

Governing in the face of extreme variance and the inherent fragilities of adaptiveness: Insights from locusts



Clara Therville, Anderies J.M., Adriaansen C., Lawton D.,
Medina H.E., Overson R., Trumper E.V., Cease A

IRD, UMR SENS – Arizona State University

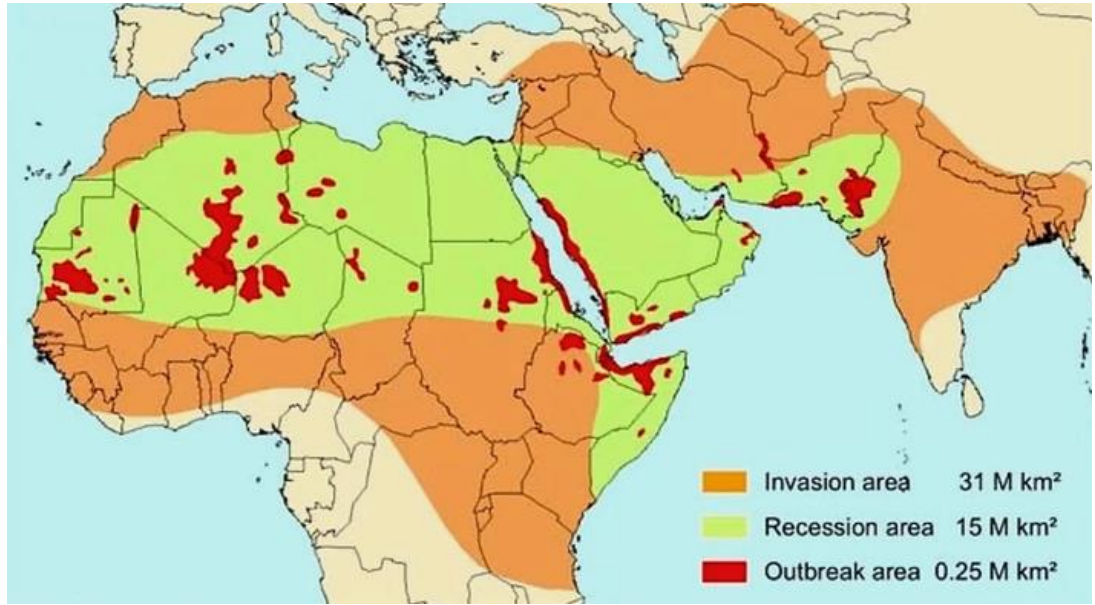
clara.therville@ird.fr

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What are locusts?



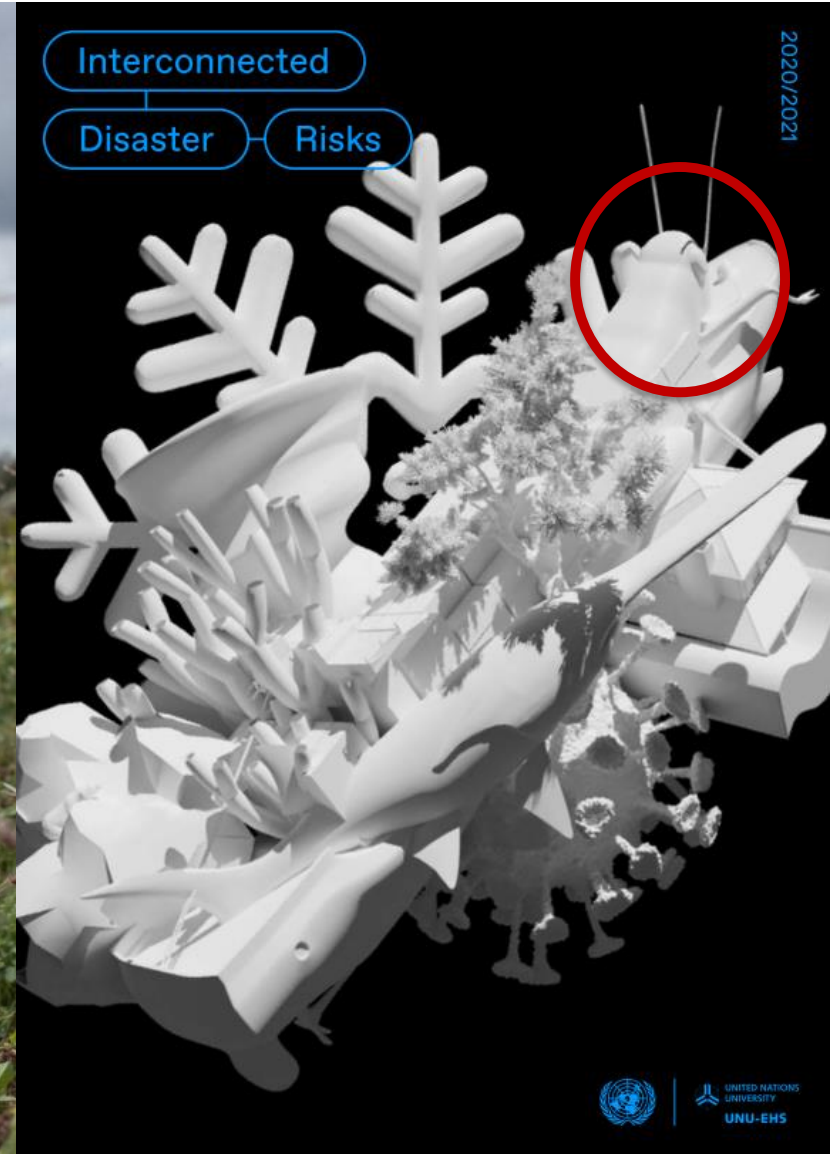
Stage	Solitarious	←→	Gregarious
Spatio-temporal dimension	Recession Breeding areas	←→	Outbreak Expansion areas
Strategy	Preventive	←→	Reactive



Locusts as a disaster

FAO: a transboundary pest

United Nations: a biological hazard
(*UNDRR, 2020*)

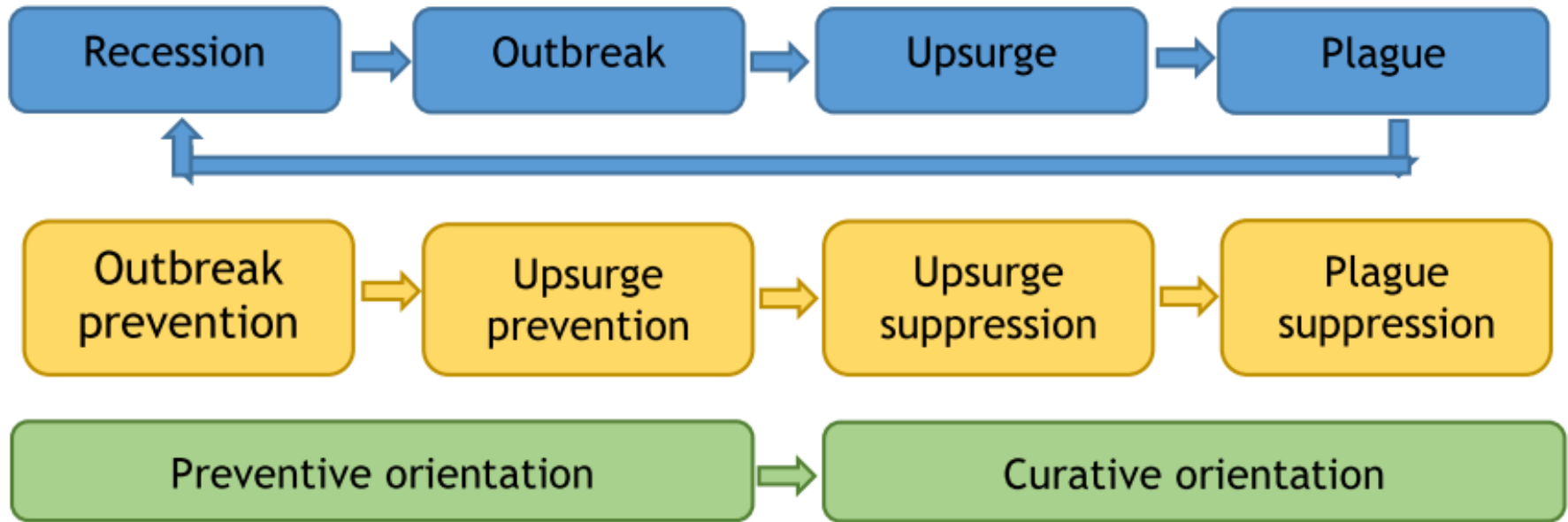


A manageable risk that can 'spit out of control'



A manageable risk that can 'spit out of control'

Since the 1950s: preventive strategy

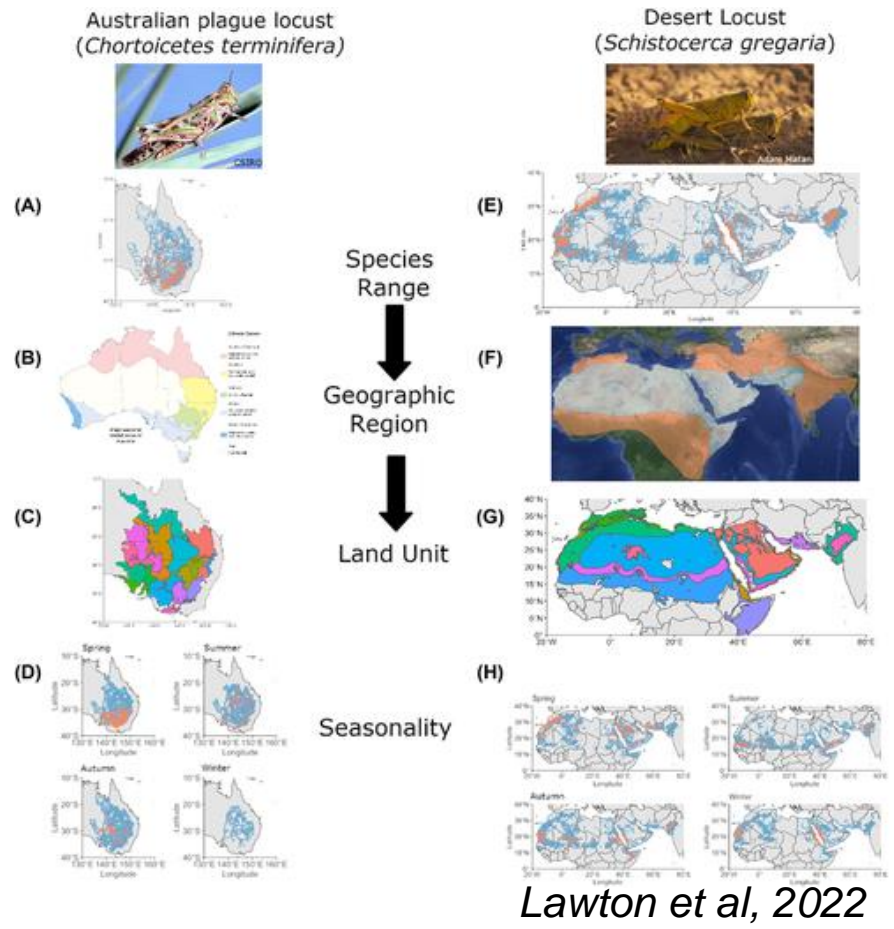


Peloquin, 2014

A manageable risk that can 'spit out of control'

Since the 1950s: preventive strategy

A techno-scientific approach: natural sciences, modelling, drones...



Matthews, 2021

A manageable risk that can 'spit out of control'

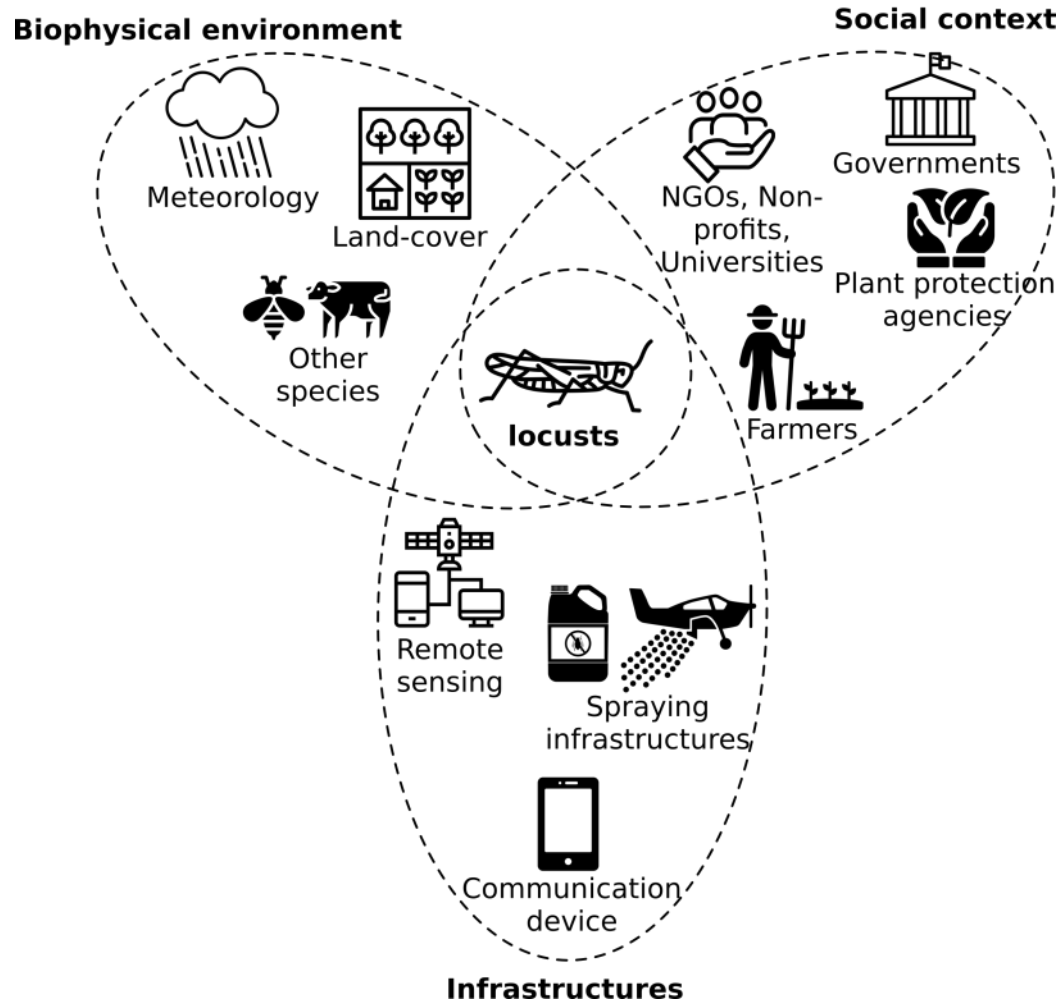
Since the 1950s: preventive strategy

A techno-scientific approach: natural sciences, modelling, drones...

But upsurges still occur

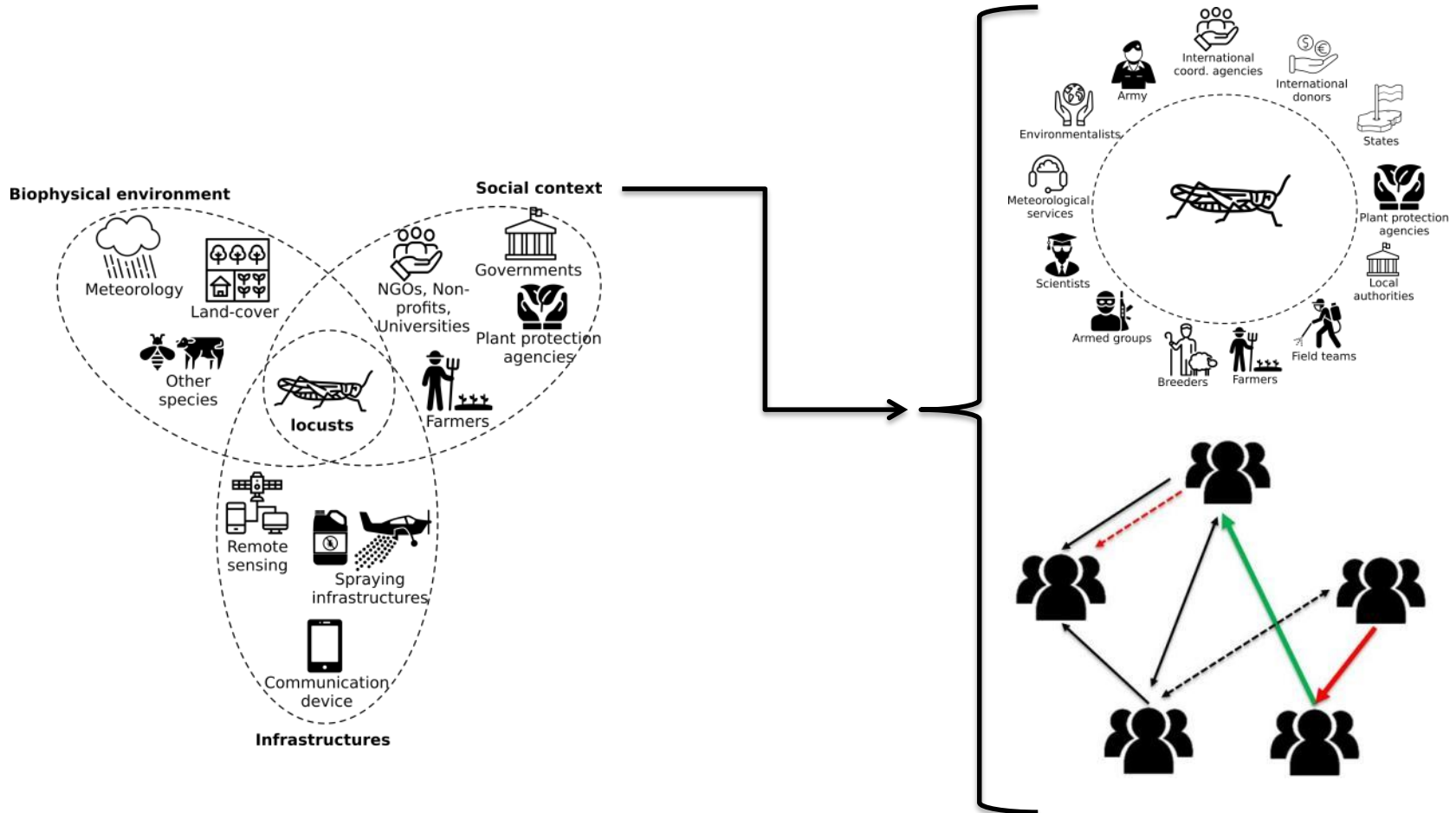
A manageable risk that can 'spit out of control'

Considering locusts as part of complex social-ecological systems

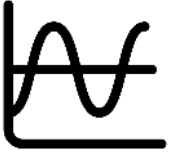


A manageable risk that can 'spit out of control'

Considering locusts as part of complex social-ecological systems – with a focus on governance



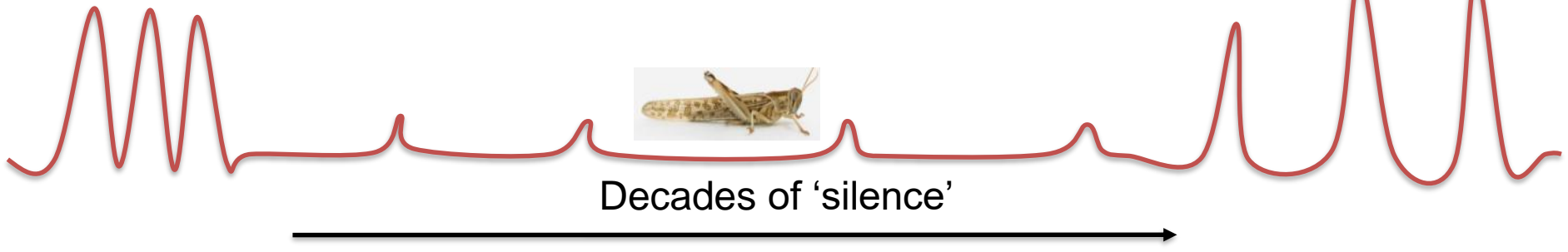
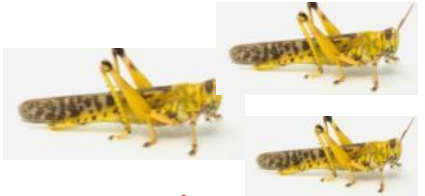
Challenges for governance in the locust case



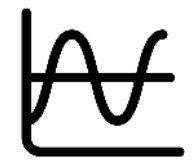
Erratic - low frequency events

Kenya suffers worst locust infestation in 70 years as millions of insects swarm farmland

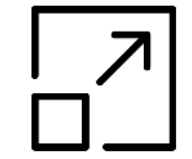
UN urges immediate action as east African nations already experiencing devastating hunger see large areas of crops destroyed



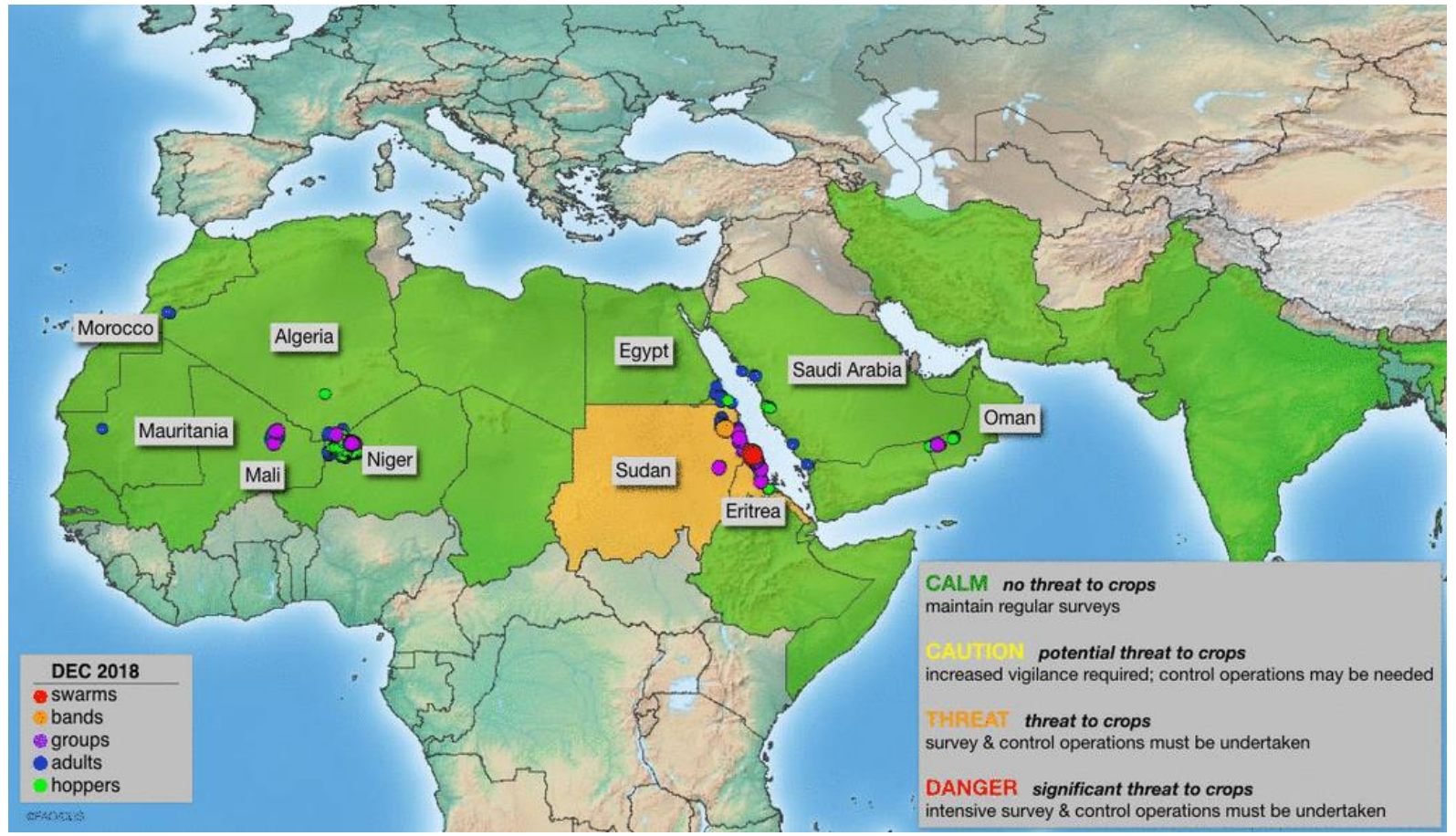
Challenges for governance in the locust case



Erratic - low frequency events



Moving spatiality



Last desert locust upsurge (2019-2020) Source of data: FAO



Implement collective action and governance in the face of low frequency and large-scale events with moving spatialities?

- Locust as a 'common bad' > polycentricity *Ostrom, 1990, 2010*
- Variability of the problem > adaptive governance

The merits of flexibility, diversity and pluralism

Underdal, 2010

A comparative approach

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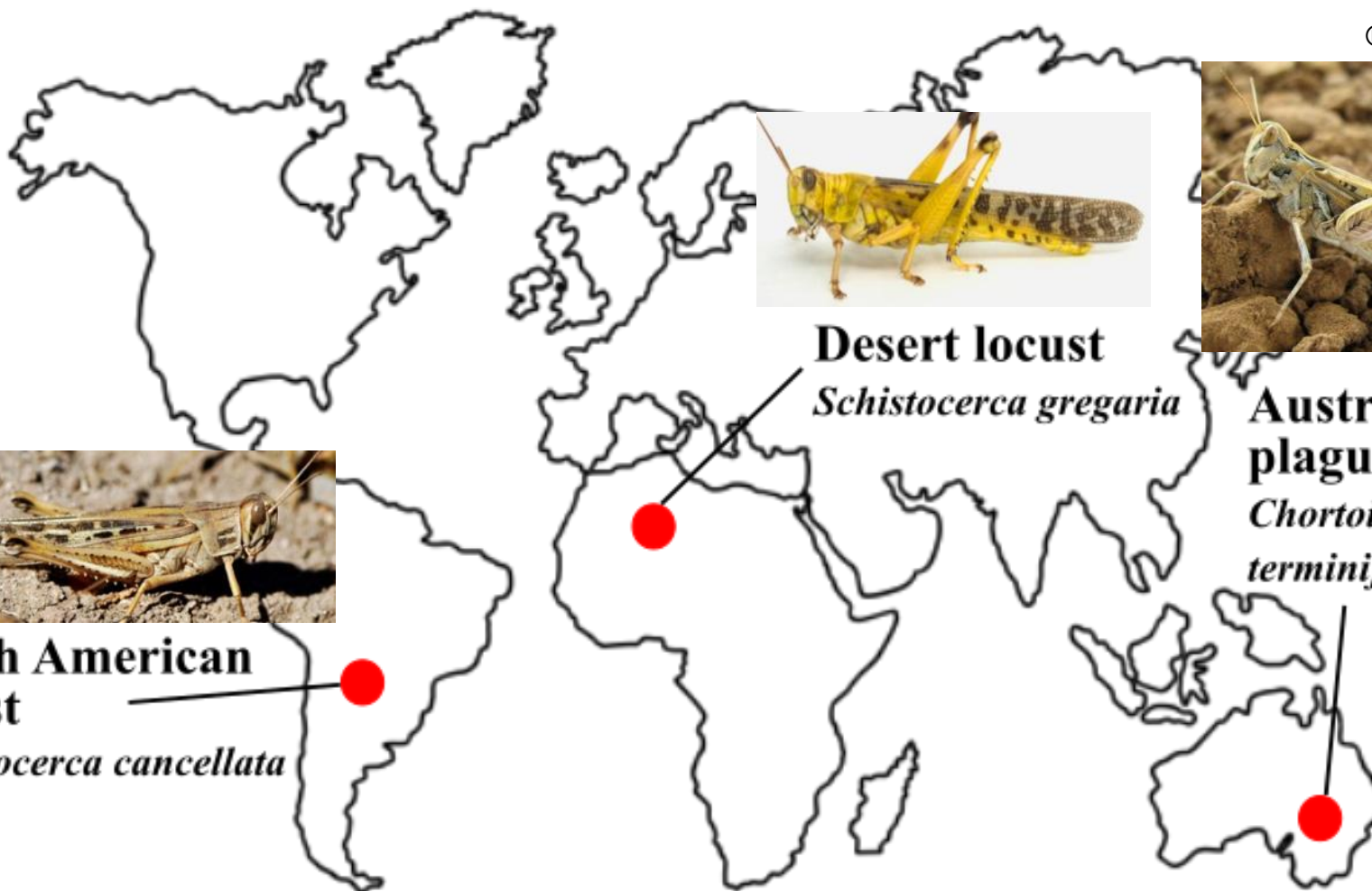
South American locust
Schistocerca cancellata



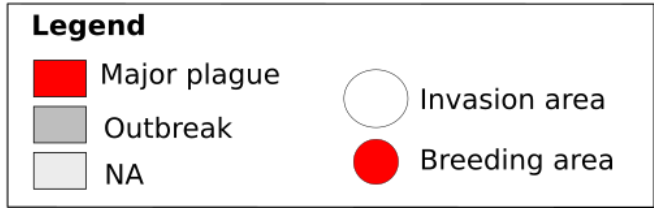
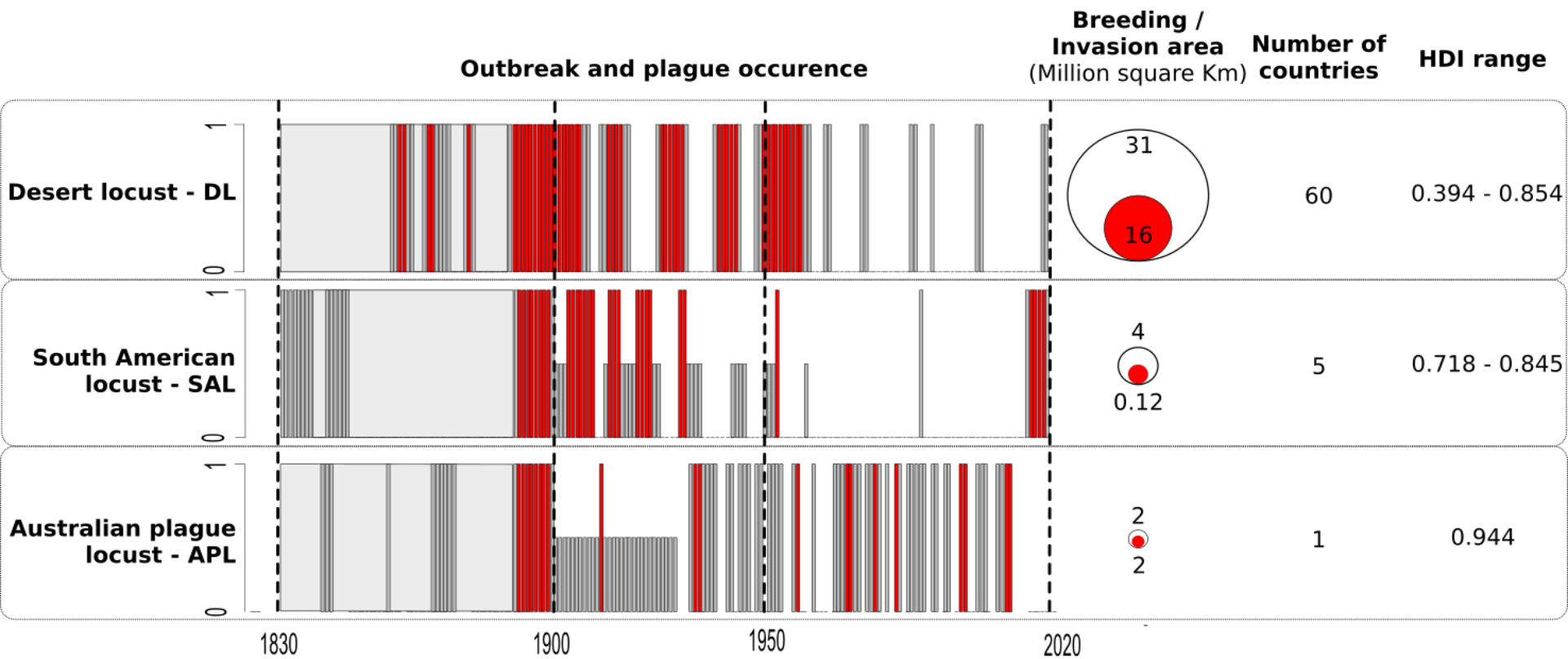
Desert locust
Schistocerca gregaria



Australian plague locust
Chortoicetes terminifera



A comparative approach



- Spatial → social variability + transboundary dimension
- Political stability and available means
- Legacies (colonialism, inter-State relationships...)

A comparative approach of governance

Literature review

Individual interviews

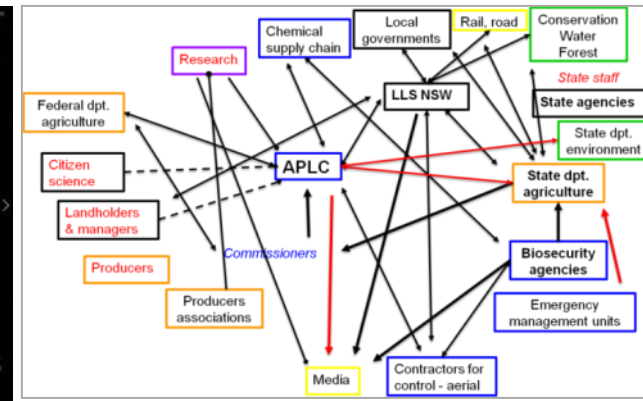
Online survey

Workshops

Argentina, February 2020

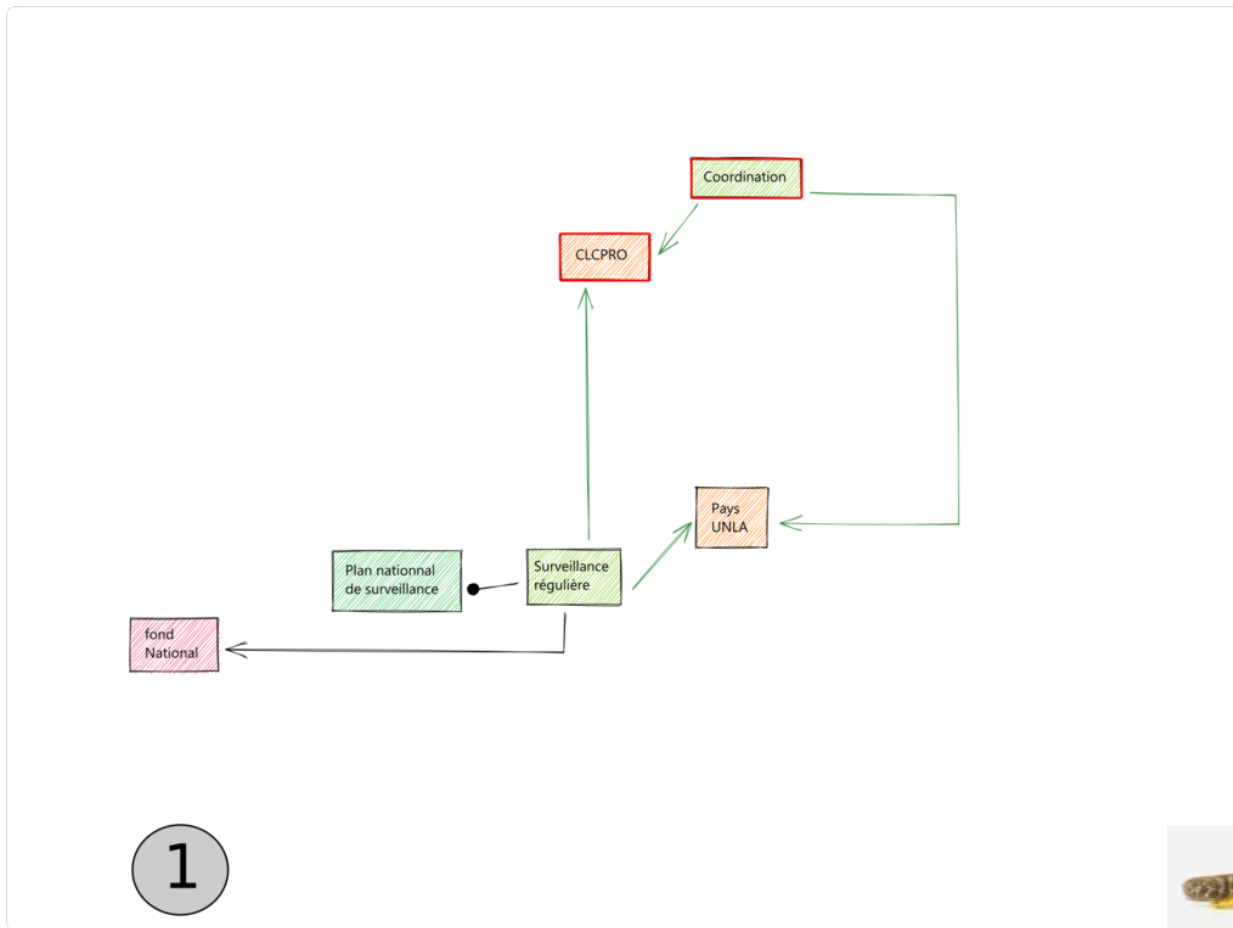


Australia, February 2021



Multi-levelled and embedded management systems

- Desert locust: adaptive governance structures



1



Recession

Major upsurge

Local / national level

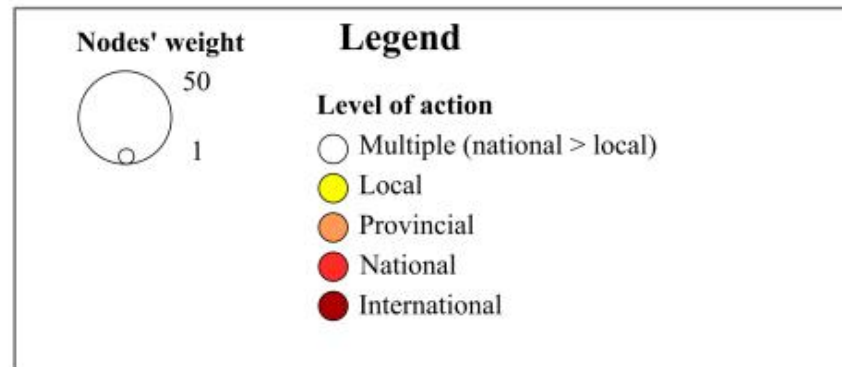
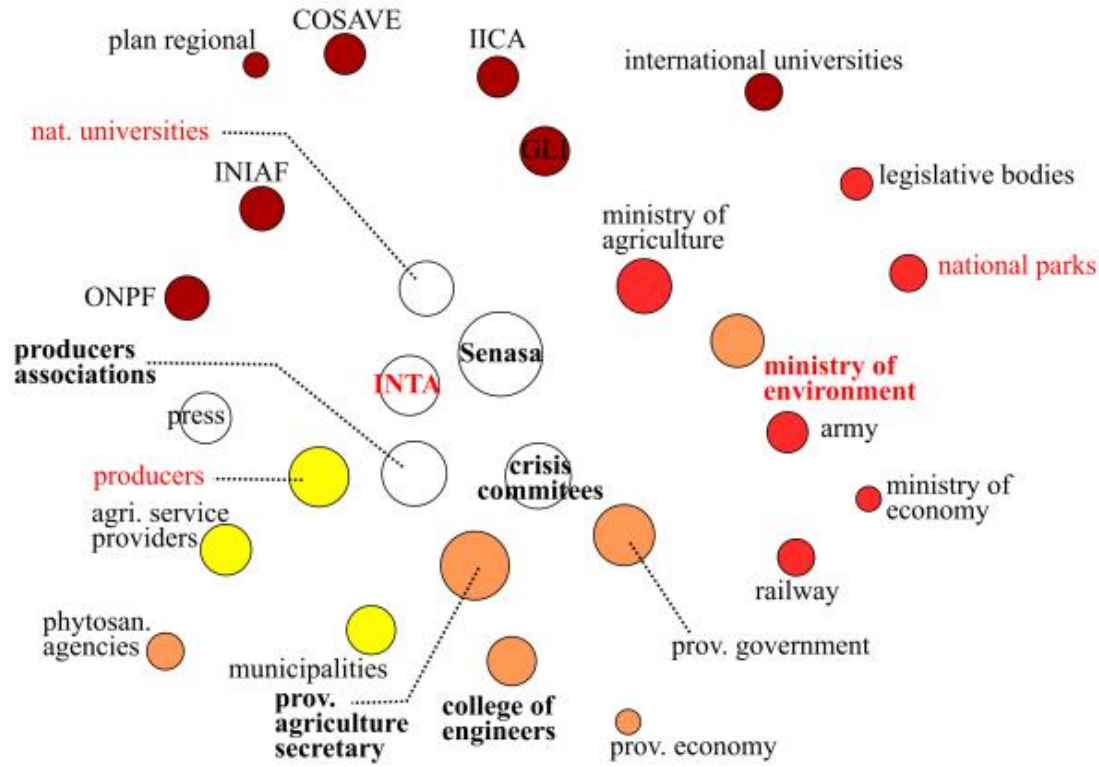
International level

More decentralized

More centralized

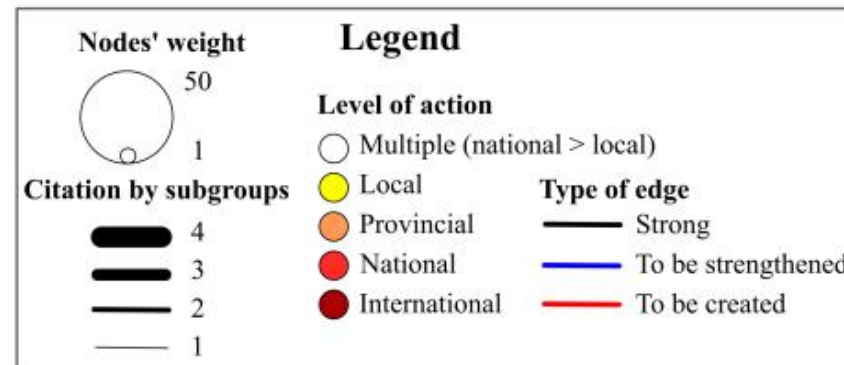
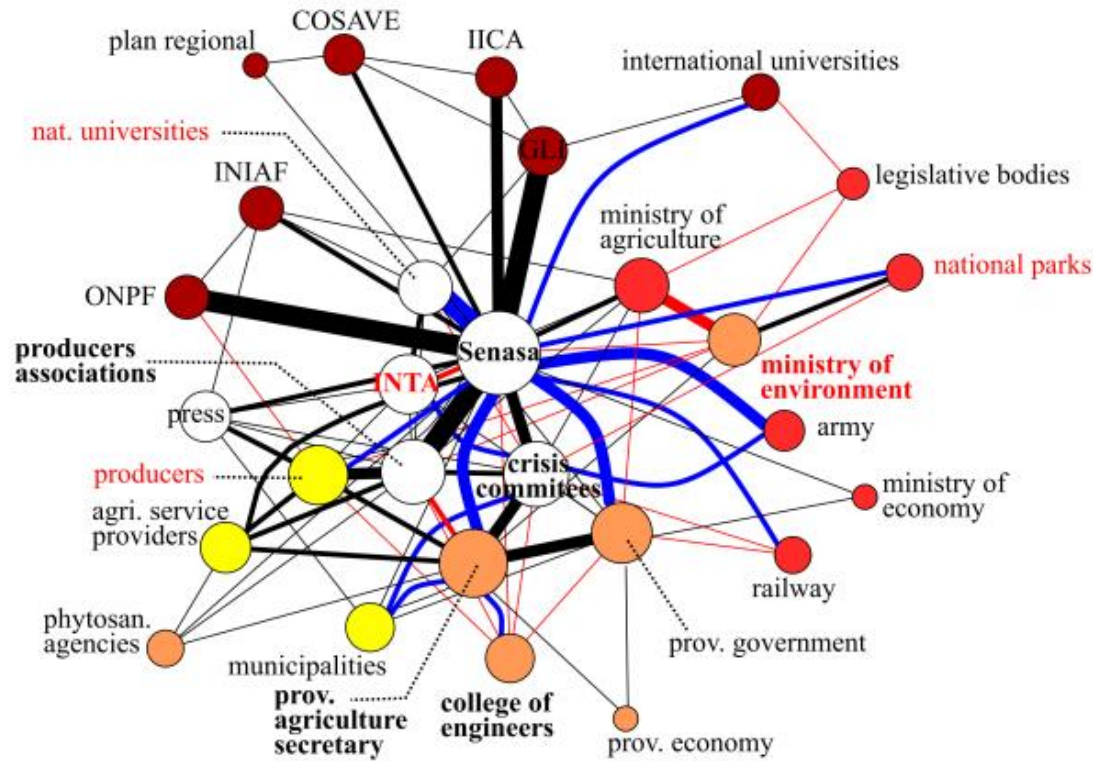
Multi-levelled and embedded management systems

- South American Locust: governing in the crisis

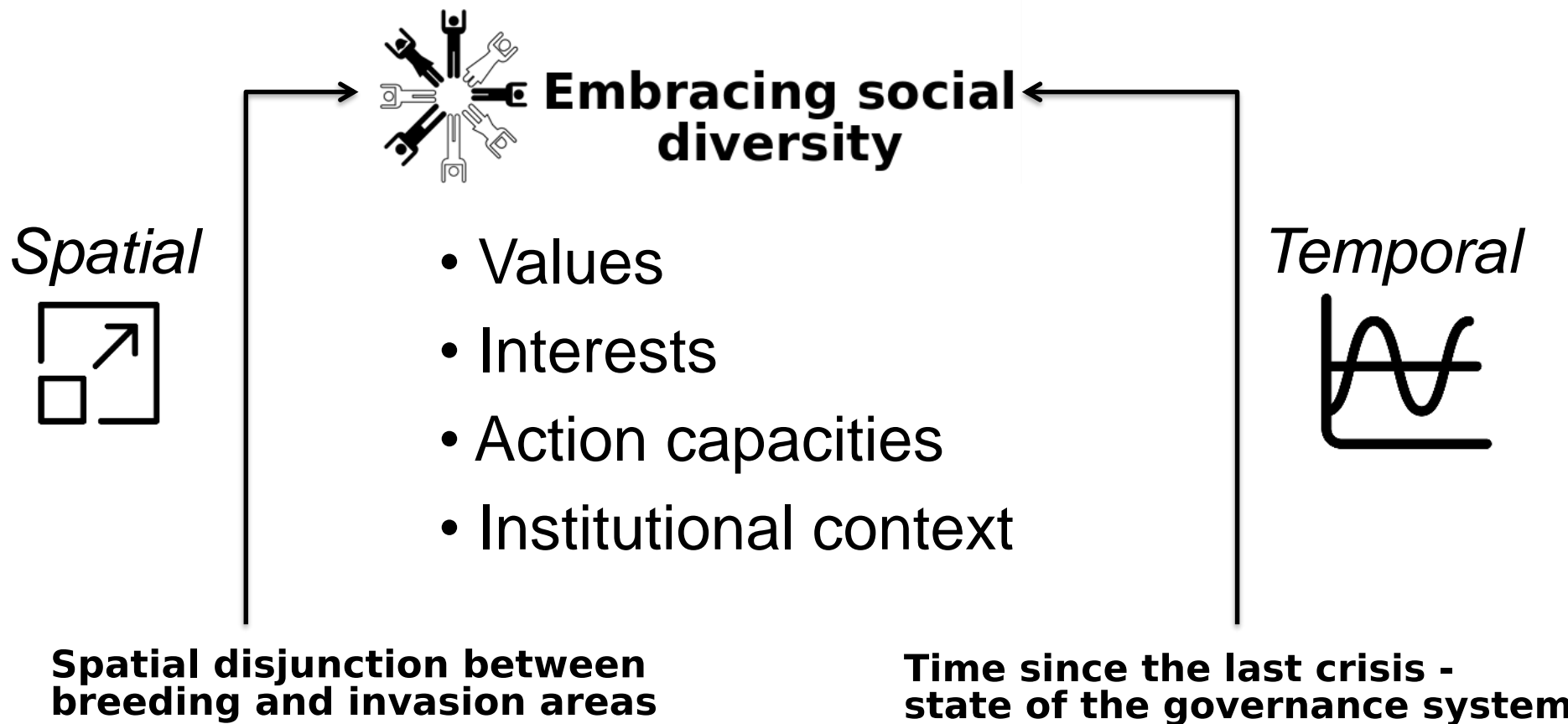


Multi-leveled and embedded management systems

- South American Locust: governing in the crisis



Major challenges



APL: 'When we get those huge influxes in from New South Wales as overnight migrations, that's a big problem for us. So if New South Wales are curbing the population, then we don't get that problem. The upshot of that is in Victoria we don't have a regular survey team that goes out and looks for locusts'

SAL: 'Slow going of regional coordination'
SAL: 'For Bolivia, it was completely unprecedented, for Paraguay also, to have this problem and so. Argentina was kind of joking that they had a problem and in admitting it (...) And then, within the year, they were working with Argentina...'

Major challenges



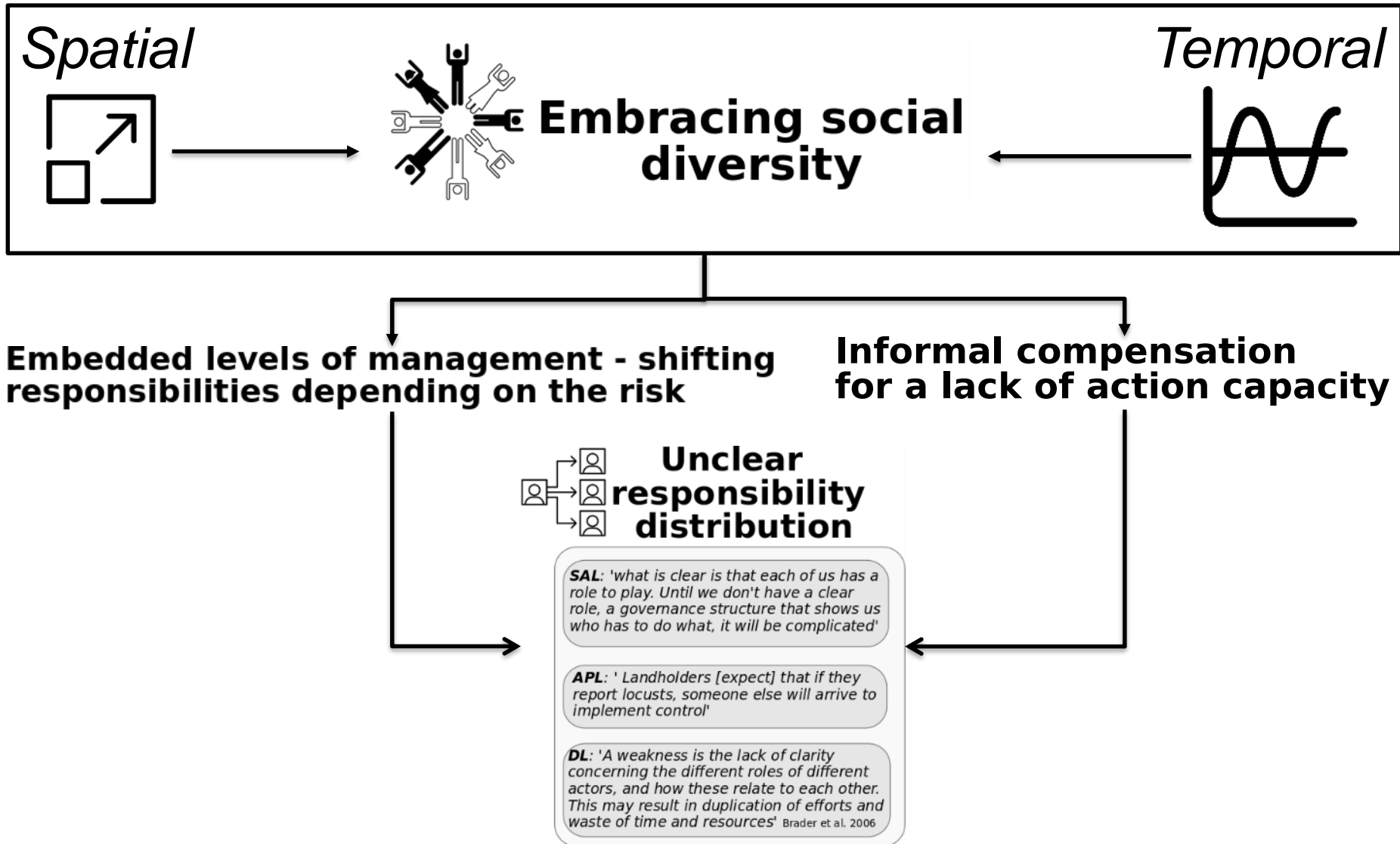
Embedded levels of management - shifting responsibilities depending on the risk

APL: 'We require [the landholders and managers of land] to control locusts on their own property. Agriculture Victoria will not do that for them unless it's an emergency. And we did it in the 2010 plague because it was getting to be too much. But in general, we hold the line that all landholders, owners, managers are responsible for managing the locusts on their property'

Informal compensation for a lack of action capacity

DL: 'The role of FAO in locust control, given to it by its member countries, is to coordinate the control and to strengthen the information system at the international level. FAO became involved in project execution because of the lack of alternative mechanisms'

Major challenges



Adaptive governance is necessary, but carries fragilities:
confusion, unclear responsibility distribution, free-riding...

Beyond prevention

- Prevention is essential!
- But emphasis on prevention /stability has its drawbacks
Lack of signal, slow changes, learning



Beyond prevention

- Prevention is essential!
- But emphasis on prevention /stability has its drawbacks

Lack of signal, slow changes, learning

- Question
 - our relation to variability
 - tensions between collective action and adaptiveness

Thank you for your attention

