



Understanding the Nexus with a complexity lens

Dr Pete Barbrook-Johnson

UKRI-ESRC Innovation Fellow and Senior Research Fellow, University of Surrey, UK

p.barbrook-johnson@surrey.ac.uk // @bapeterj

cecan.ac.uk // innovativeppp.org

❖ Overview

- The UK Centre for the Evaluation of Complexity Across the Nexus
- Using complexity in WEF policy making and evaluation
- Public-private partnerships at the nexus
 - Examples
 - An ecosystem of partnership working



What is CECAN?

❖ Centre for the **Evaluation of Complexity** Across the **Nexus**

❖ Research centre

- Funded by research councils and gov departments/agencies
- 9 Universities, 5 practitioner orgs
- Mix of evaluators, and complexity, social, and environmental scientists
- Started March 2016
- **pioneering, testing and promoting innovative policy evaluation approaches and methods**



Department
for Environment
Food & Rural Affairs



Department for
Business, Energy
& Industrial Strategy



Environment
Agency



Food
Standards
Agency



Cranfield
UNIVERSITY



What is complexity? What is systems thinking?

✘ Similar ideas

- Academic differences
- In practice, the same

✘ Think in systems

- Think holistically, across systems
- Many and diverse components, which interact and adapt in nonlinear ways

✘ Key characteristics:

- adaptation to changes
- feedback loops
- thresholds for change
- areas of relative high and low stability
- past states influencing possible future states
- being highly dynamic, and
- being an open system, impossible to bound.

✘ Result

- tipping points, emergent new properties, and **unpredictability**
- Need different approaches and methods



Josina Vink
@josinavink

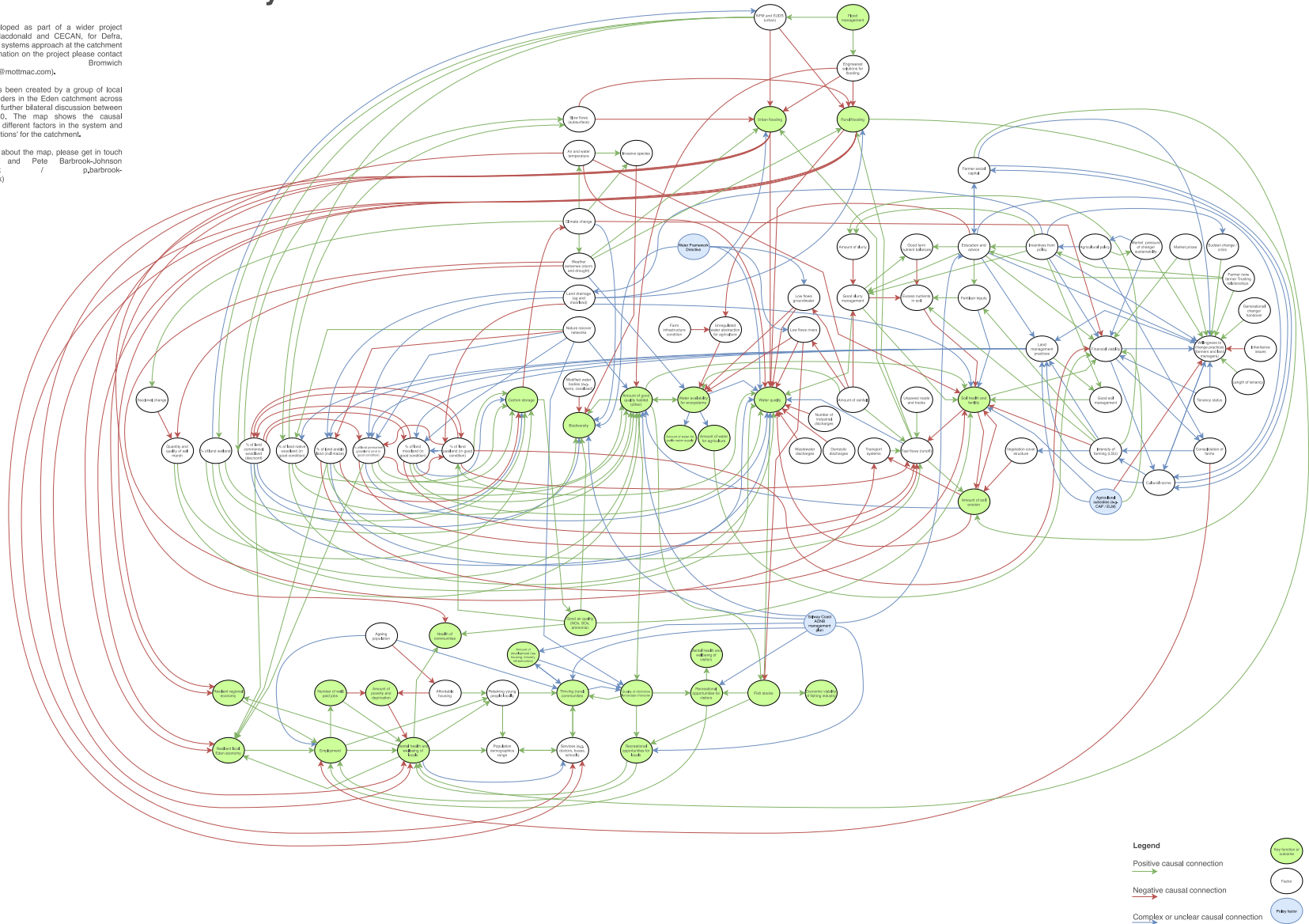
@Ecocene works to create a typology of systemic relations
#RSD6
12:55 PM - Oct 20, 2017

What we have been up to

- ❖ Case studies - co-produced projects with government, e.g.:
 - Farming and agriculture
 - Renewable heat
 - Energy trilemma
 - Waste crime
- ❖ Government guidance on evaluation - Magenta book
- ❖ Commissioned
 - Complexity Evaluation Framework for Defra
 - Water systems for Defra
- ❖ Briefing notes (EPPN) - cecan.ac.uk/resources
- ❖ Events, webinars
- ❖ Capacity building



For more information about the map, please get in touch with Alex Penn and Pete Barbrook-Johnson (a.penn@surrey.ac.uk / p.barbrook-johnson@surrey.ac.uk)



Successes and failures at the nexus

- ✘ Complexity and systems a natural way into WEF thinking
 - Cross-domain
 - Social and participatory
- ✘ Methods that help (inclusive but rigorous, connect to other analysis)
 - Systems mapping
 - Qualitative Comparative Analysis
- ✘ Department/ministry-level objectives drive focus and aims - excludes nexus thinking
 - We haven't cracked this - cultural shift/social innovation
 - Commissioning of evaluation and applied research will be key
 - Informing guidance and building capacity

Public-private partnerships at the nexus

- ❖ Innovative forms of governance a key part of better WEF thinking
- ❖ More participation and ownership at local levels
- ❖ Operating across scales
- ❖ Examples
 - South Lincolnshire Water Partnership – multi-sector assets
 - Landscape Enterprise Networks – unlocking investment in landscapes – like Payment for Ecosystem Services
- ❖ innovativeppp.org





What next?

- ❖ Making complexity and systems tools more accessible, practical and valuable
- ❖ Advocating for WEF thinking up and down the policy hierarchy – being ‘WEF entrepreneurs’
- ❖ Supporting public-private-third sector collaboration
- ❖ Always keen for international collaboration – get in touch!



Get in touch!

p.barbrook-johnson@surrey.ac.uk

[@bapeterj](#)

www.cecan.ac.uk

www.innovativeppp.org