



# **Biodiversity across the Borders**

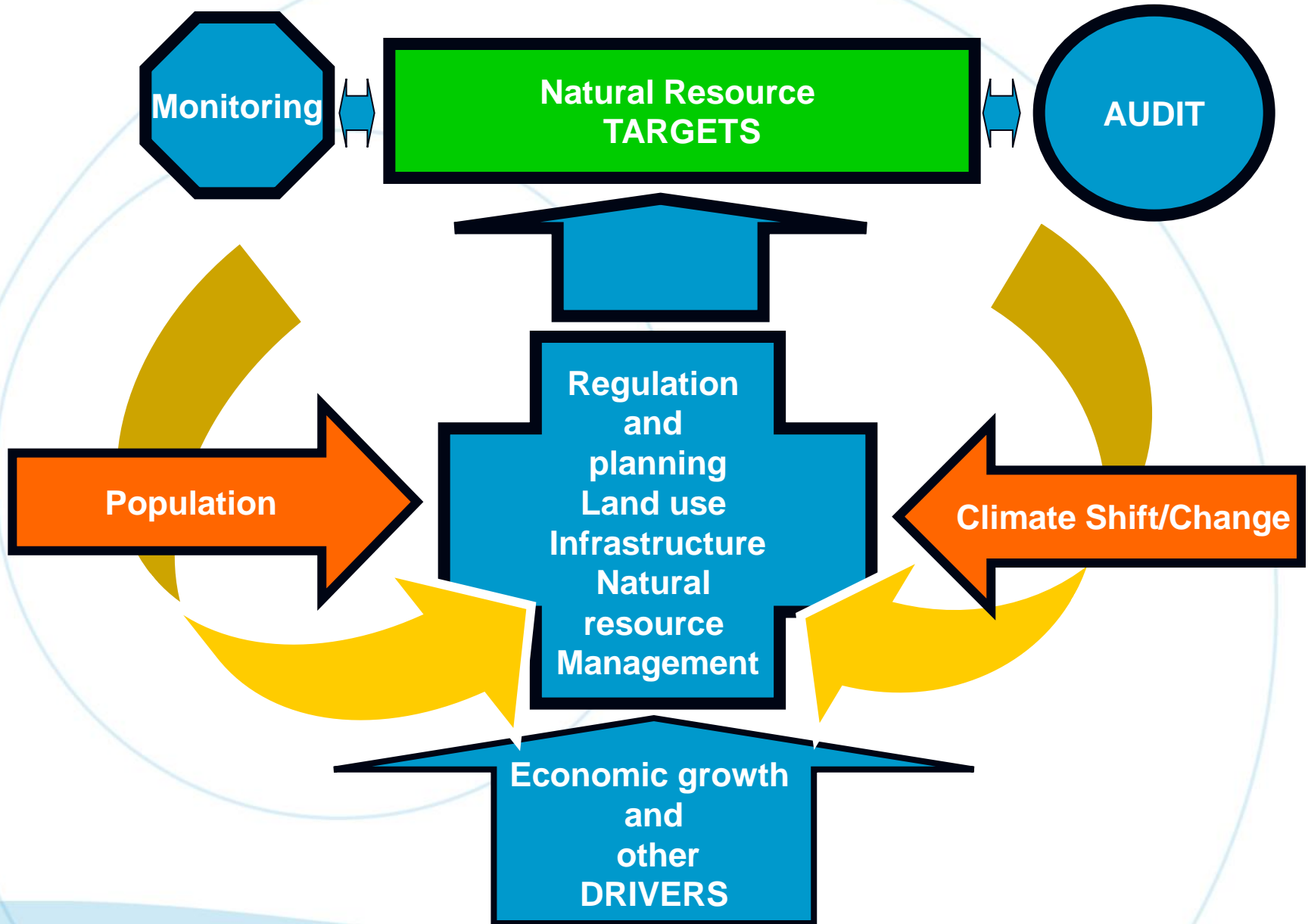
*Shifting Paradigms: Resilience and the  
NSW Natural Resources Commission*

**Dr John Williams**  
*Commissioner*

**9 June 2011**

# Outline

- **The NSW Natural Resources Commission**
- **The NRC and Resilience**
  - Linked social ecological systems
  - Embracing change
  - Variables and thresholds
  - Adaptive capacity
- **What we have learnt**
- **Challenges ahead**

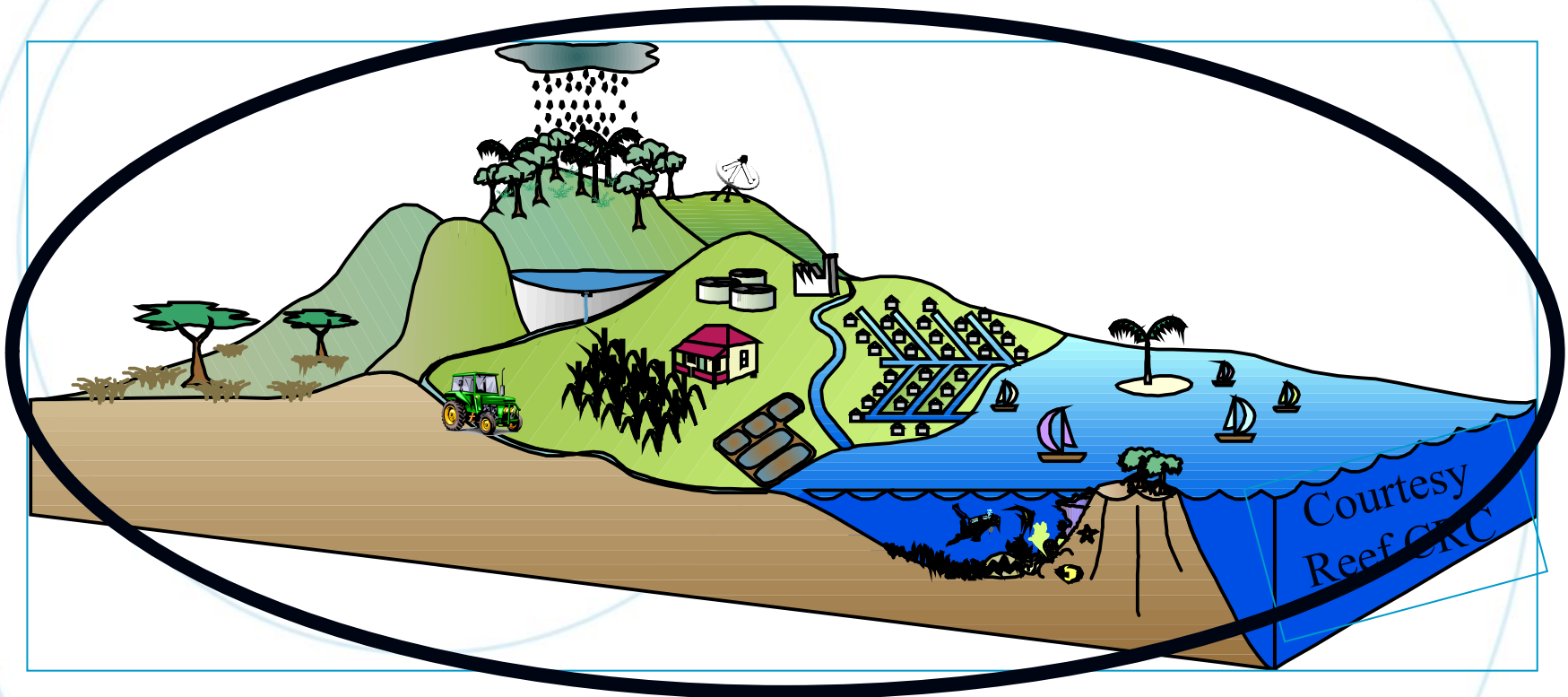


# NRC & Resilience

- **NSW Aspirational Goal**
- **Consistent with NRC practice**
  - Application of the standard
  - Embraces complexity
  - Systems perspective
  - Total Catchment Management
- **Decision to test the effectiveness of resilience theory**

# My vision

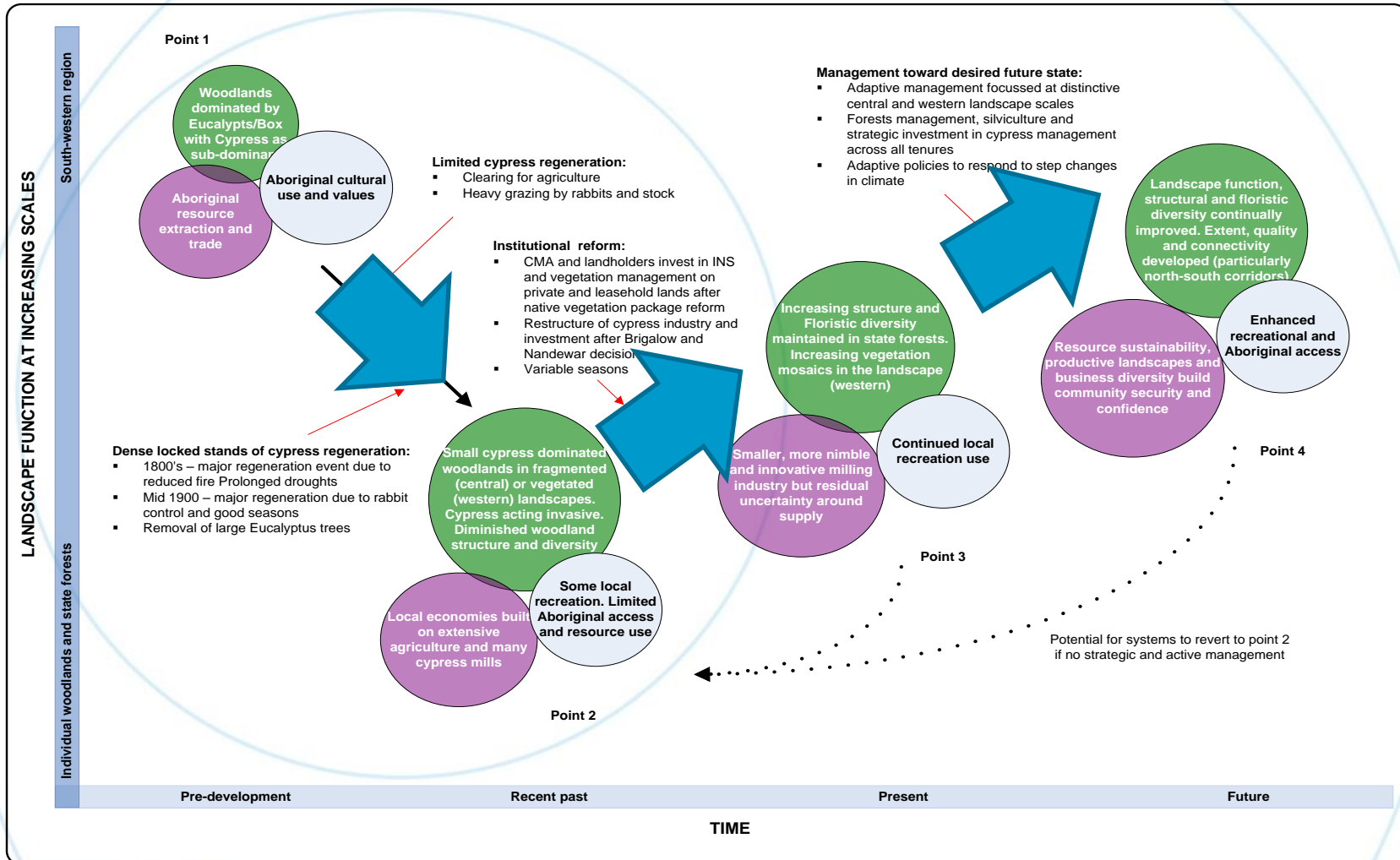
*Integrated action, based on sound science, to manage the landscape for all users, for now and the future.*



# Linked Social - Ecological Systems

- **A new age – the anthropocene**
- **Important to ‘manage the whole’**
- **Systems dynamics - the supply of and demand for ecosystem services**
- **Increasingly social variables driving systems**
- **Example: South Western Cypress Regional Forest Assessment**

# Regional Forest Assessment South Western Cypress



# Managing for Change

- **Every thing is changing, always was**
  - Directional change
  - Adaptive cycles
  - Shocks
  
- **The myth of a steady state –**
  - Are historical benchmarks still relevant?
  - Example: River Red Gums Regional Forest Assessment



# River Red Gums Regional Forest Assessment

- River regulation and climate change
- Changed Flooding = changed forests
- 1.1 year floods every 3.5 years
- 10 year landscape restoration floods unlikely to occur again



# Variable and Thresholds

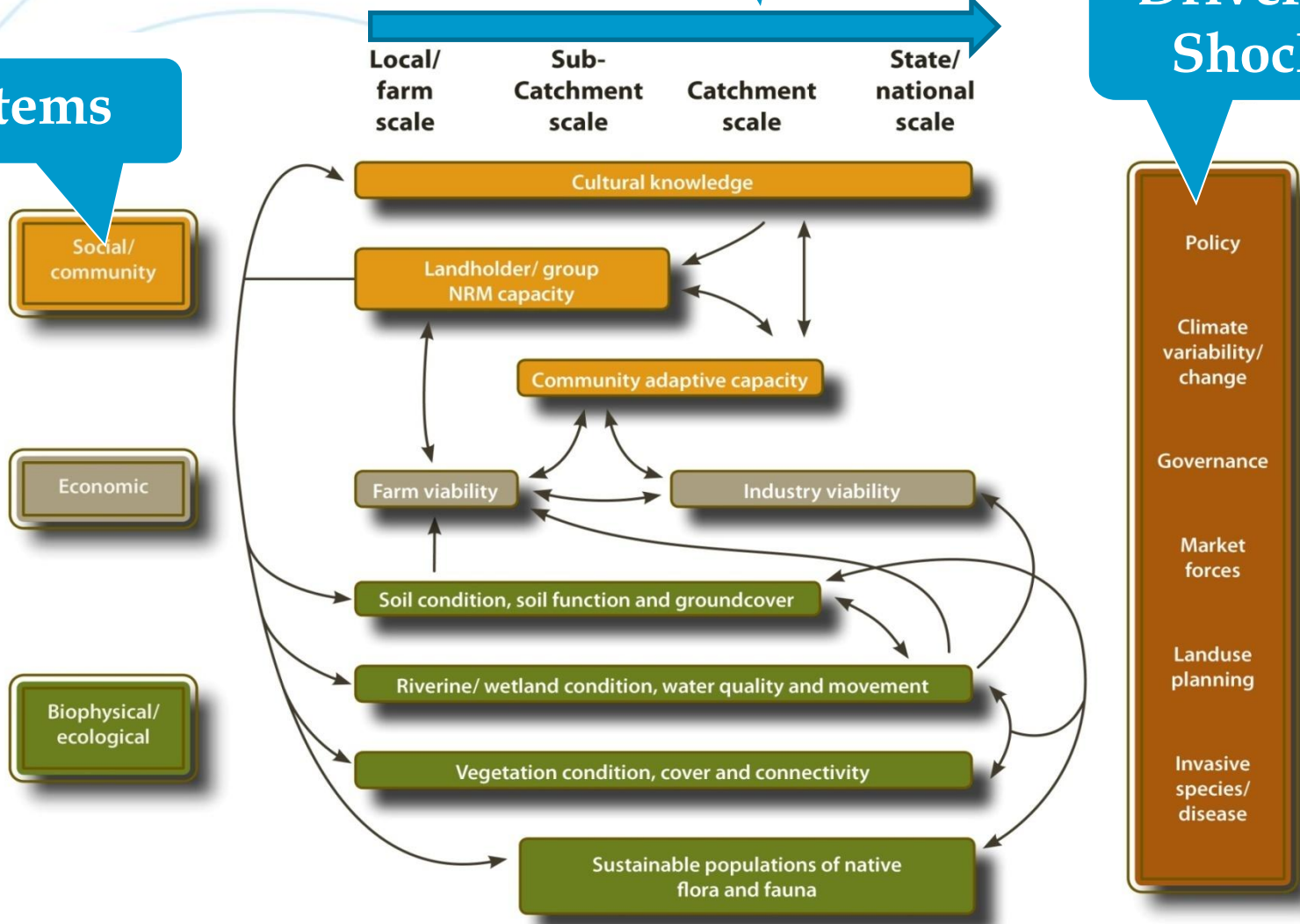
- **Linked social-ecological systems**
  - Operating at a range of spatial, temporal and institutional scales
  - Many variables - but only a few controlling variables
- **Thresholds to alternative system states**
- **Example - Resilience Based Catchment Planning.**

# Resilience Based Catchment Planning

**Systems**

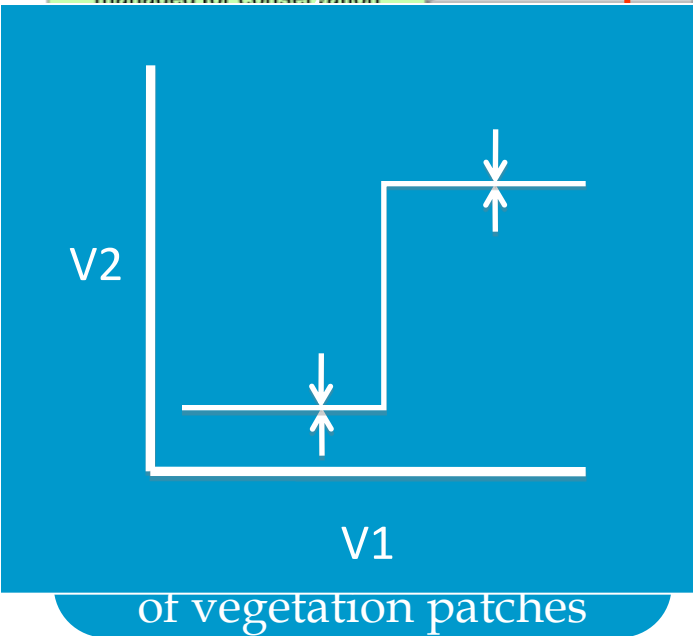
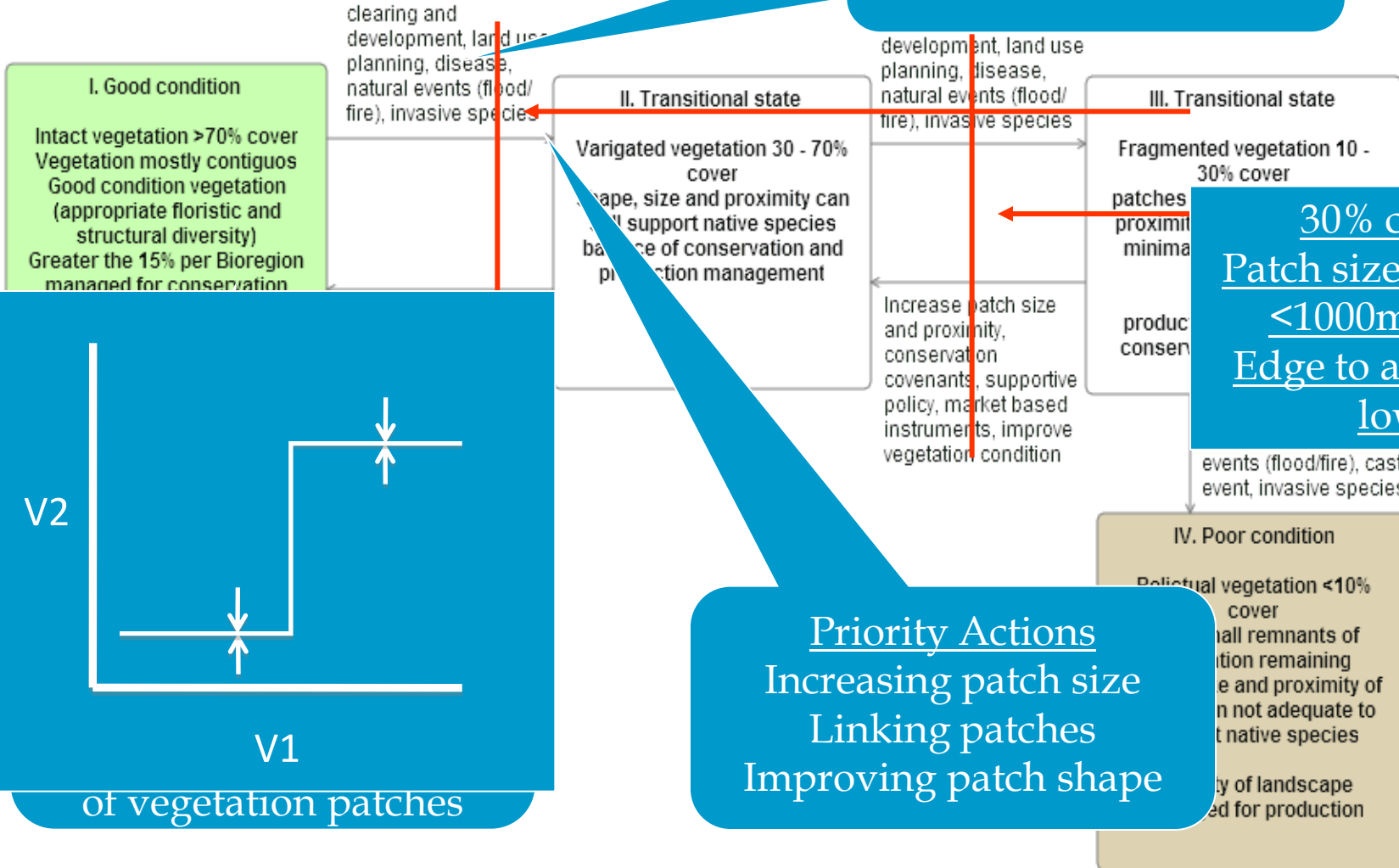
**Scales**

**Drivers & Shocks**



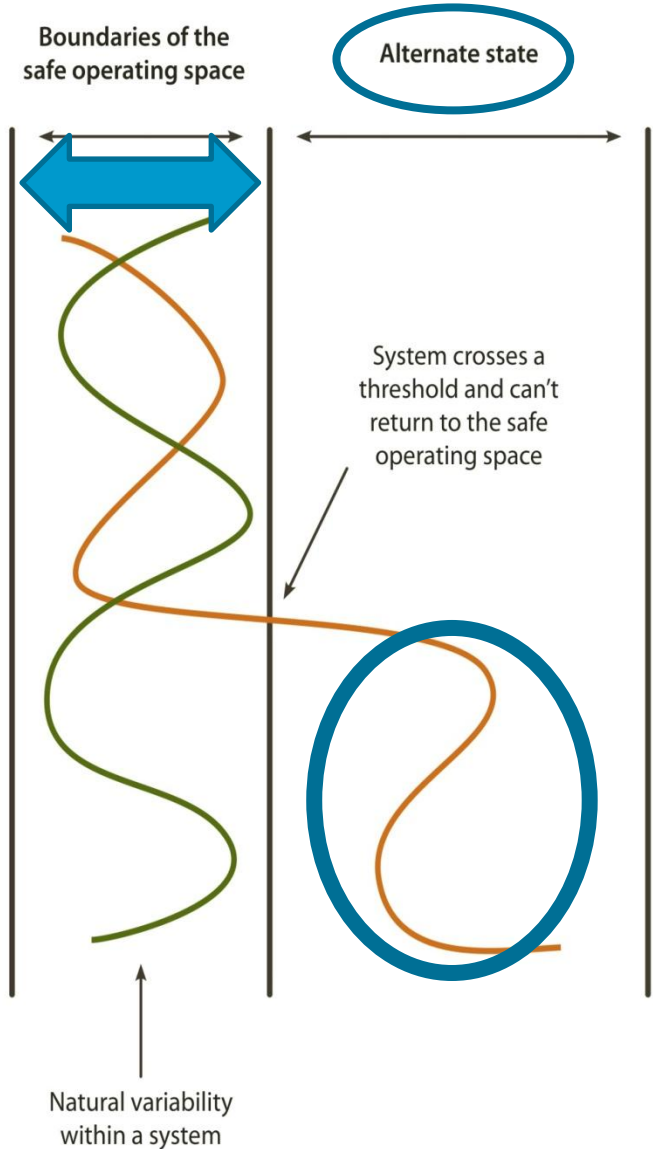
# Resilience Based Catchment Planning

Drivers  
Vegetation removal & fragmentation



# Resilience Based Catchment Planning

- Plan targets work to keep natural systems within thresholds.
- Prioritises action to those areas that are critical
- Simplifies monitoring



# Adaptive Capacity

- **Preparing for uncertainty**
- **Responsiveness agility**
  - A range of approaches –diversity of practice
  - Well connected well informed community
- **Institutional arrangements that can respond**
  - Regional decision making
  - Networked
- **Example – NSW Regional Delivery Model**

# What have we learnt

- **Can integrate with existing NRM methods**
- **Effective framework for complex issues**
- **Community understood resilience intuitively**
- **Simplifies planning and communication**
- **The social aspects of resilience are challenging for NRM practitioners**
- **Resilience assessments needs strong evidence**

# Challenges Ahead

- **Avoiding the “buzz-word” syndrome**
- **Un learning – being open to different thinking**
- **Integrating resilience with current practice**
- **Working across disciplines**
- **Following through**



# Questions

- **This presentation is also available from**  
[www.nrc.nsw.gov.au](http://www.nrc.nsw.gov.au)