

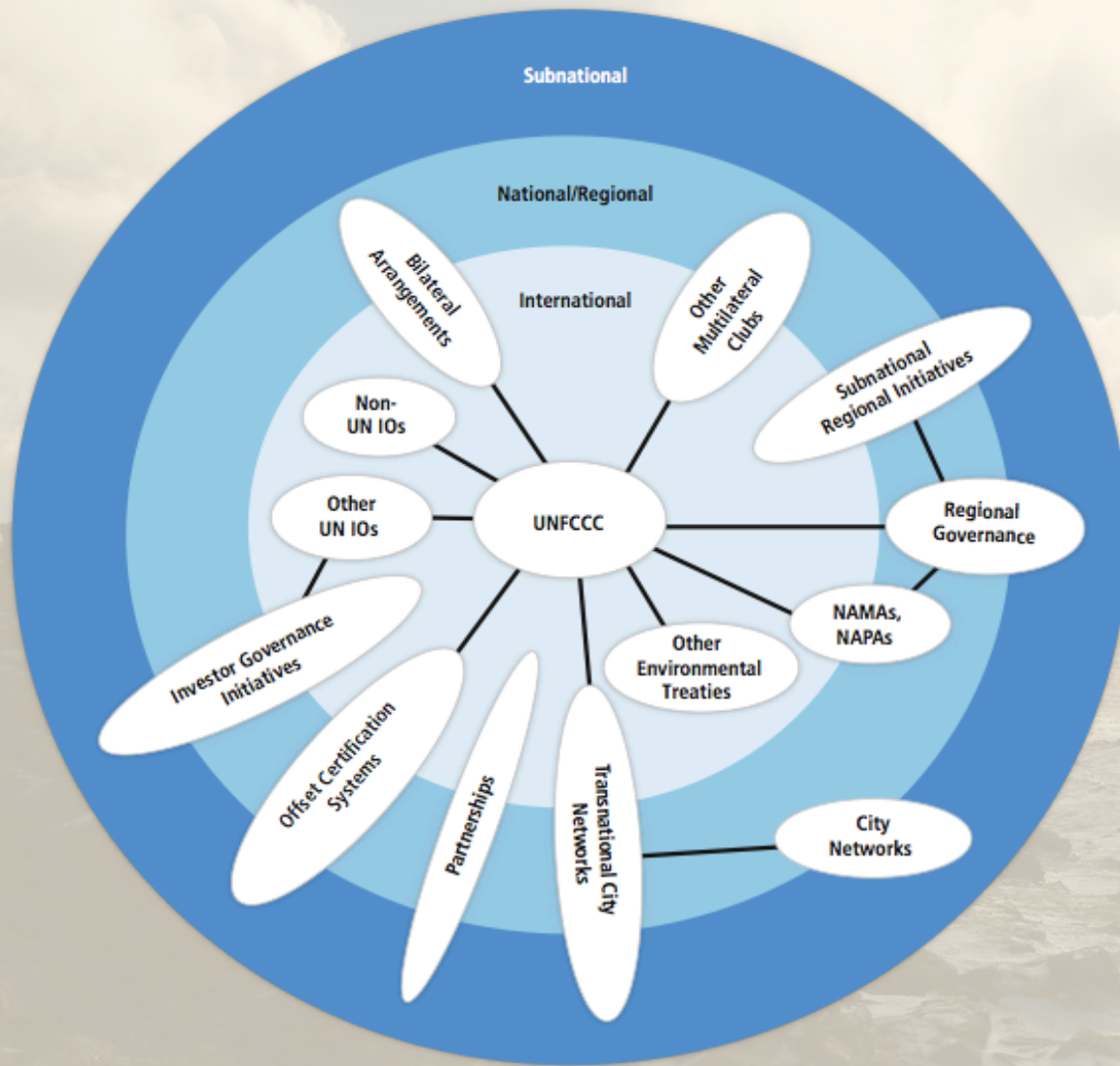
Network analysis and global climate governance

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Climate governance “beyond” the UNFCCC

- Widespread recognition of breadth of climate governance by range of actors outside the UNFCCC
 - Cities, regions, investors, NGOs, businesses, etc.
 - Many hybrids involving different types of actor
 - Conceptualised variously as private, transnational, nonstate, hybrid climate governance
- Recent debates about what it all adds up to
 - Regime complexes, institutional interaction/interplay, fragmentation, orchestration, etc.
- Attempts within the UNFCCC to connect and coordinate with other climate governance initiatives
 - International cooperative initiatives, NAZCA portal, specific partnerships, etc.



Source: Stavins et al “International Cooperation: Agreements and Instruments”, in IPCC AR5, WGIII report.

Key question

- How do the interactions between these myriad initiatives work, and how might we study them effectively to understand how they may be either synergistic or interact in ways that compete and conflict with each other?

Social Network Analysis

- Methodology focused on studying interactions and relationships
- Useful for studying
 - Flows of ideas and authority
 - Structural position of particular actors
 - Patterns of clustering in a network
- Should provide valuable insights for climate governance
 - Through a focus on the empirical connections across different sorts of climate governance.
 - And especially for how implementation of the Paris agreement may be enhanced by strategic coordination with transnational climate governance

Existing SNA work on climate governance and politics

- Work on diffusion of ETS (Paterson et al 2014)
- Work on development of carbon standards and accounting tools (Green 2013; Thistlethwaite & Paterson 2015)
- Work on the politics of knowledge in the IPCC (Corbera et al 2016)
- Work on dominant themes in UN climate negotiations (Venturini et al 2014; Hadden & Seybert forthcoming)
- Roles and strategies of NGOs (Hadden 2015; Böhmelt et al 2014)
- Use of social media in climate politics (Williams et al 2015)
- Overlapping memberships in climate governance initiatives (Widerberg forthcoming)

Example: climate epistemic networks

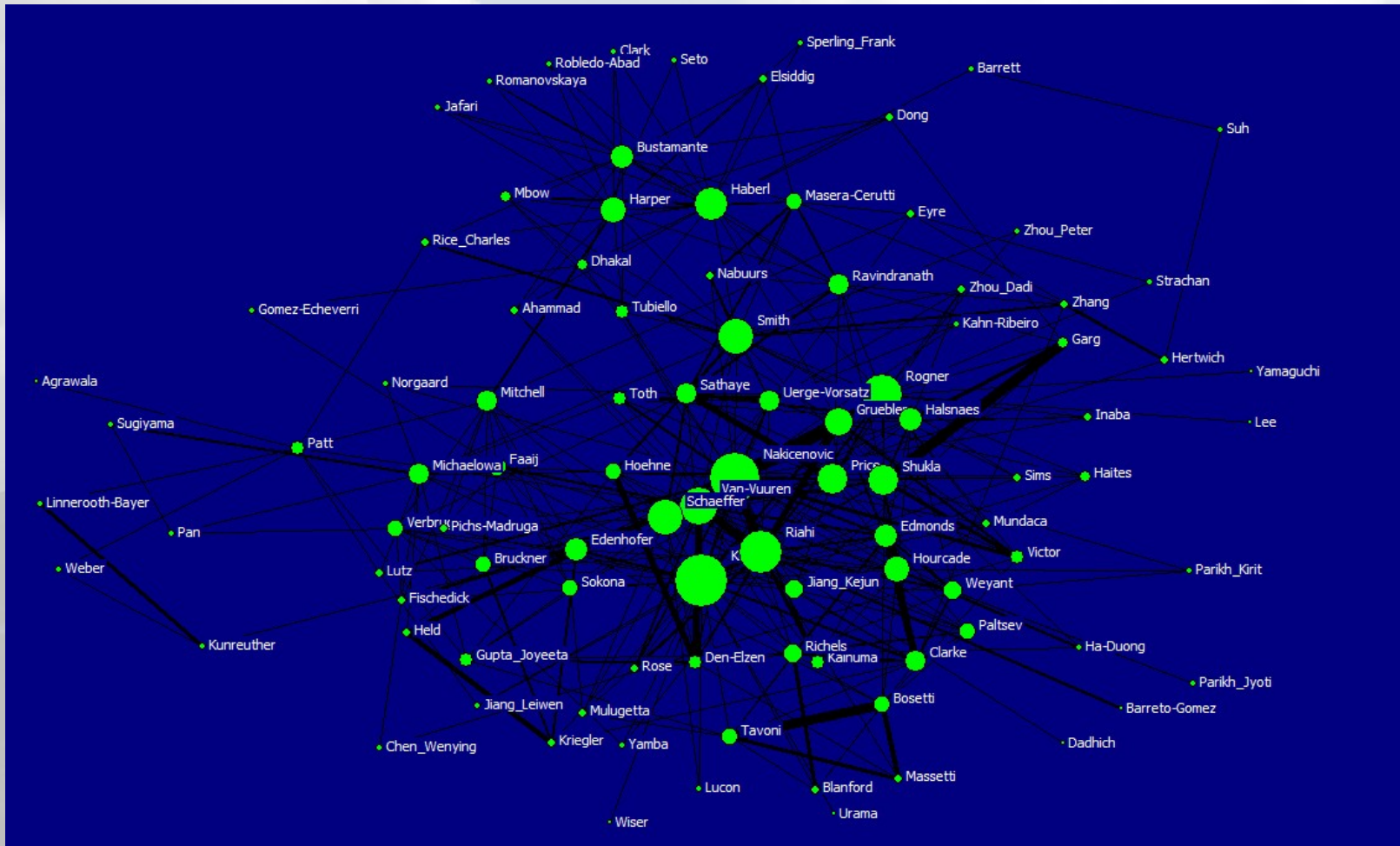
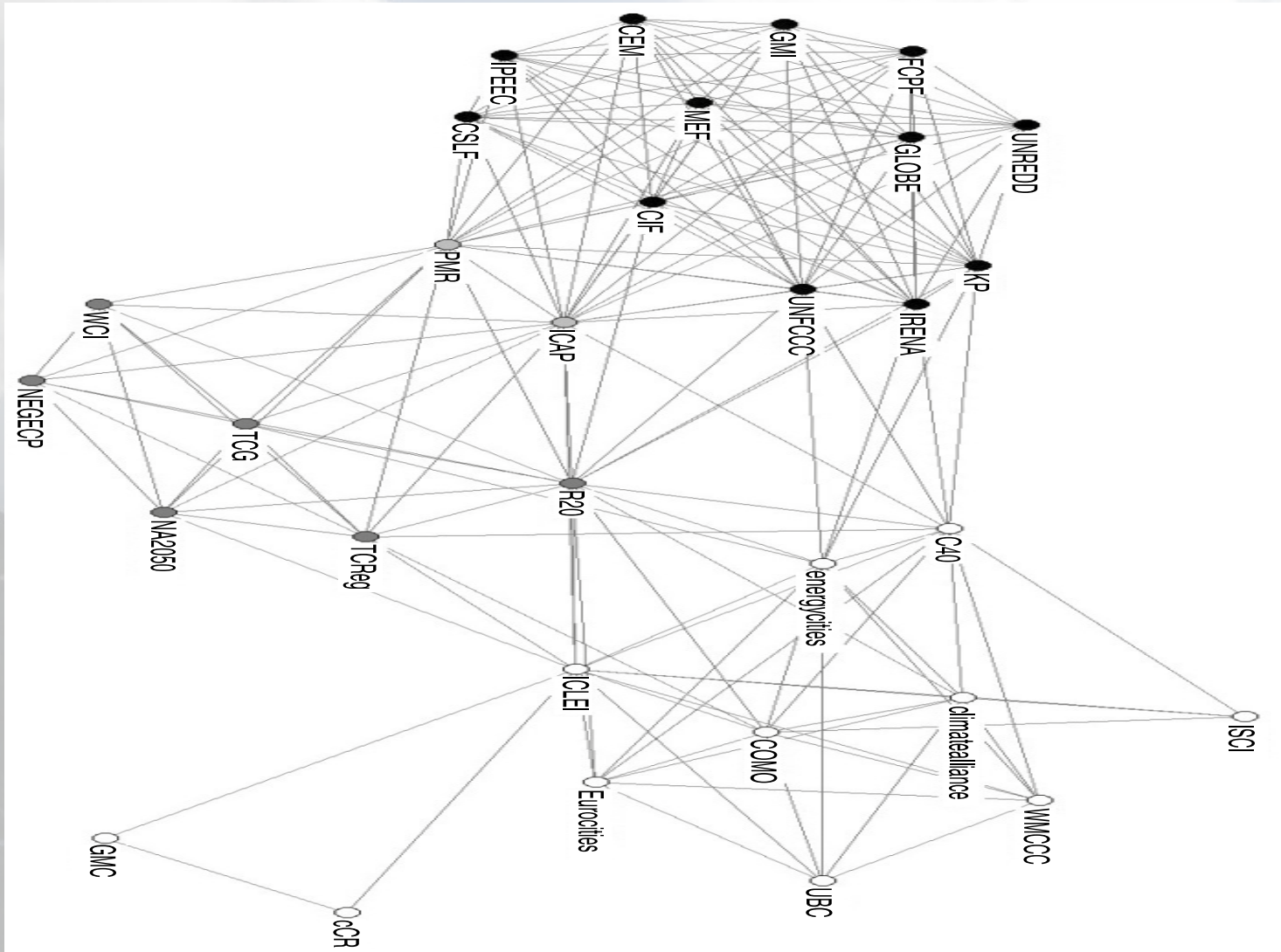


Figure 1. Combined ego networks of all IIASA-connected authors in IPCC AR5. Size of node indicates node degree (the number of other people the author has co-authored with =), while line thickness indicates tie strength (the number of papers co-authored by the two authors together). Source: Hughes & Paterson forthcoming.

Example: shared membership in governance initiatives

global climate governance (public institutions only)



Source: Oscar Widerberg. Forthcoming. Mapping institutional complexity in the Anthropocene: A network approach. In Philipp Pattberg & Fariborz Zelli (eds) *Environmental Politics and Governance in the Anthropocene*. London: Routledge

Useful start but more systematic would add significant value

- Limits of overlapping membership data
 - (easy to do, but thin inferences)
- Other ways to research climate governance via SNA
 - Specifying individuals/organisations that play key roles in generating climate governance. Who are the orchestrators? Who has authority to shape climate governance?
 - Tracking money flows across initiatives
 - Tracking the adoption of operational rules across initiatives
 - Tracking explicit formal linkages (MOI, carbon offset agreement, etc)
 - Tracking implicit functional linkages (effects of carbon prices on a technology initiative, eg.)

Conclusions I

- Using SNA to research these interactions would help researchers and policy-makers understand better:
 - Capacity for coordination or orchestration across different initiatives
 - By individuals, organisations, the FCCC, or other initiatives
 - Through rules, shared infrastructure, finance, etc
 - Through specific initiatives like the NAZCA portal
 - Agency of specific sorts of individuals or organisations
 - Will arise out of structural position within networks (rather than inherent features of the actors themselves)

Conclusions II

- Design of specific initiatives that might trigger effects via interactions across the complex
 - E.g Will the Article 6 itmo provision have similar effects triggering carbon market activity as Kyoto did?
 - E.g. what will be the effect of the Paris design where there is a collectively specified objective (<2°C) but no individually specified objective for states on transnational climate governance?
 - (hypothesis: enhanced activity by and profile of non-state actors doing 'climate scorecards' for states – tracking and aggregating NDCs)