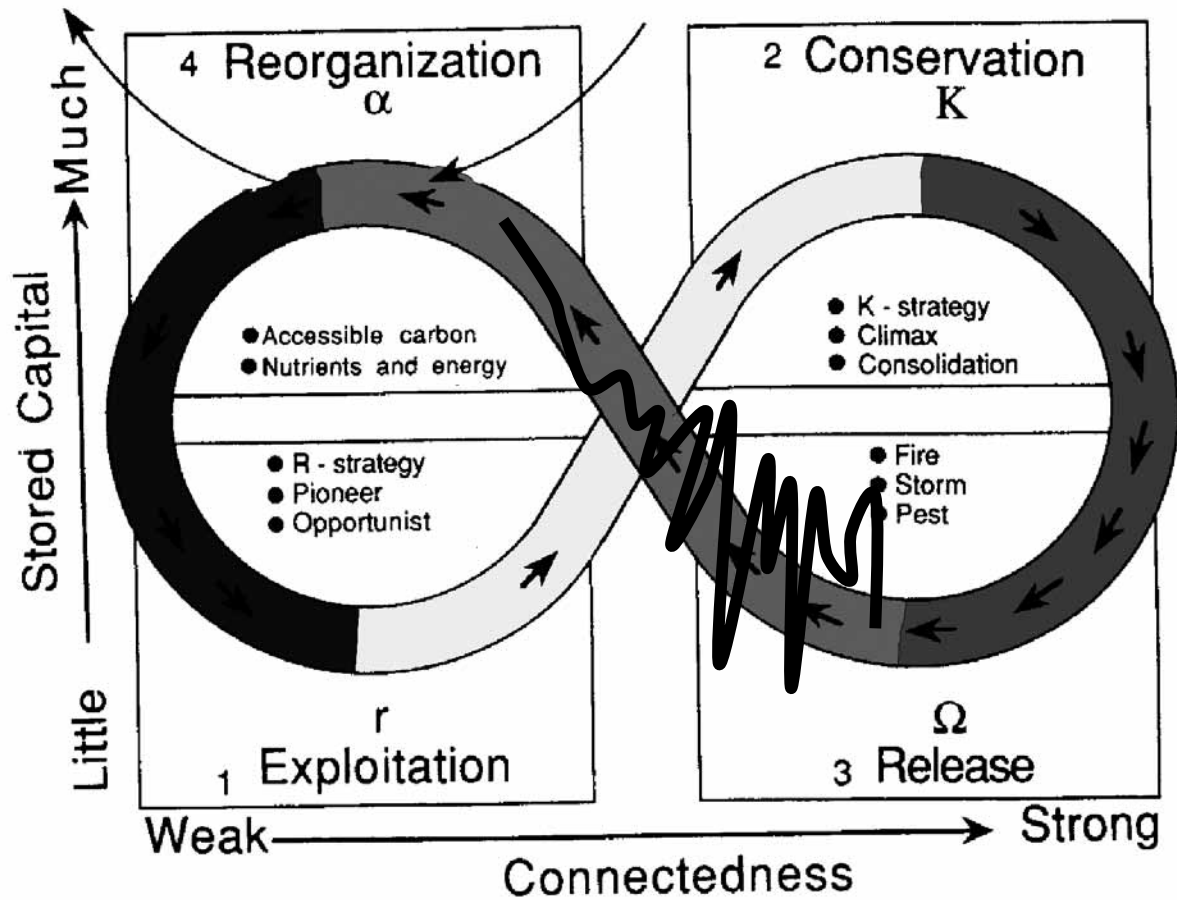


**Pikoli village**



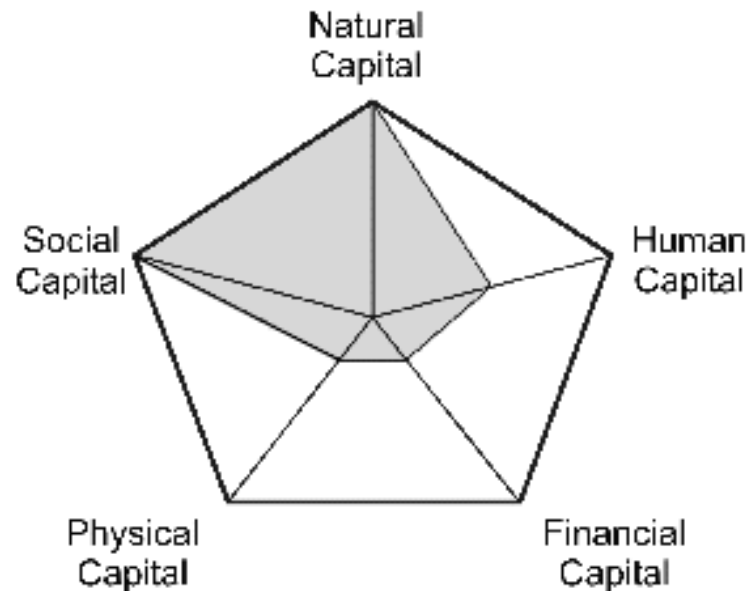
A 'patchy' distribution at all scales

# Chaotic fluctuations

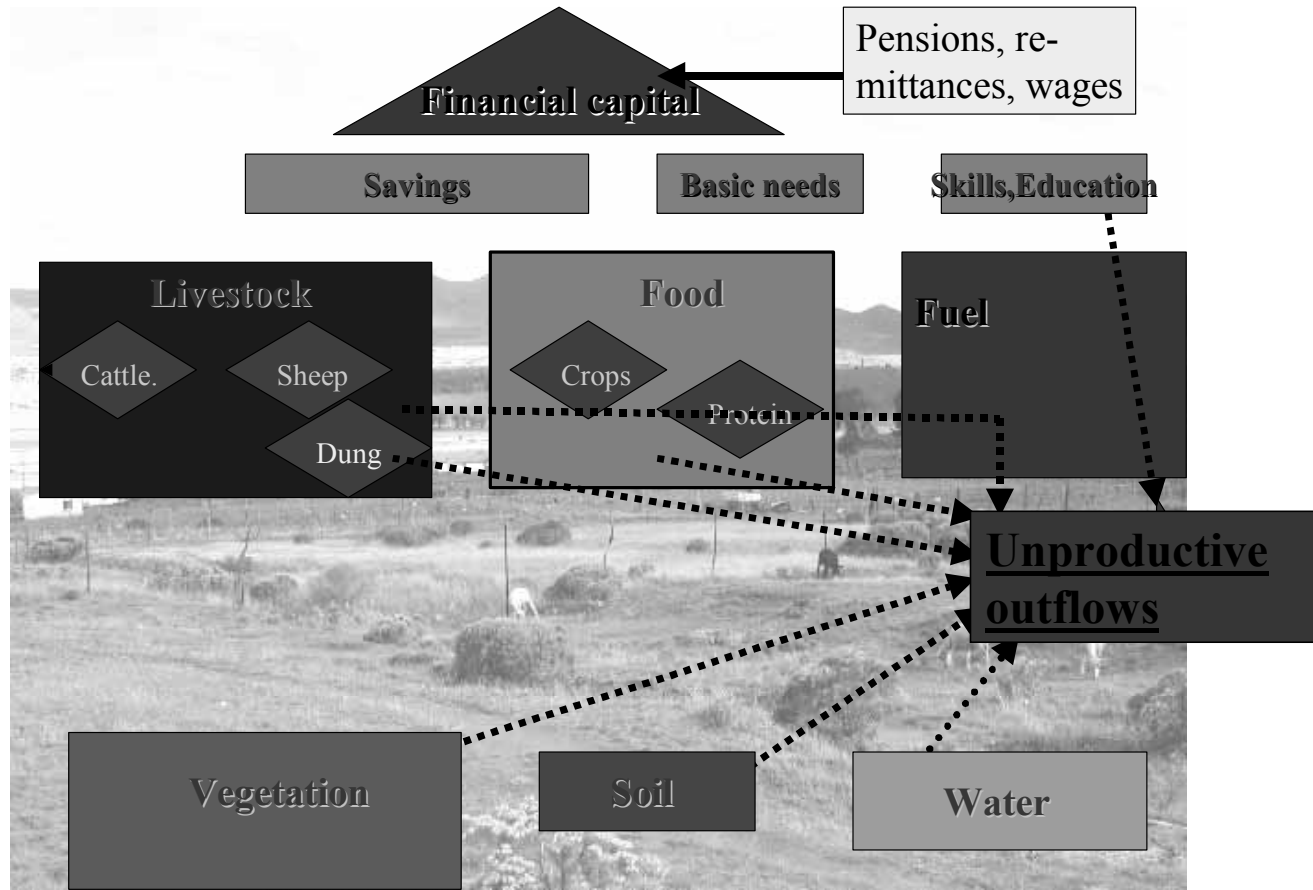




# Shortages in certain types of capital



# and 'leakage' of capital



# Opportunities

- Southern African complex adaptive systems are ‘transformable’
  - Many windows of opportunity
  - Constant re-assessment
  - Role players are willing to learn and experiment
- Used to finding negotiated solutions
- ‘Cooperative governance’ is enshrined in the constitution
- Policies promote devolution

# Three practical examples from Eastern Cape

Nqabara, Mbhashe municipality



Planning, capacity development for:

- Community conservancy
- Participatory Forest Management
- Tourism

Bathurst, Ndlambe municipality



Planning and institutional development for:

- Conservancy
- Cultural tourism
- Craft centre, medicinal plant garden
- Nguni breeding

Macubeni, Emalahleni municipality



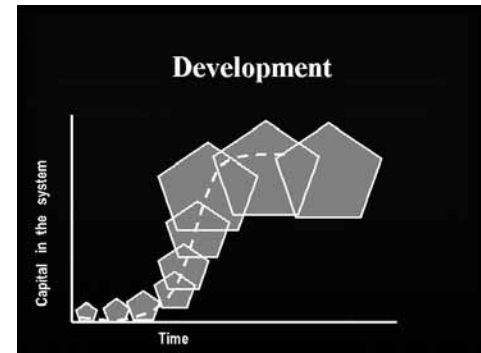
Planning, institutional development and capacity development for:

- Ecosystem restoration
- Soil erosion control business (nurseries, restoration work)
- Payments for ecosystem services (water)

- Community-based planning
- Capacity development
- Institutional development
- Income generation
- Monitoring and adaptive learning

# How to do it? Examples from Eastern Cape

- **Build capital** through
  - Ecosystem repair
  - Training
  - Institutional development
  - Conflict resolution
  - Finding markets for ecosystem products
- *But be ready for a slow process and constant setbacks*
- *The challenge, when capital is very low, is to overcome intermediate setbacks*



# Start with 'key resource areas'

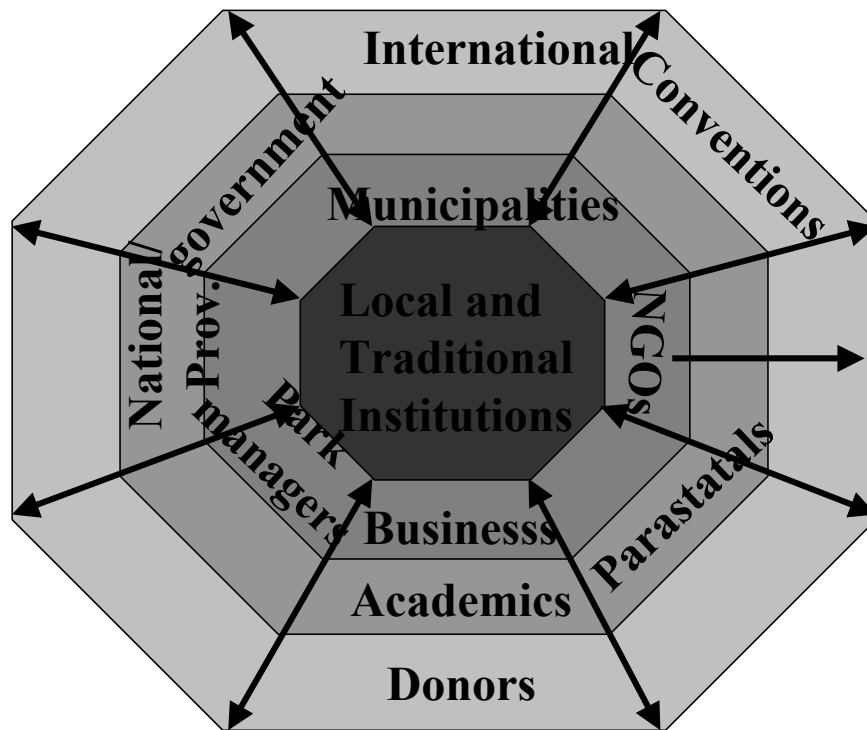
- Productivity and biodiversity 'hotspots'
- Individuals and institutions with capacity for transformation
- Nodes with good infrastructure
- *They are the 'seeds of renewal' and need to be nurtured*



- **Form partnerships**
  - Knowledge networks
  - Learning networks
  - Identify ‘bridging institutions’, recognized by all key stakeholders
- *They augment human capital and are therefore critical*
- **Negotiate for political space**
  - *Tread lightly around power relations*

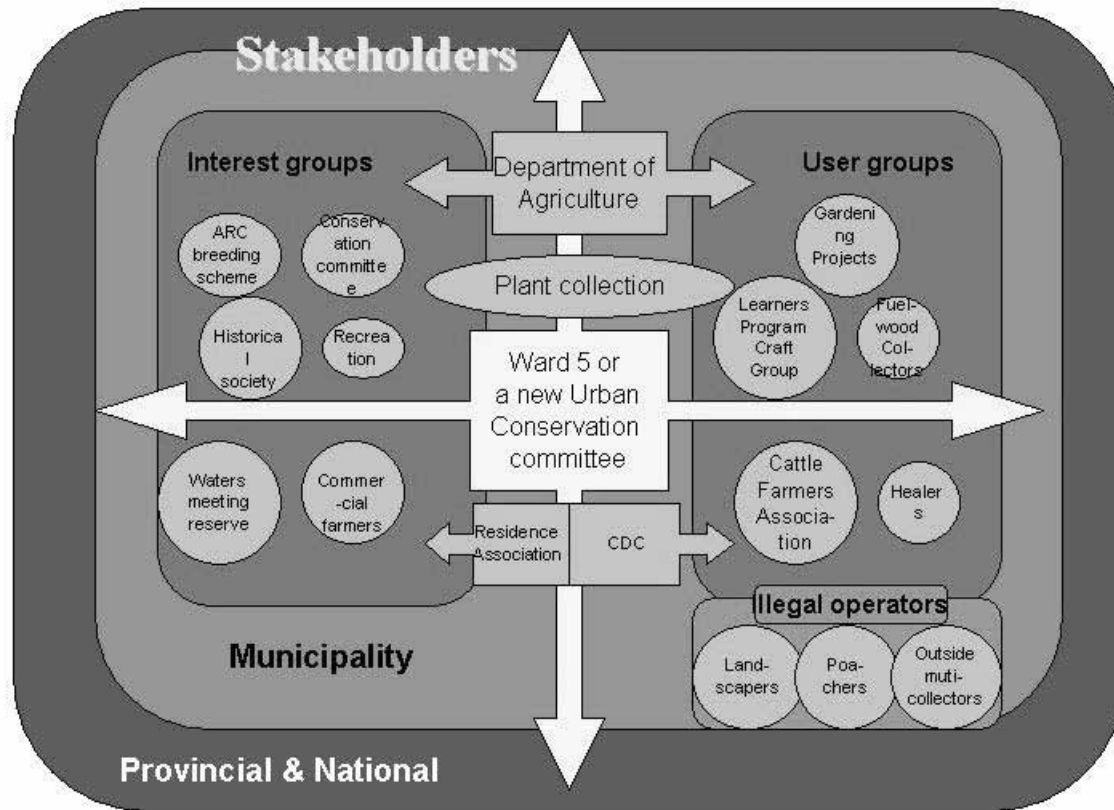


# Governance networks

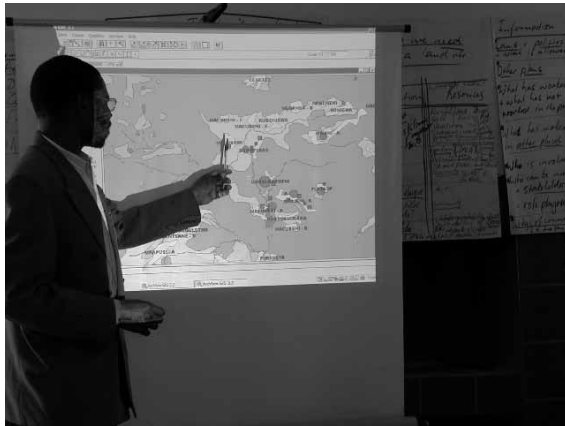
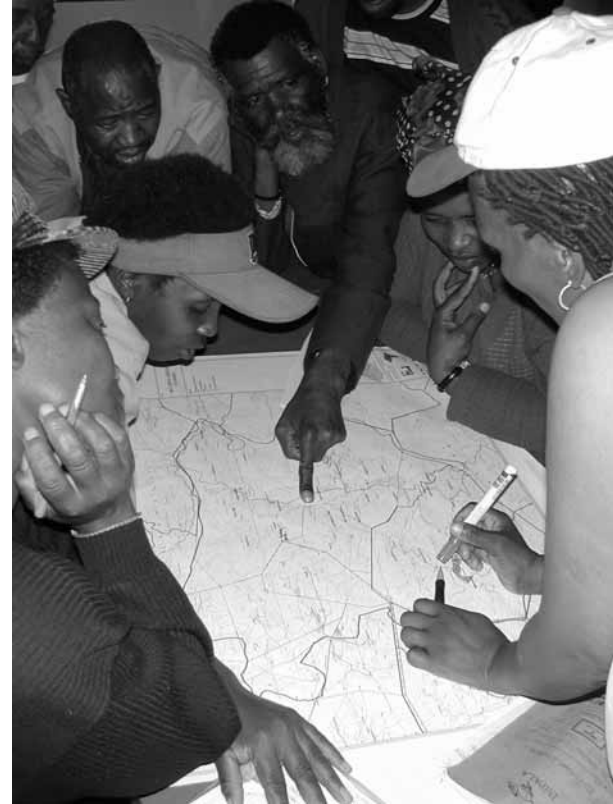




# Bridging Institutions: the example of Bathurst, Eastern Cape



# Combine different types of knowledge



- Anticipate ‘windows of opportunity’
  - Policy windows
  - Fund-raising windows
  - Chaotic periods of transition



REPUBLIC OF SOUTH AFRICA

NATIONAL ENVIRONMENTAL  
MANAGEMENT:  
BIODIVERSITY ACT

REPABOLIKI YA AFERIKA BORWA

TSAMAIISO YA BOSETSHABA YA  
TIKOLOGO: MOLAO WA  
*BIODIVERSITY*

No , 2004



DEPARTMENT OF ENVIRONMENTAL AFFAIRS AND TOURISM

GUIDE TO THE COMPLETION OF THE BUSINESS PLAN FOR EPWP (POVERTY RELIEF) PROJECTS  
2004/05 to 2006/07

#### INTRODUCTION

The business plan serves as the format in which consultants must present the results of the feasibility studies they conducted for specific projects. This guide provides an amplification and definitions of the terminology used in the business plan as well as certain criteria which projects must meet.

As background to the completion of the business plan consultants are advised to read the following documents which will be made available on the website [www.thelapa.com](http://www.thelapa.com):

- Code Of Good Practice For Employment Conditions for Special Public Works Programmes; and
- Ministerial Determination: Special Public Works Programmes
- The Environment and Culture Sector of the Expanded Public Works Programme Sector Plan
- The Expanded Public Works Programme: Consolidated Programme Overview and Logical Framework.