

## **This work needed to be done because..**



Adaptation of any kind is  
 generally seen as a good thing

..adaptation plans are therefore  
 emerging everywhere



Few if any of them ask “what  
 constitutes effective adaptation”

Challenge: to develop adaptation  
 plans which proactively identify  
 bad impacts

## Coastal adaptation - a classical **wicked problem**:



..no “definitive, all-encompassing and final” solution (Moser et al)

We therefore need to

..adaptively develop appropriate responses

## Conventional blueprint planning



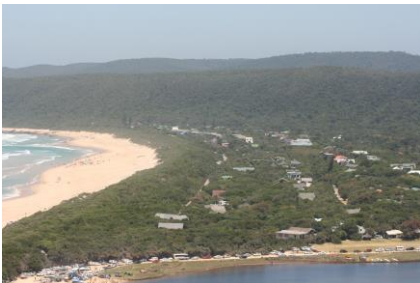
with financial, technological and rigid institutional solutions

..unlikely to bring about transitions to sustainability in coastal areas

..Yet coastal adaptation plans are the flavour of the month

## What is an effective adaptation?

An effective adaptation achieves its objective(s)



..[of reducing vulnerability of the social-ecological system to global change]

..without increasing the vulnerability of *other* systems

..in space and time

# Maladaptation



“..action taken ostensibly to avoid or reduce vulnerability to climate change that impacts adversely on, or increases the vulnerability of other systems, sectors or social groups”

Barnett 2010. *Global Environmental Change* 20: 211-213



## We are..

Identifying examples of unintended consequences

Assessing the underlying pathways to maladaptations, and effective adaptations

..using SES, Robustness Vulnerability and Individual Cognitive perception frameworks

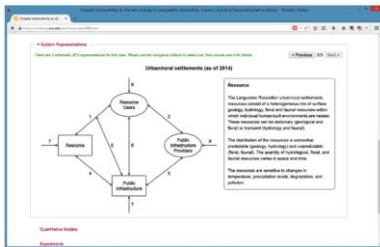
..models

..participatory action research

..learning

In three ‘county’-level cases: Garden Route (S. Africa); Languedoc-Roussillon (France); Cornwall (UK)

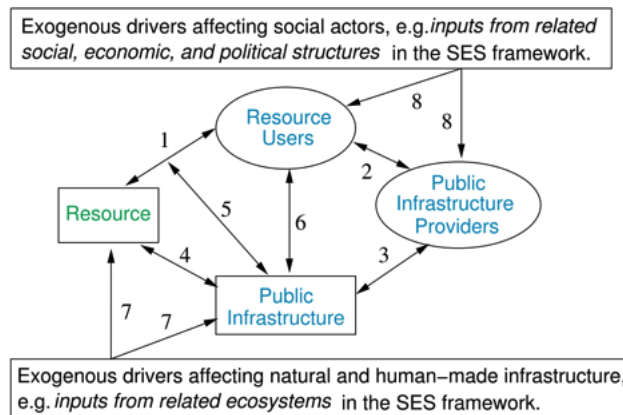
# How we are doing it is..



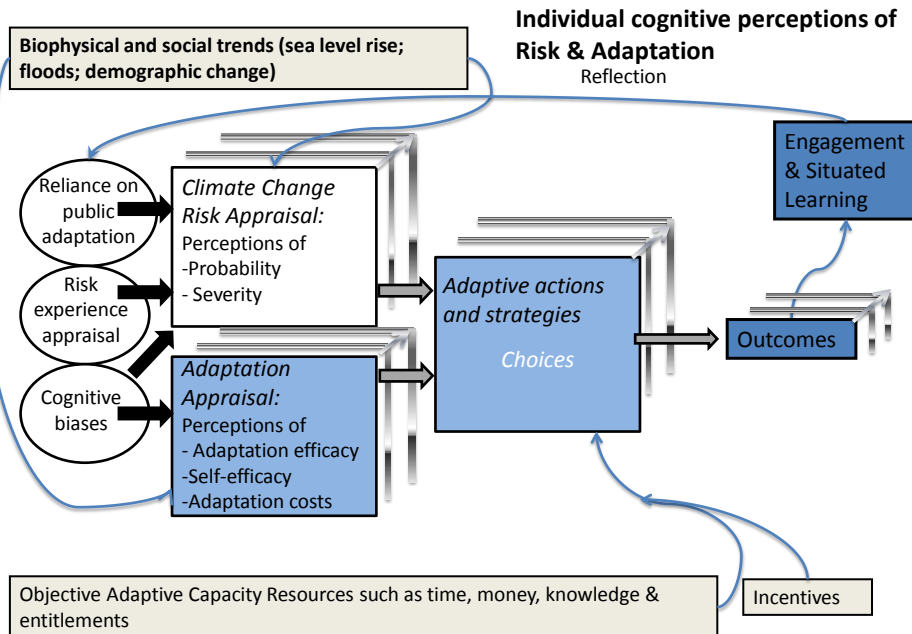
- **Trust building** to reduce the 'social distance' between academics, decision makers and civil society – listening, informal engagement, observations
  - Raising curiosity
- Interviews
- Dialogues
- Participatory action research
- Secondary data collection about risks, institutional dynamics and flows
- **Models** of individual and institutional adaptations, in response to perceptions of risk and adaptive capacity
- Feedback, reflection, **learning**
- Participatory **planning**

## Social-Ecological Robustness-Vulnerability Framework

..to assess connections and disconnections between elements of the SES

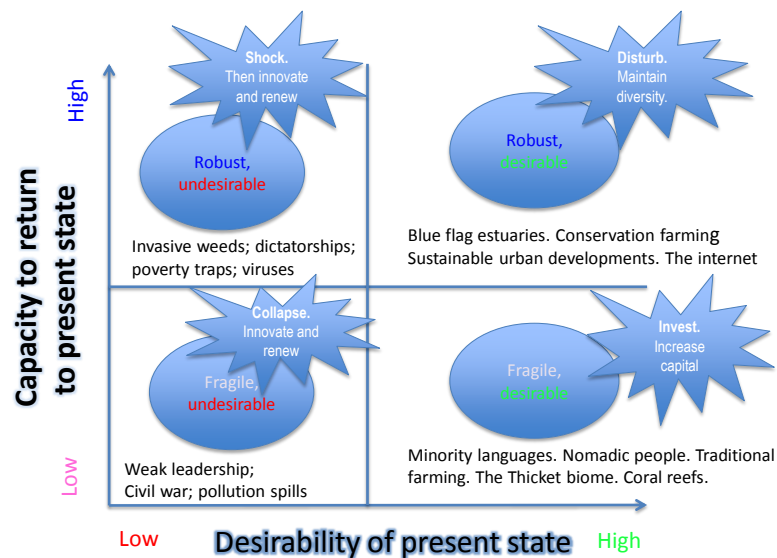


Anderies et al. 2004



Adapted from Grothmann &amp; Patt (2005)

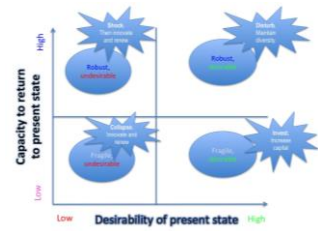
## Resilience can be adaptive or maladaptive



# Types of maladaptations

## “Ensnaring” maladaptations

- Inappropriately **STABILIZE** instead of **SHOCK**



- E.g. fire-fighting associations to combat fires in invasive alien stand
- Insuring homes built in risky places

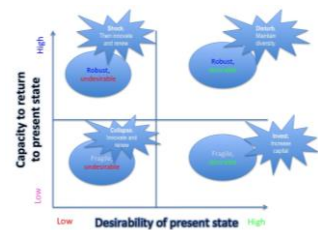
## “Stagnating” maladaptations

- Inappropriately **INVEST** instead of **DISTURB**

- E.g. planning in silos because it is convenient
- Hard structures to protect dune systems

## “Disruptive” maladaptations

- Inappropriately **DISTURB** instead of **INVEST**



- E.g. leaving newly reclaimed dunes unprotected
- Budget cuts for innovative planning projects

## “Blinkered” maladaptations

- Focusing on a single scale or sector, instead of looking across scales

# What we are learning is..

## About adaptation theory

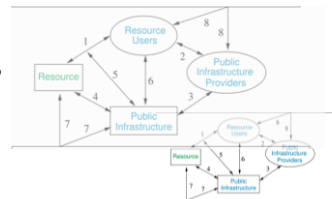
- Systems frameworks and models to explore adaptation pathways

## About practice

- Many officials are eager to adopt a long term perspectives
- Their political bosses, however, use a reactive short term approach
- Making promises after crises such as floods, fires and droughts
- ‘Fire-fighting’ activities getting the bulk of the budget
- Practitioners will benefit from using complex multi-scaled frameworks

## Maladaptations from incongruous connections between elements of the social-ecological system

- Institutional incongruencies
- Disconnects across scales
- Blocking of ‘institutional flow’
- Rigidity = *hyper*-connectedness



## The symptom is that decision makers become ‘myopic’

- Forgetting what lies beyond the boundaries



# Promising adaptations

While maladaptations are common, there are also examples of promising ‘smart adaptations’

..need to monitor these pathways

E.g. integrated spatial development frameworks; restoring ecological infrastructure (e.g. Working for Water; protected landscapes; Hope Spots)

## Conclusions

Adaptations can be dangerous

Pathways can better be understood using a multi-scale SES lens

- ..how to manage resilience
- ..connectivity in institutional flow (both in space and time)
- and
- ..incongruence between perceptions of risk, and adaptive capacity

Participatory methods, coupled with models, have potential to stimulate smart adaptations

Researcher’s roles have shifted

- ..we are also knowledge brokers; process facilitators; sense maker; reflectors