MAGIC:

understanding and learning from (mal)adaptations in coastal areas

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 *othe*r 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

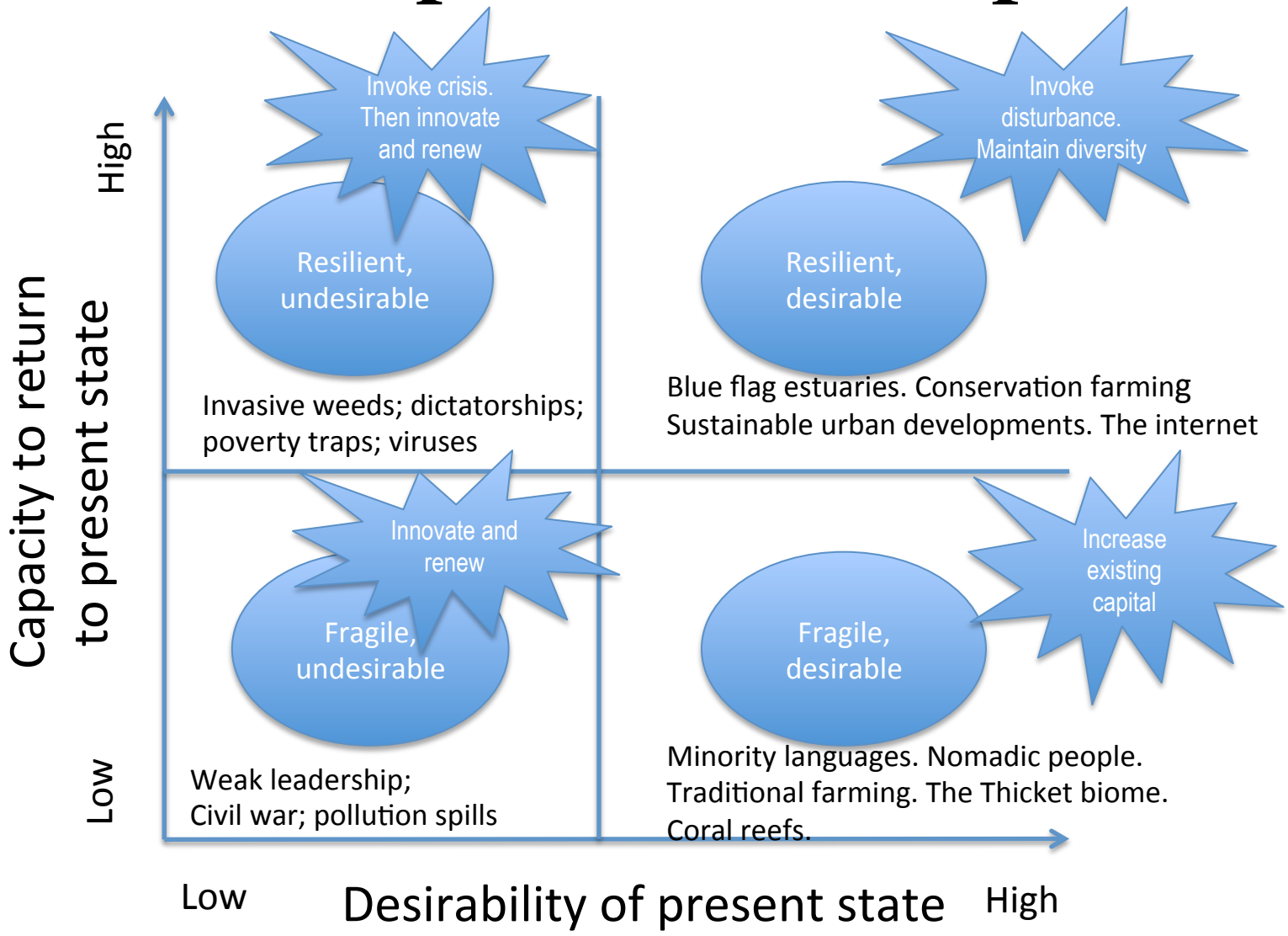
..participatory action research

..learning

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

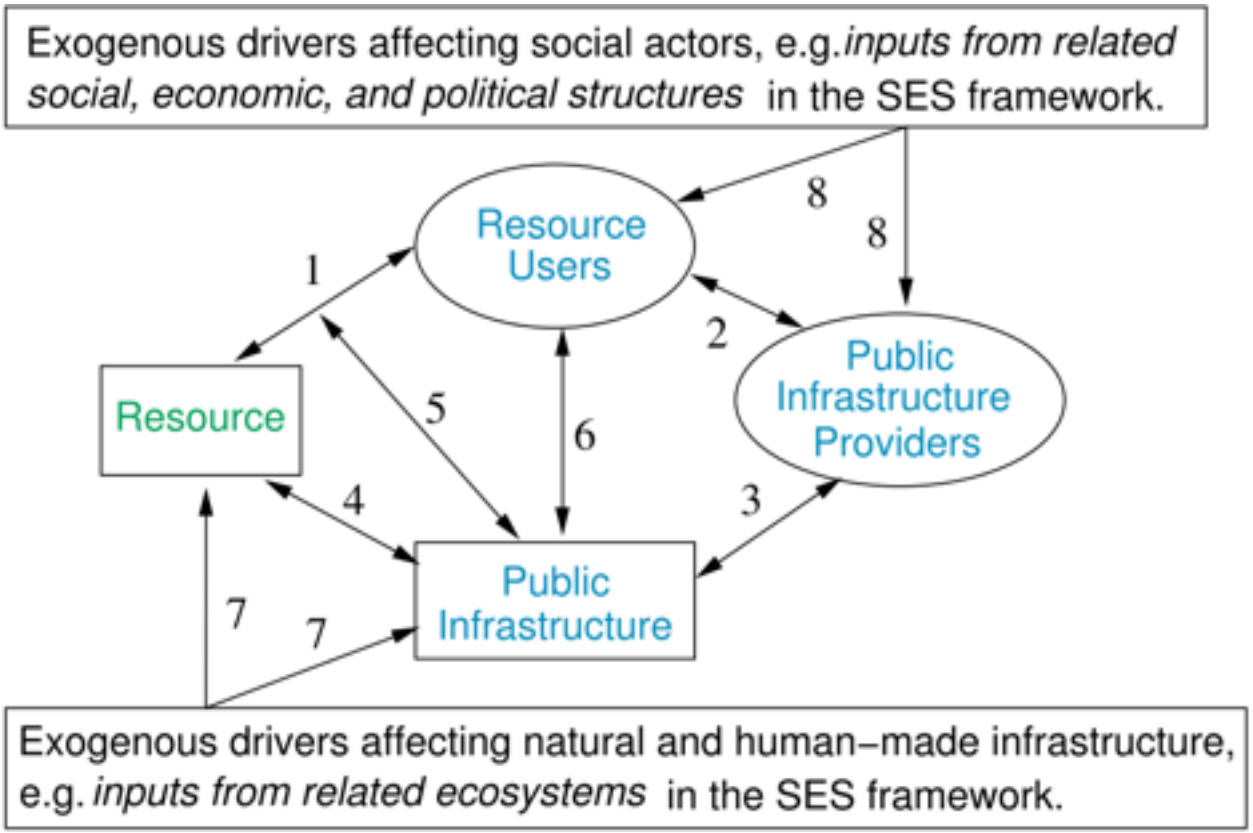
Conceptual frameworks

Resilience:
can be adaptive or maladaptive

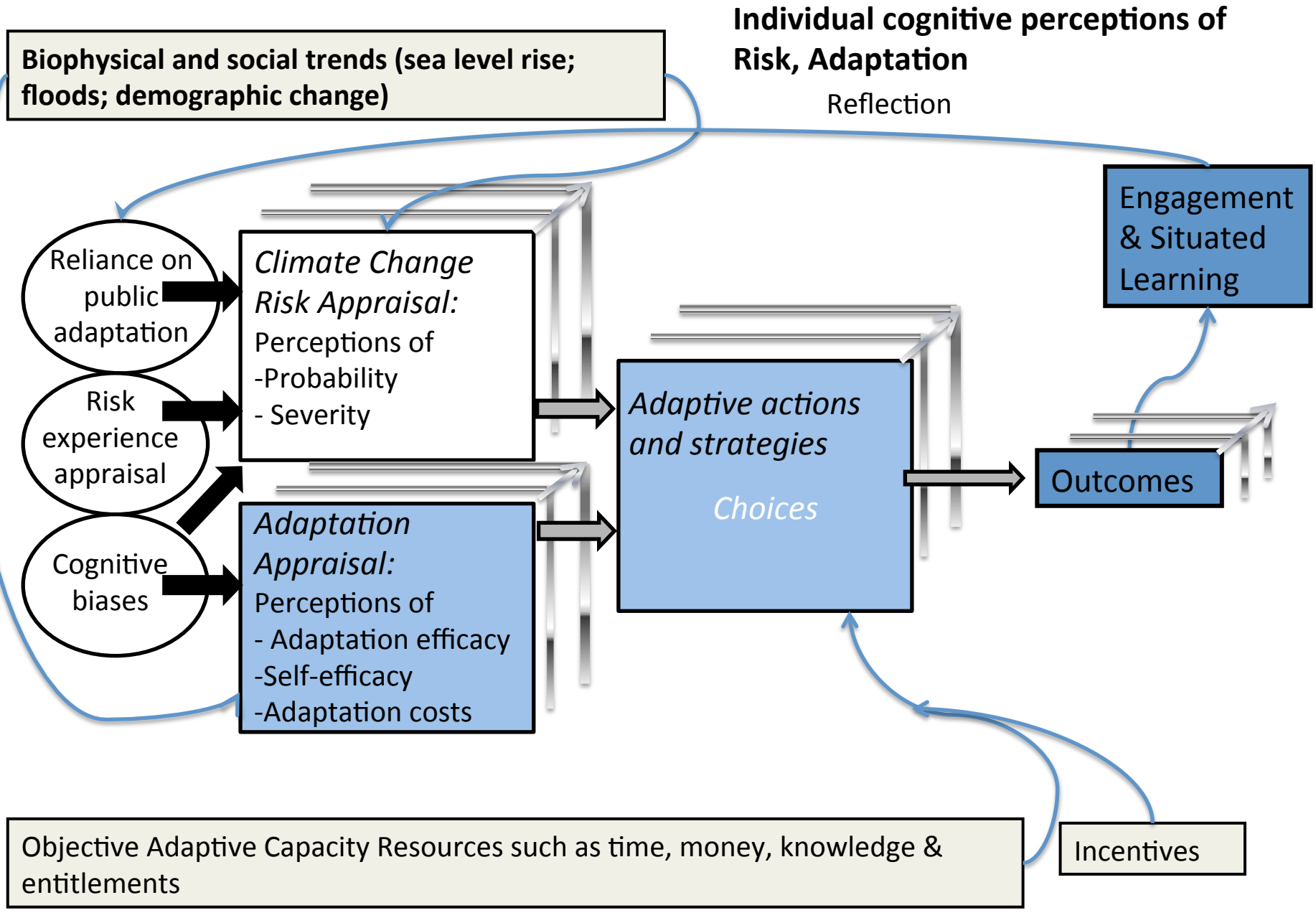


Social-Ecological Robustness-Vulnerability Framework

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

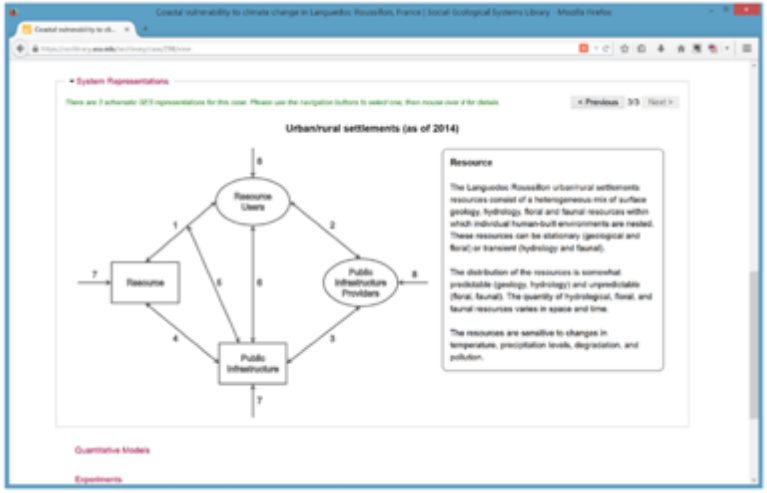


Anderies et al. 2004



Adapted from Grothmann & Patt (2005)

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**

What we are learning is..

About adaptation theory

- Systems frameworks and models to explore adaptation pathways

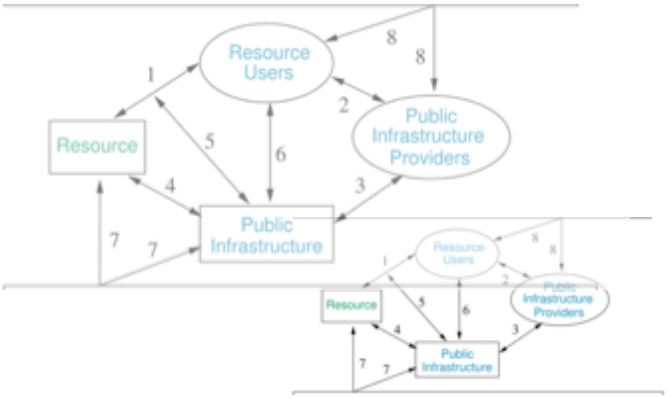
About practice

- 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

- Practitioners will benefit from *a priori* assessing the possibility of maladaptations before they arise
    - E.g. scenario planning
    - Adaptive learning and reflection

- Researchers' roles:
  - knowledge brokers; process facilitators; connectors
  - sense makers

- Causes of maladaptations are about 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

- Individual and institutional adaptations may strengthen identity, sense of place
- Mutually enforcing feedbacks between adaptation and identity, e.g.
  - stewardship
  - ecological solidarity

- Which in itself could be a maladaptation

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)

Conclusion

Adaptations can be dangerous

Can better be understood using a multi-scale SES lens

..connectivity in institutional flow (both in space and time) and

..incongruence between perceptions of risk, and adaptive capacity

Developed models and methods to understand adaptation pathways and

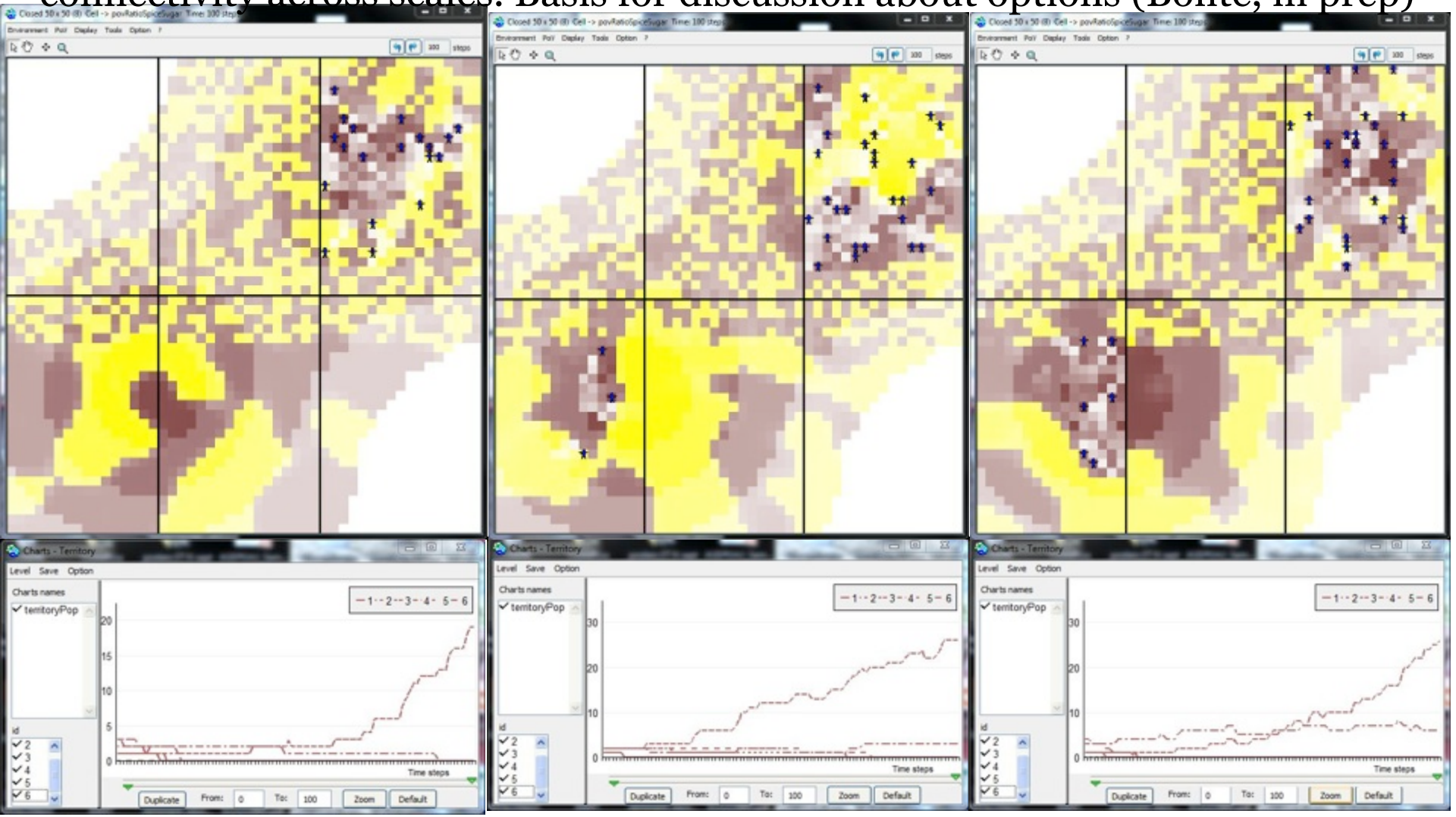
..change behaviour towards collaborative adaptive stewardship

Researcher's roles have shifted:

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

E.g. « SugarScale » simulation:
a benchmark for adaptation scenarios to external shocks

- access and rights to 2 types of resources, mediated by..
- connectivity across scales. Basis for discussion about options (Bonte, in prep)



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