



**BUILDING ROBUSTNESS TO DISTURBANCE:  
GOVERNANCE IN SOUTHERN AFRICAN PEACE PARKS**

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## Battering around a Few Concepts

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- **Social-Ecological Systems**

- Holistic view, coupling social and ecological systems

- **Governance**

- “The complex mechanisms, processes and institutions through which citizens and groups articulate their interests, exercise their legal rights and obligations, and mediate their differences.” (UNDP)

- **Institutions**





## Battering around a Few Concepts

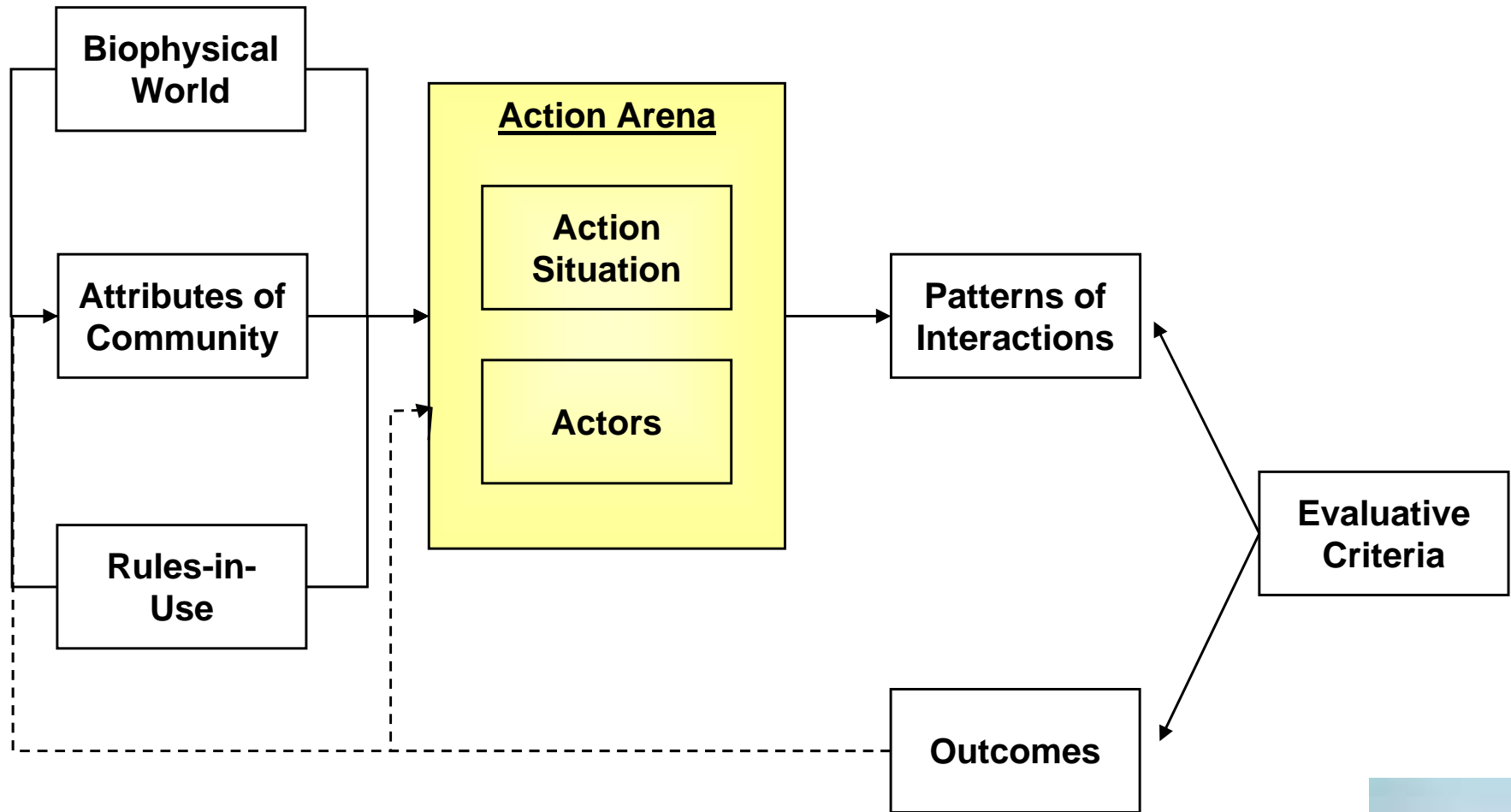
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- **Social-Ecological Systems**
- **Governance**
- **Institutions**
  - Shared concepts used by humans in repetitive situations organized by rules, norms, and strategies
    - Institutions are not the same as organizations
  - Polycentricity is where many elements are capable of making mutual adjustments for ordering their relationships with one another within a general system of rules where each element acts with independence of other elements.





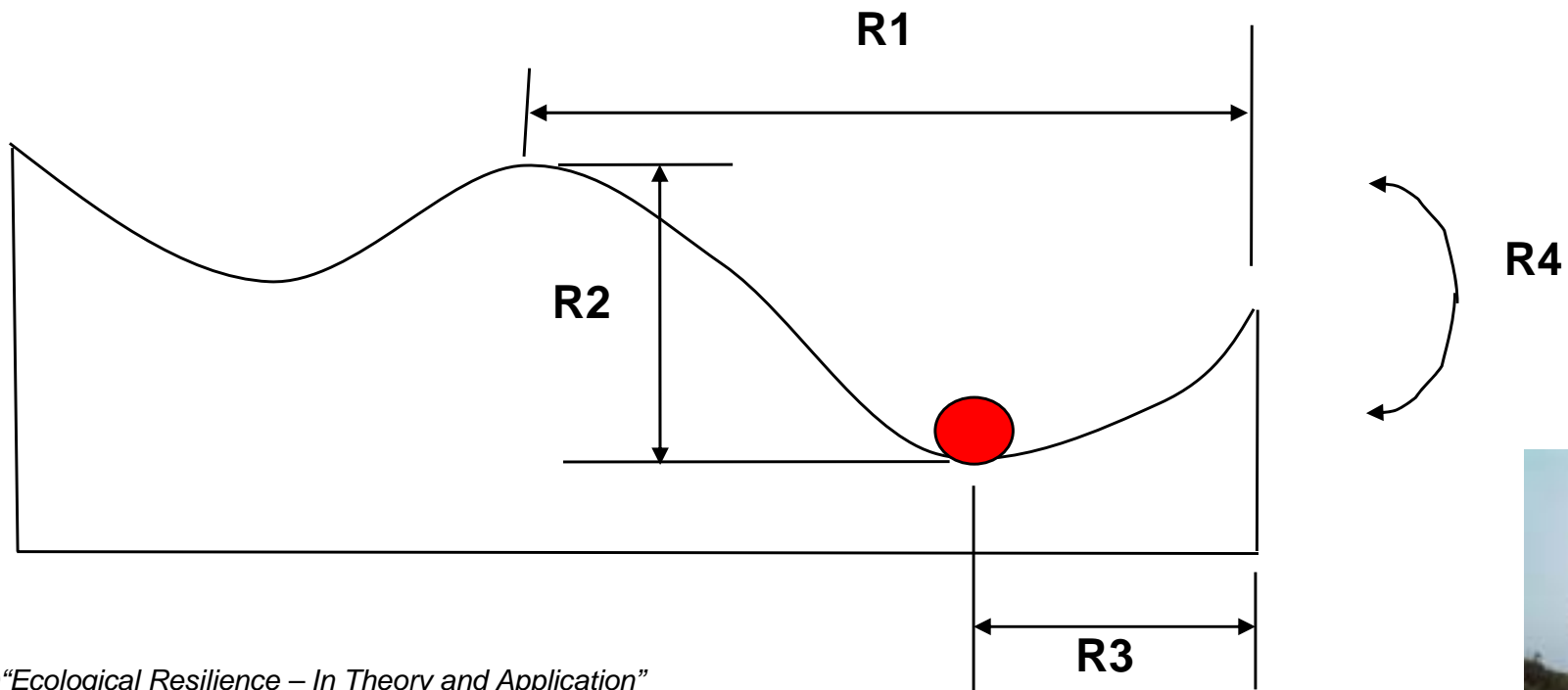
## The IAD Framework





## Resiliency and Robustness

- Resilience – the amount of disturbance that a system can absorb without losing the ability to recover or return to the same equilibrium
- Robustness – the concept of resilience applied to a designed system (as opposed to an evolved system)
  - It is the maintenance of desired system performance when subjected to external or internal unpredictable perturbations



Sources:  
Gunderson (2000) "Ecological Resilience – In Theory and Application"  
Walker et al. (2003) "Thresholds and Resilience in Ecological and Social-Ecological Systems"  
Carlson and Doyle (2002) "Complexity and Robustness"



## The Puzzles

### The Policy Dilemma

- What role should the joint management board of a transboundary protected area play vis-à-vis the national park staffs
- How can transboundary cooperation be improved, whether the boundary is an international frontier, a provincial border, a park fence, or between public, communal, and private landowners

### The Theoretical Challenges

- How to manage within a multi-level, polycentric governance system
- How to make the institutional design of a governance regime more robust (adaptive governance?)

### The Research Question

- **How does the institutional design of transboundary protected areas change in response to disturbance?**



## ● ● ● ● ● Operationalizing the Project

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- Building general background on two case studies and the histories and goals behind transboundary park creation
- Identifying significant disturbances
- Examining institutional responses to these disturbances
  - Are the responses coordinated at the international level, between sub-national groups, at the local level?
  - What actions have the JMB and the sub-committees taken?
  - Have uncoordinated responses been taken?
  - Factors leading to the coordination or lack of it?
- In depth analysis of a few leading, interconnected disturbances:
  - Relations between local communities and park
  - Human-wildlife conflict – threats to life and livelihood
  - Veterinary disease





## Case One – The Great Limpopo Transfrontier Park



- Created in November, 2000 between South Africa, Mozambique, and Zimbabwe
- Key Drivers – from senior levels of national governments and international donors





**In the GLTP**

**South Africa**

- Water levels in the Olifants
- Elephant populations
- Human-wildlife conflict
- Border security
- Coordinating management of a TFP and a contractual park

**Mozambique**

- Vet disease
- Human-wildlife conflict
- Poaching
- “Induced” relocation of between 6,000 and 28,000 people

**In the Kgalagadi**

**South Africa**

- Human-wildlife conflict – predators
- Infrastructure maintenance
- Contractual park with Mier and San

**Botswana**

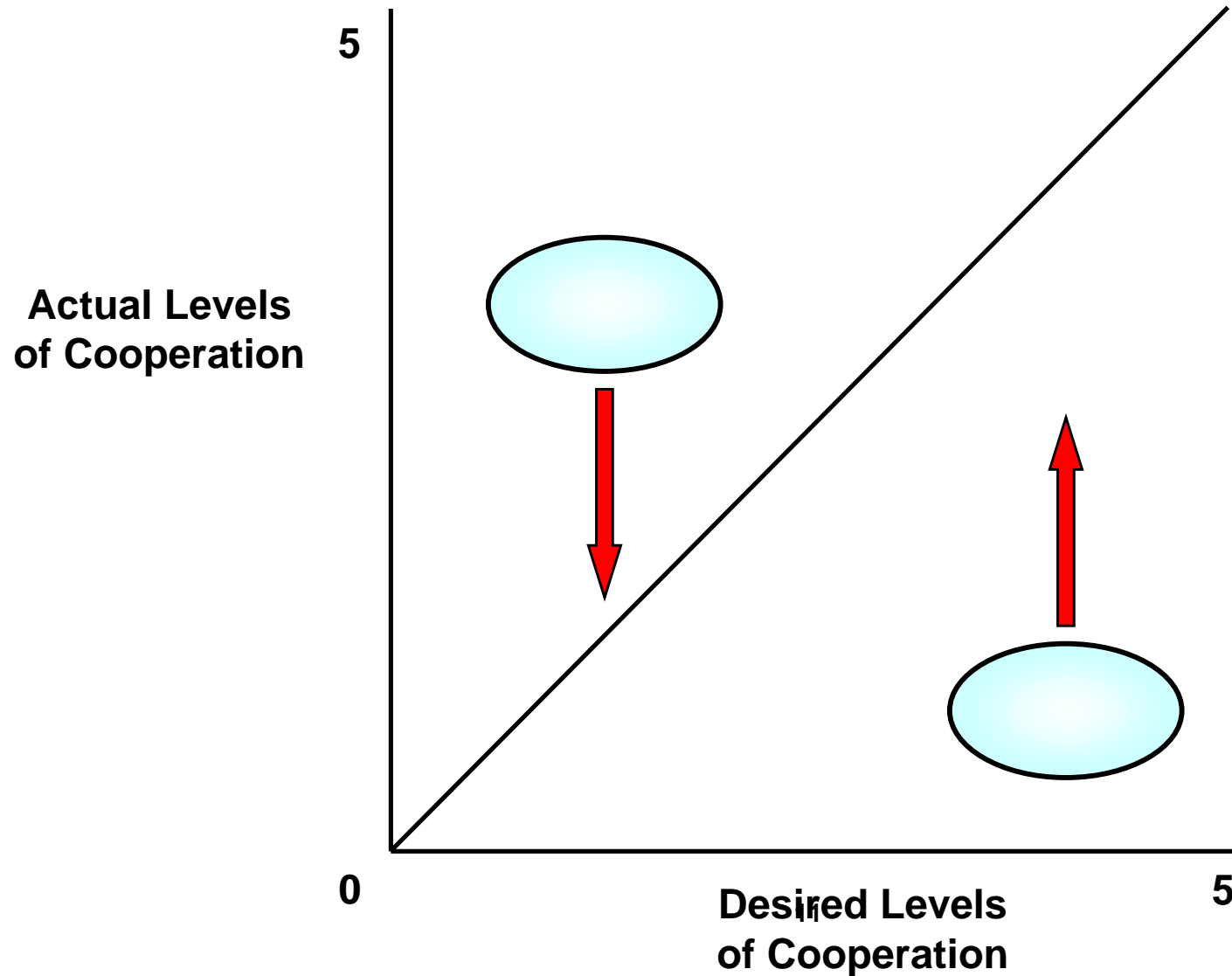
- Human-wildlife conflict – predators
- Revenue sharing in the TFP
- Tourism development





## Cooperation Levels in Response to Disturbances

- Six degrees of cooperation
  - The Five C's or nothing
- Two Social Scales of cooperation
  - Political cooperation
  - Operational cooperation



**Thank You!**

**Questions?  
Comments?**



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IU's School of Environmental Affairs  
University of Pretoria – Political Science**

## Disturbance in an Interdisciplinary Context

### From the Ecologists

- Large, Infrequent Disturbances (LIDs) – fire, flood, etc. – **shocks** to the system
- But what about chronic problems – invasive species – **pressures** to the system

### From the Social Scientists

- Crises resulting in changes to policy and prescription
- So is every change to policy due to a “crisis”?
- Shocks (LIDs) – regime change (think about “punctuated equilibrium” in policy)
- Pressures – population growth, poaching, land claims,...

### My Current Usage (disturbances = shocks, pressures, crises, surprises)

- A continuum from shocks to pressures
- A continuum from predominantly social to predominantly ecological
- A continuum from disturbance at an operational or political level
- Grouping according to:
  - Size, salience, location, who is diagnosing,...





## Outcomes

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- Inform government officials and park managers on how and when to work with the joint management board
- Further scientific knowledge on polycentricity and multi-level, multi-scalar governance
  - Systematically build knowledge about cross-scale and cross-boundary governance
    - Expand from the international aspect of these TBPA
    - Broaden research agenda to other transboundary environmental issues
  - Inform our understanding of cross-boundary governance and provide practical policy advice
- Advance the current research on linked social-ecological resilience and the robustness of institutions
- Expand the current literature on transboundary protected areas beyond the focus on case studies and localized, idiosyncratic issues
- Move beyond the narrow confines of traditional International Relations literature to show the importance of IR studies beyond security, conflict, and the International Political Economy





## (Preliminary) Hypotheses Leading the Research

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- **Hypothesis 1:** Large disturbances, or disturbances of immediate concern (greater salience) to multiple countries, will generate greater degrees of transboundary cooperation.
- **Hypothesis 2:** Cases of bottom-up policy origination (the Kgalagadi) will have higher degrees of operational cooperation than situations of top-down origination (the GLTP).
- **Hypothesis 3:** Cases of top-down policy origination (the GLTP) will have higher degrees of political cooperation than situations of bottom-up origination (the Kgalagadi).
- **Hypothesis 4:** The higher transaction costs of international coordination and the lack of direct enforcement abilities of the JMB will minimize the amount of institutional development at the international level relative to national and sub-national levels.
- **Hypothesis 5:** Transaction costs will be higher with operational cooperation??

