

COMPLEX POLICY INTERLINKAGES BETWEEN ANAEROBIC DIGESTION AND FOOD WASTE IN THE UK

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BACKGROUND

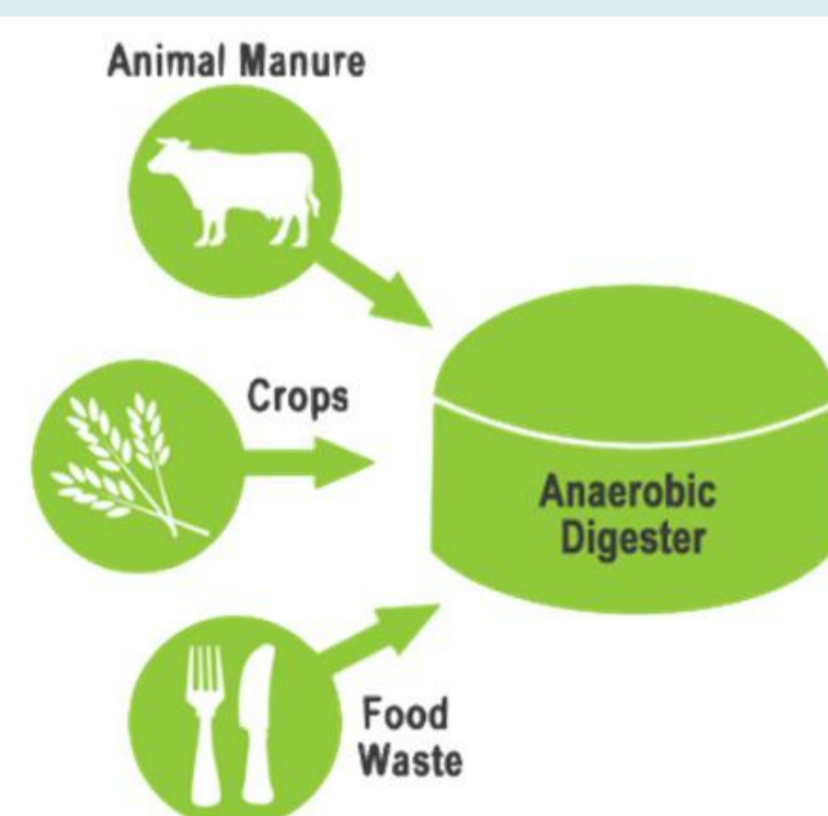
Domestic Targets



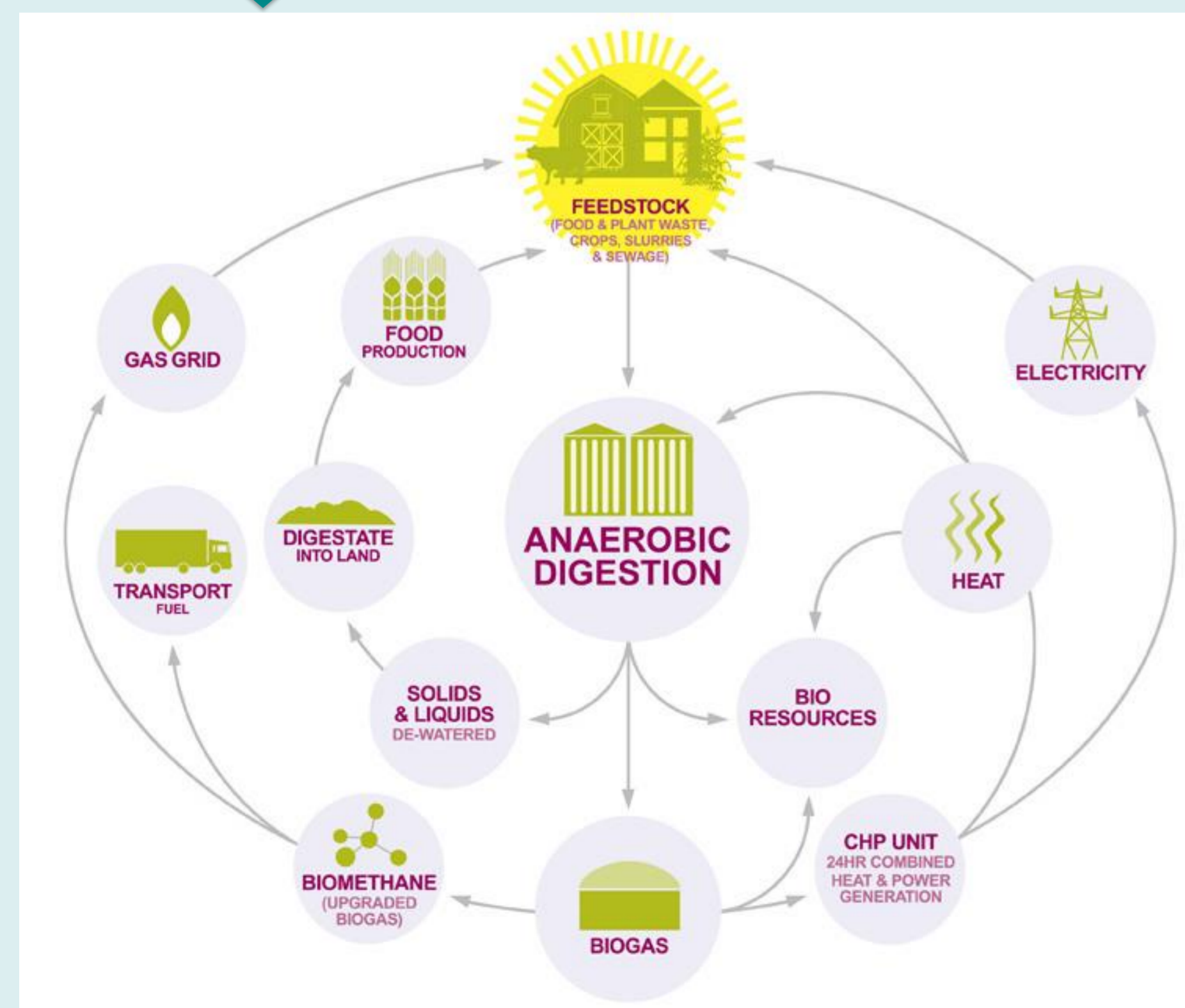
HOWEVER, 7.3 million tonnes of food waste end up in landfills each year

OPPORTUNITY:

- The technology of Anaerobic Digestion (AD)
- Digesting 1 tonne of food waste can generate 300 kWh of energy
- 400 operational AD plants and 420 projects under development in 2017



Source: Voulioukis (2015)



Source: <http://adbioresearch.org/about-ad/what-is-ad/>

RESEARCH AIMS & QUESTIONS

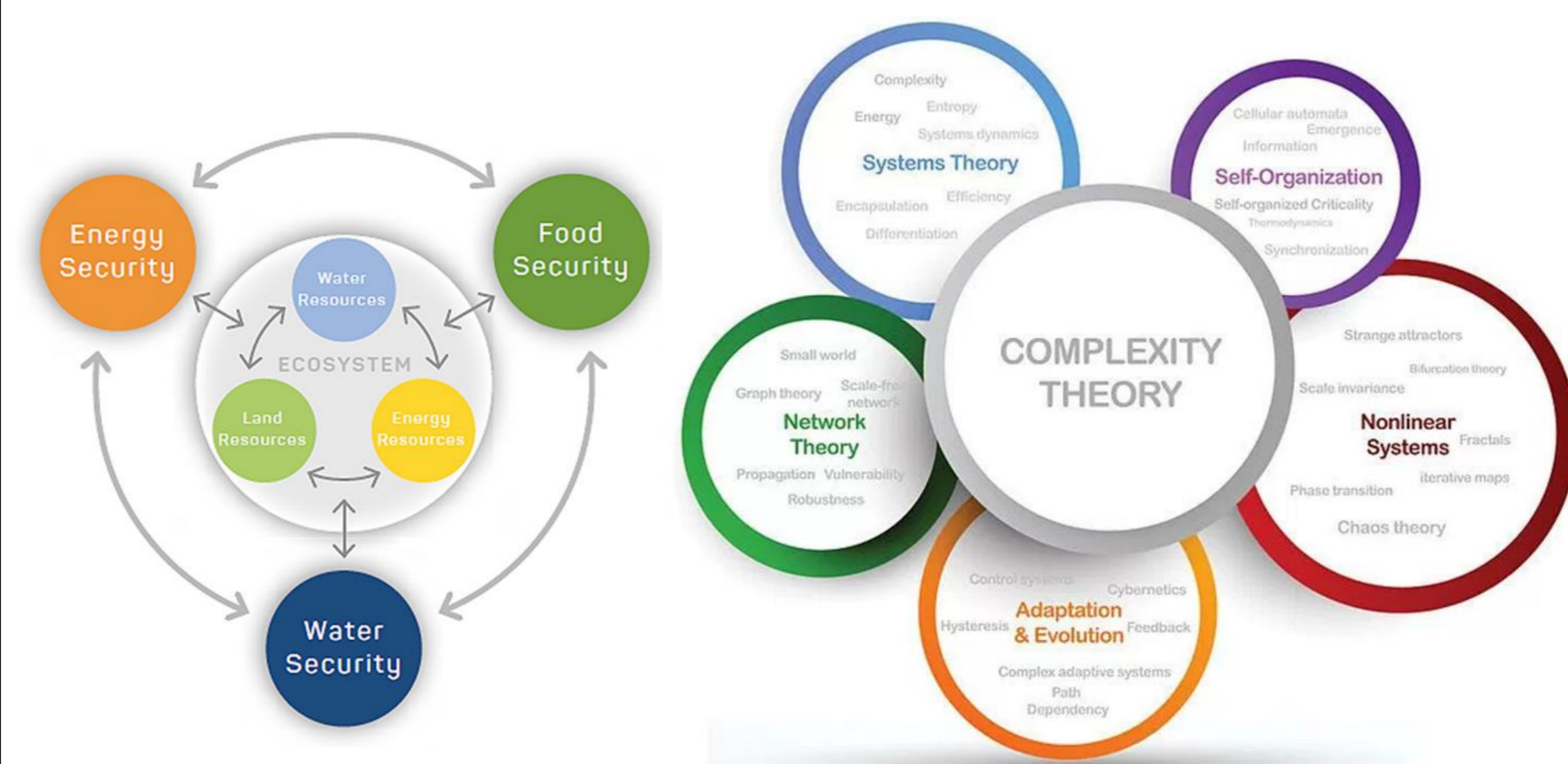
AIMS

- Provide an interdisciplinary evaluation framework which integrates environmental, political, social and economic aspects, while taking into account the policies, processes, actors and dynamics.
- Inform policies and regulations on how to support the development of a sustainable food waste collection system leading to anaerobic digestion plants.

QUESTIONS

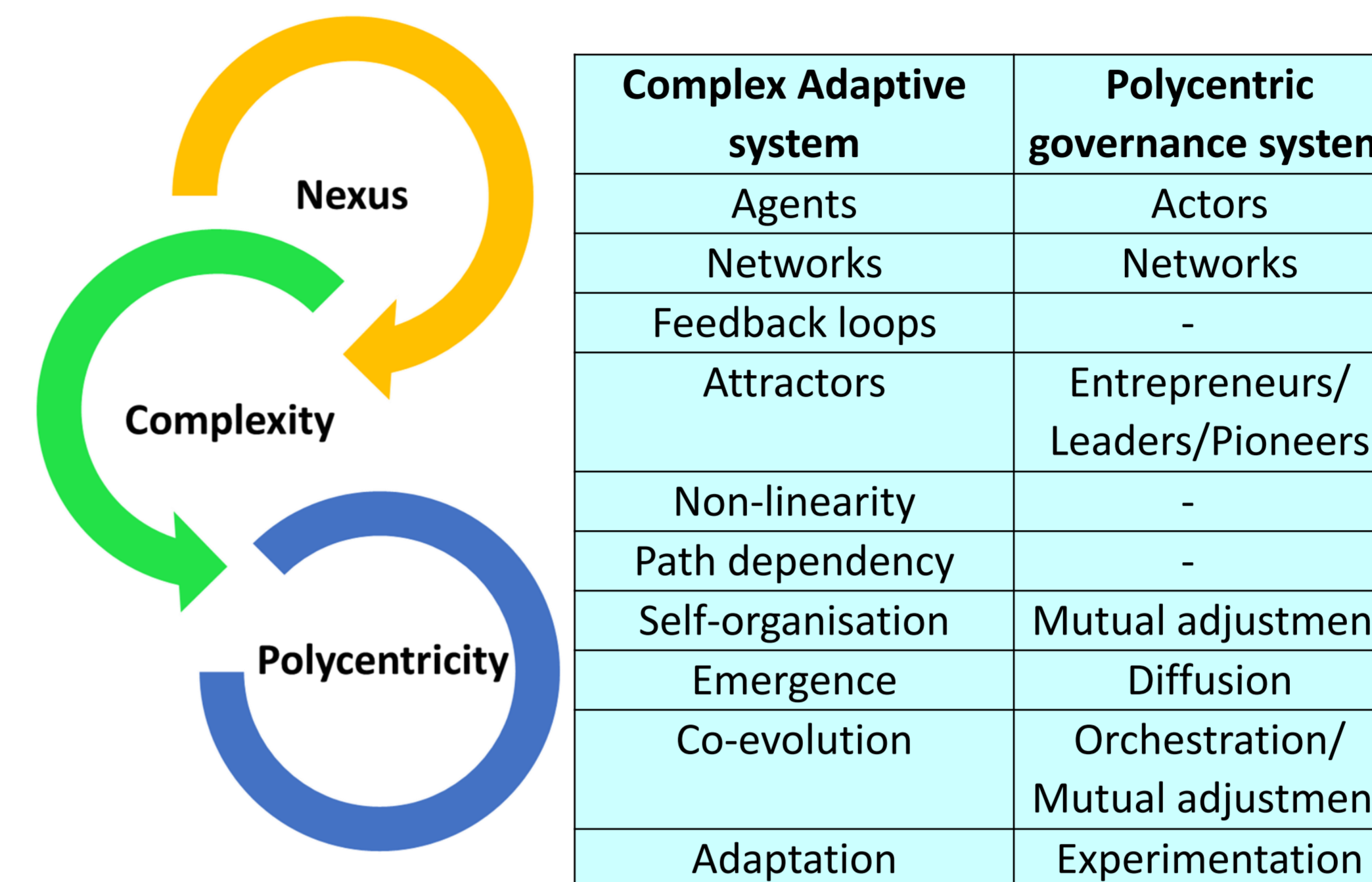
- To what extent can the wider AD governance of the UK be described as a complex and polycentric system within the energy-water-food-environment nexus?
 - Why would this conceptualisation be useful for the UK policy actors of AD?
- What really works in the food waste collections leading to AD plants in Scotland and Wales, compared with England?
 - What drives differences in the food waste collections leading to AD plants in England, Scotland and Wales?
- What are the drivers and barriers for leading food waste collections to AD and what are its results at the local level?

KEY CONCEPTS



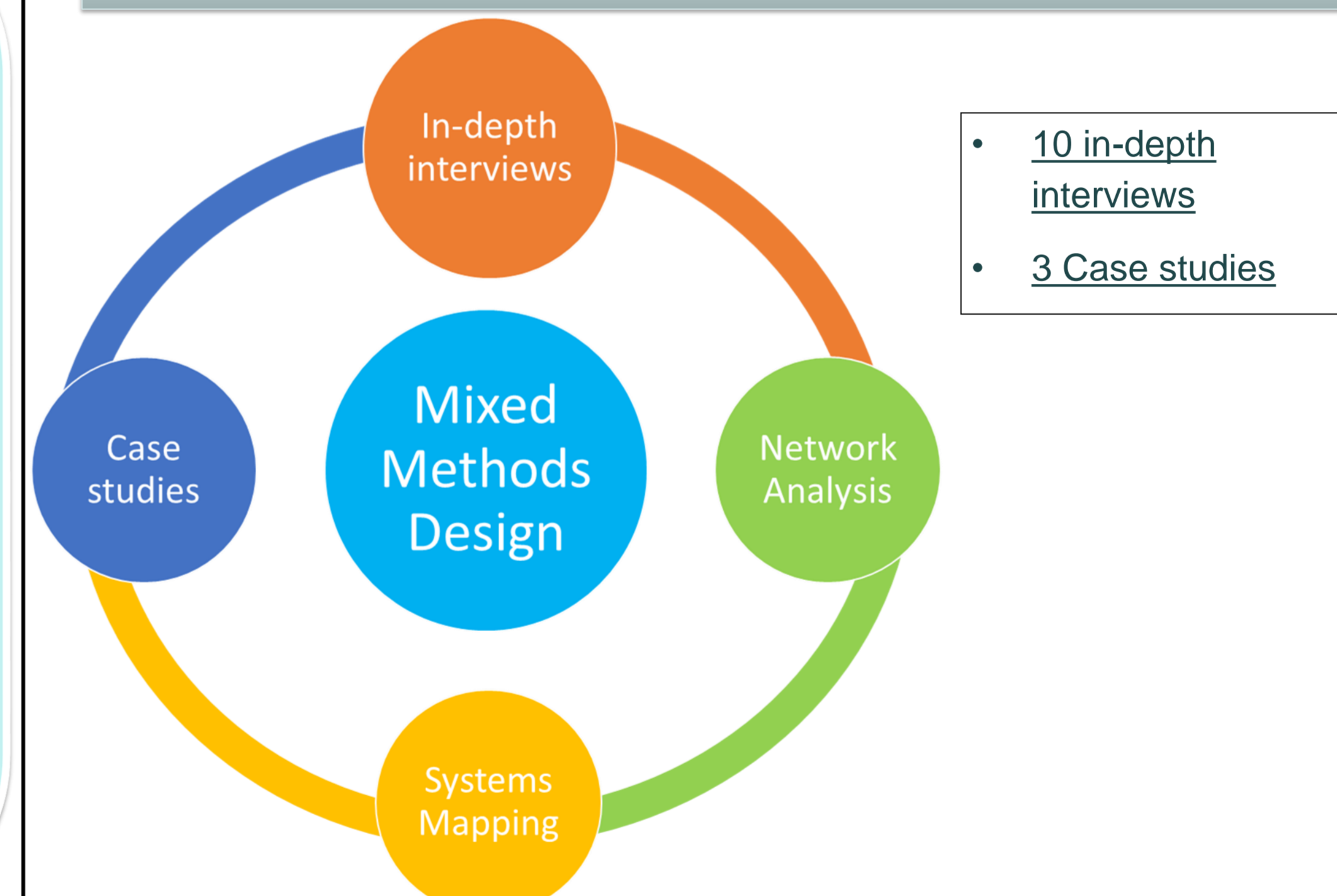
Source: <https://www.water-energy-food.org/about/introduction>

CONCEPTUAL FRAMEWORK



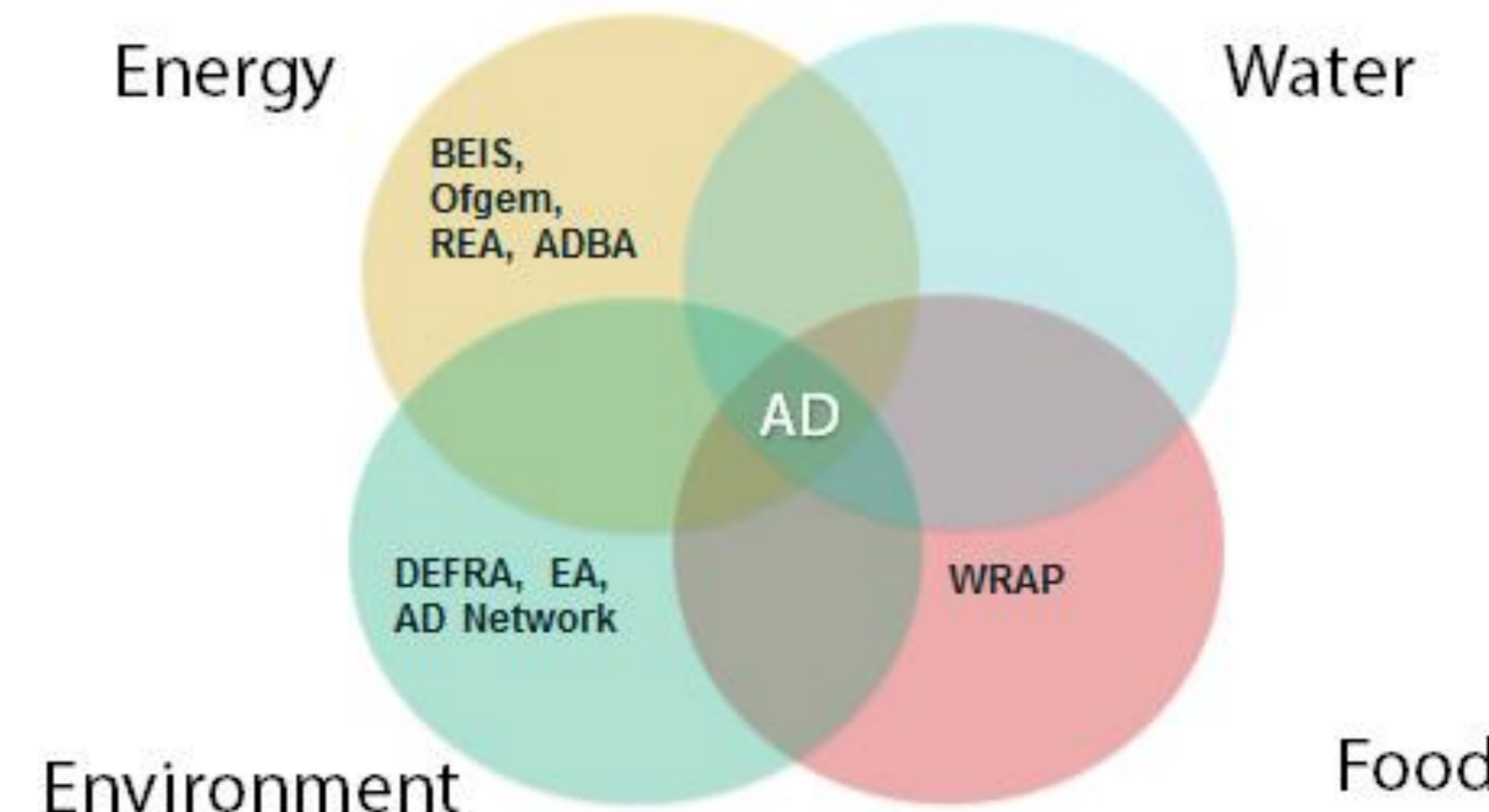
Link the 'nexus' thinking with the 'systems' thinking

RESEARCH METHODS



IN-DEPTH INTERVIEWS (ON-GOING WORK)

- Scoping interviews with 10 policy experts, specialising on the AD from the different 'nexus' sectors.
- Aim to understand the AD governance at the national level.

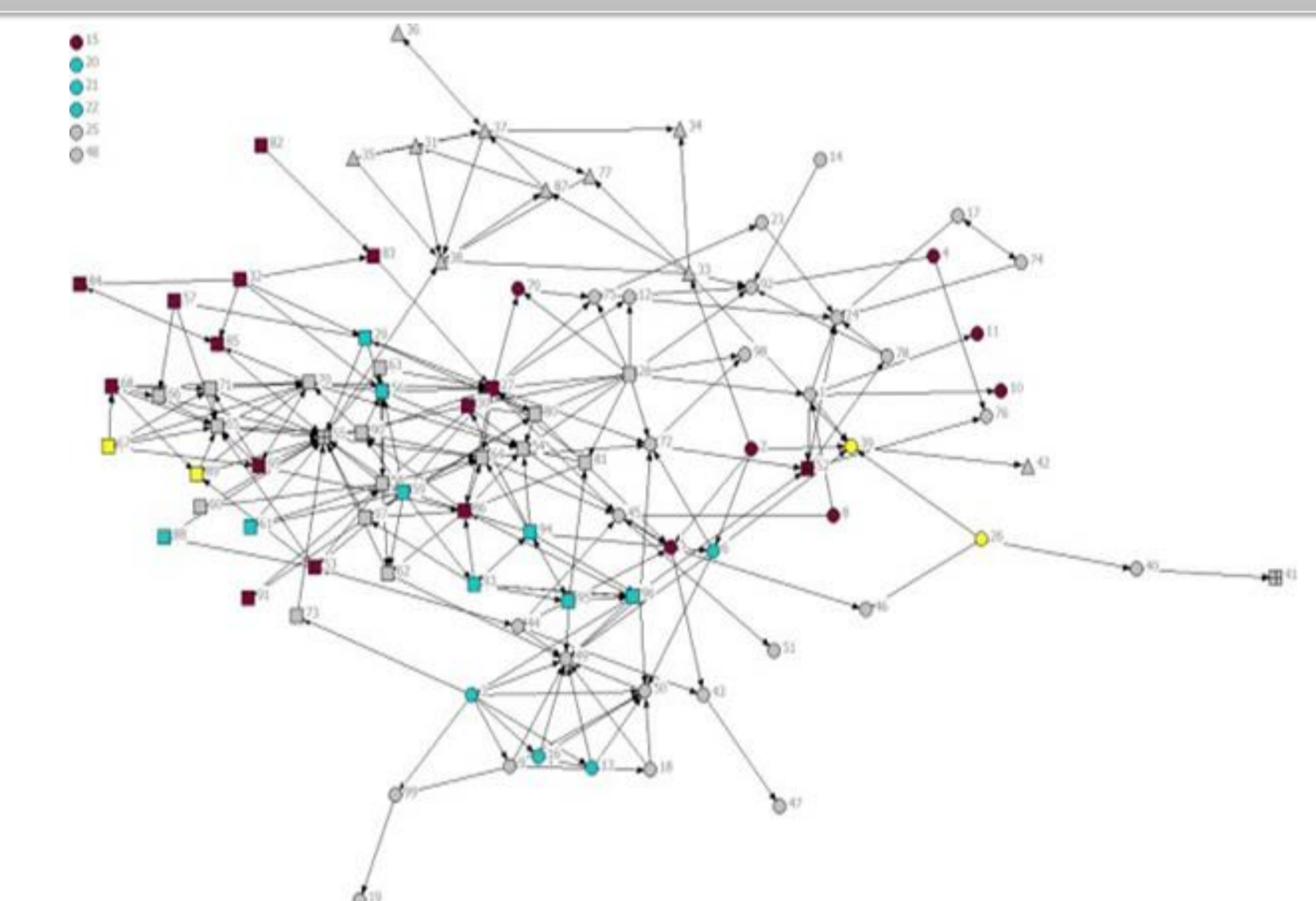


SELECTION OF CASE STUDIES (ON-GOING WORK)



Data analysis

SYSTEMS MAP & NETWORK ANALYSIS (WORK UNDER CONSIDERATION)



Source: (Abström and Cornell, 2018)

CONTRIBUTION TO KNOWLEDGE

This research:

- Identifies what works and does not work in the policies and incentives regulating the linkages of AD and food waste in the UK.
- Explores in depth the interdependencies and interconnections of actors in the networks of complex energy-water-food-environment policies at the local level
- Contributes to evidence-based policymaking in the fields of AD and food waste collections, while taking into consideration the synergies and trade-offs of the energy-water-food-environment nexus.

(This CECAN funded PhD research started in January 2017).