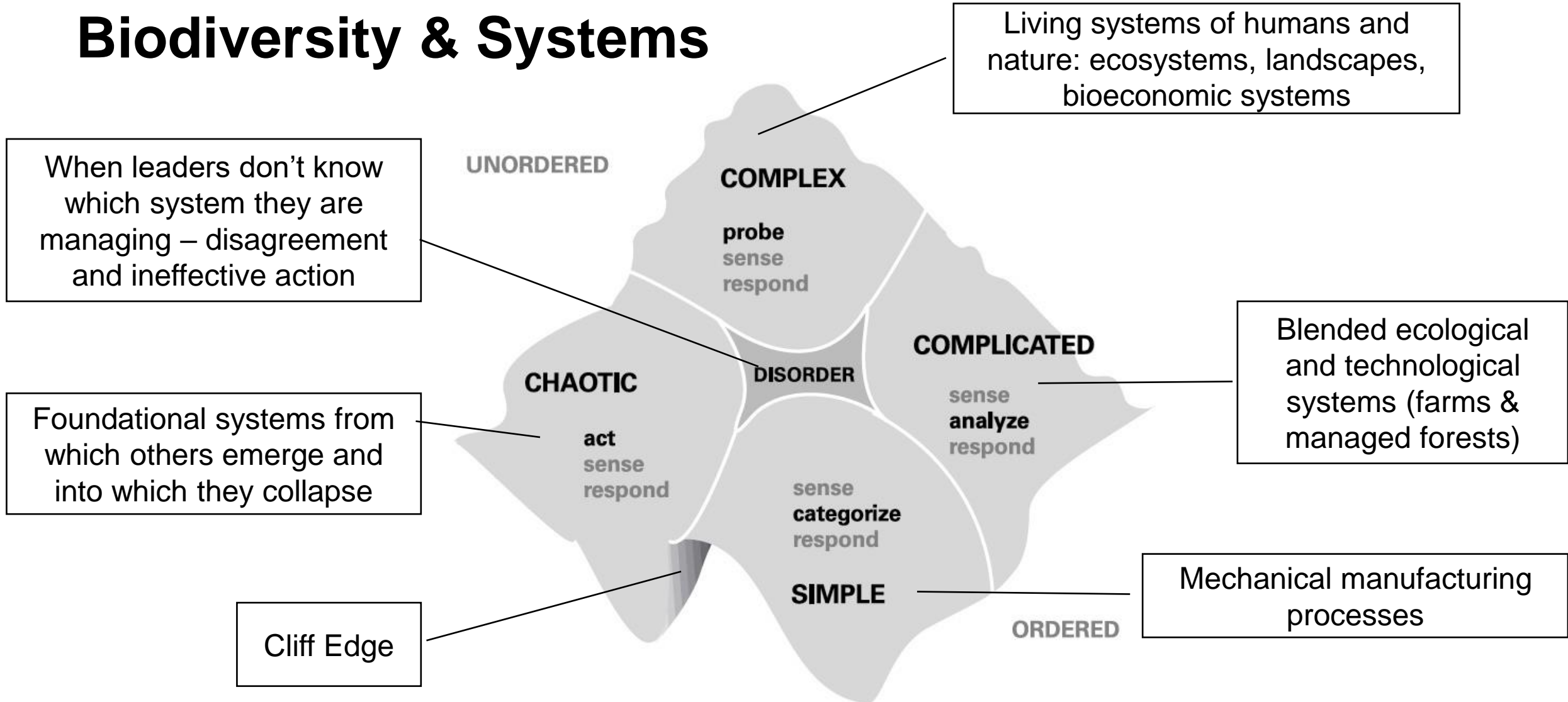


Reflection from the Biodiversity Perspective

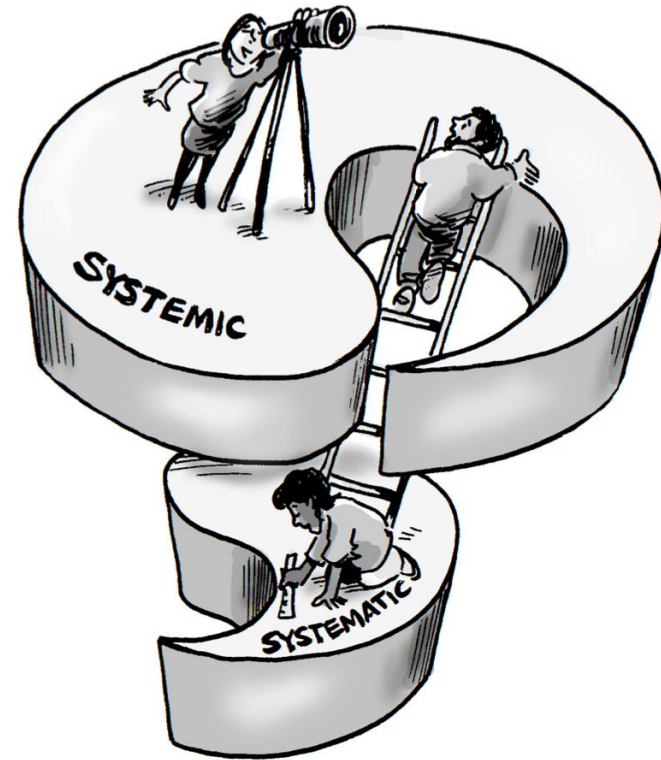
Mike Jones, SLU Centre for Biological Diversity, Department of
Urban and Rural Development

Biodiversity & Systems

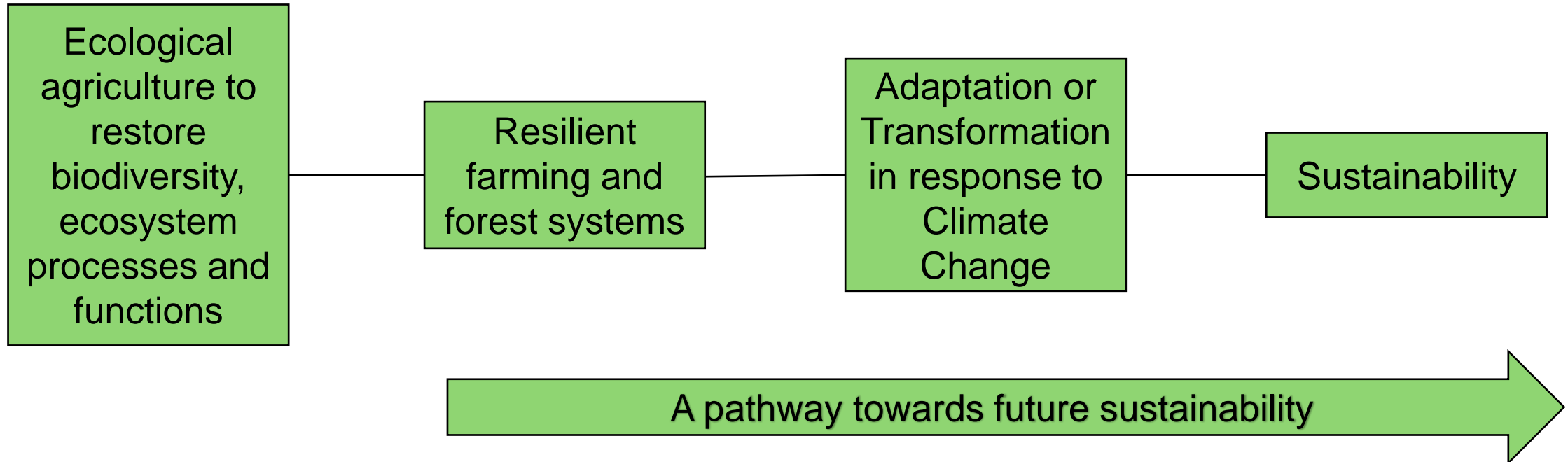


Biodiversity Requires Requires Reductionist & Holistic Thinking

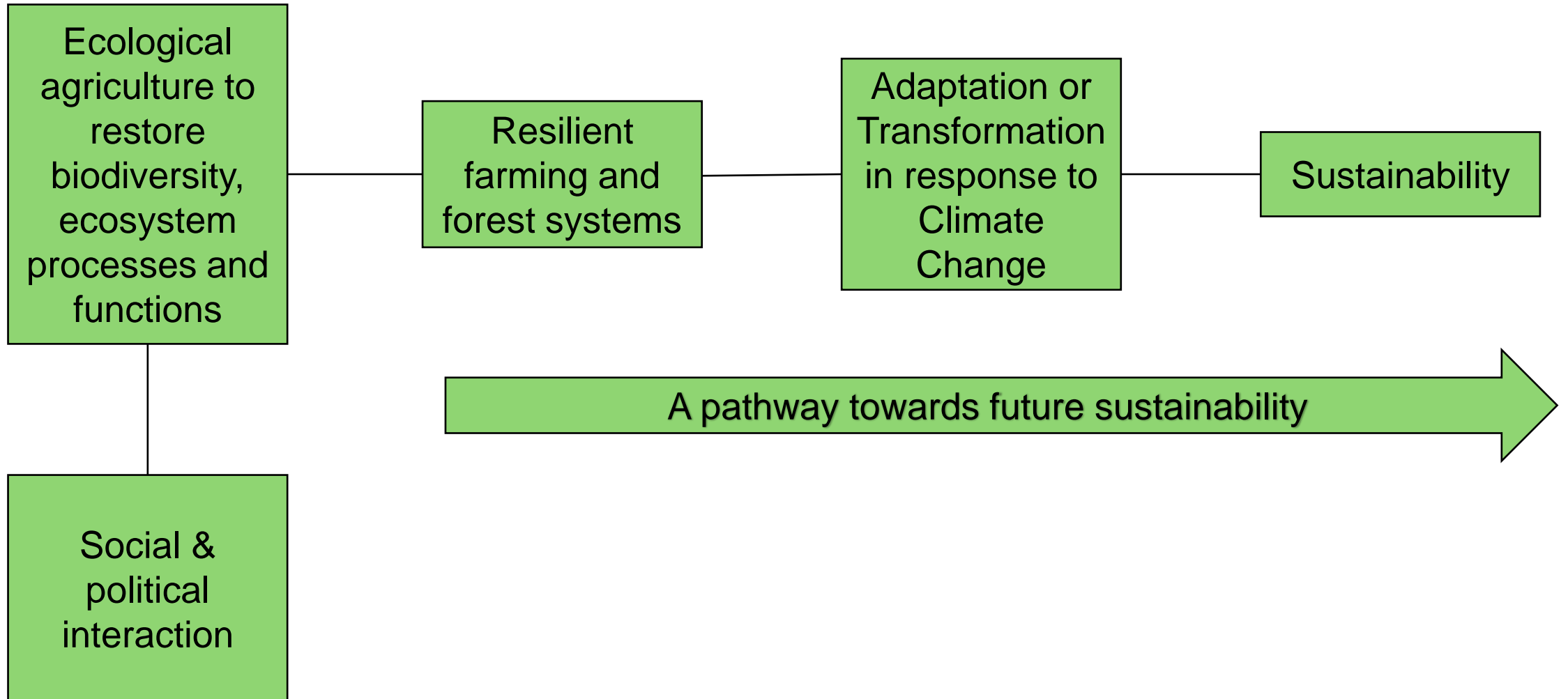
- Systemic and systematic approaches are different and complimentary ways of learning about systems:
- Reductionist analysis focuses on the parts of a system
- Holistic synthesis focuses on the interactions between the parts of the system



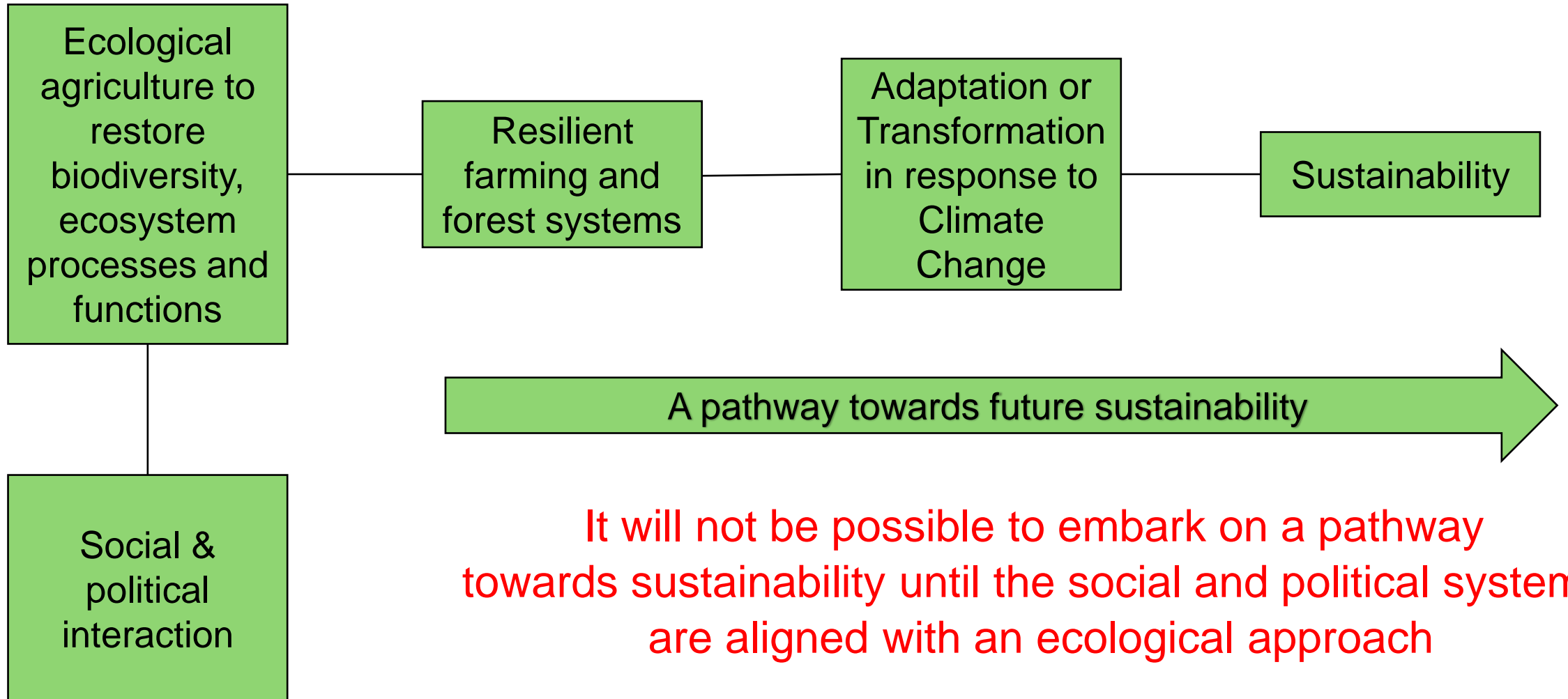
Biodiversity & Resilience to Climate Change



Biodiversity & Resilience to Climate Change



Biodiversity & Resilience to Climate Change

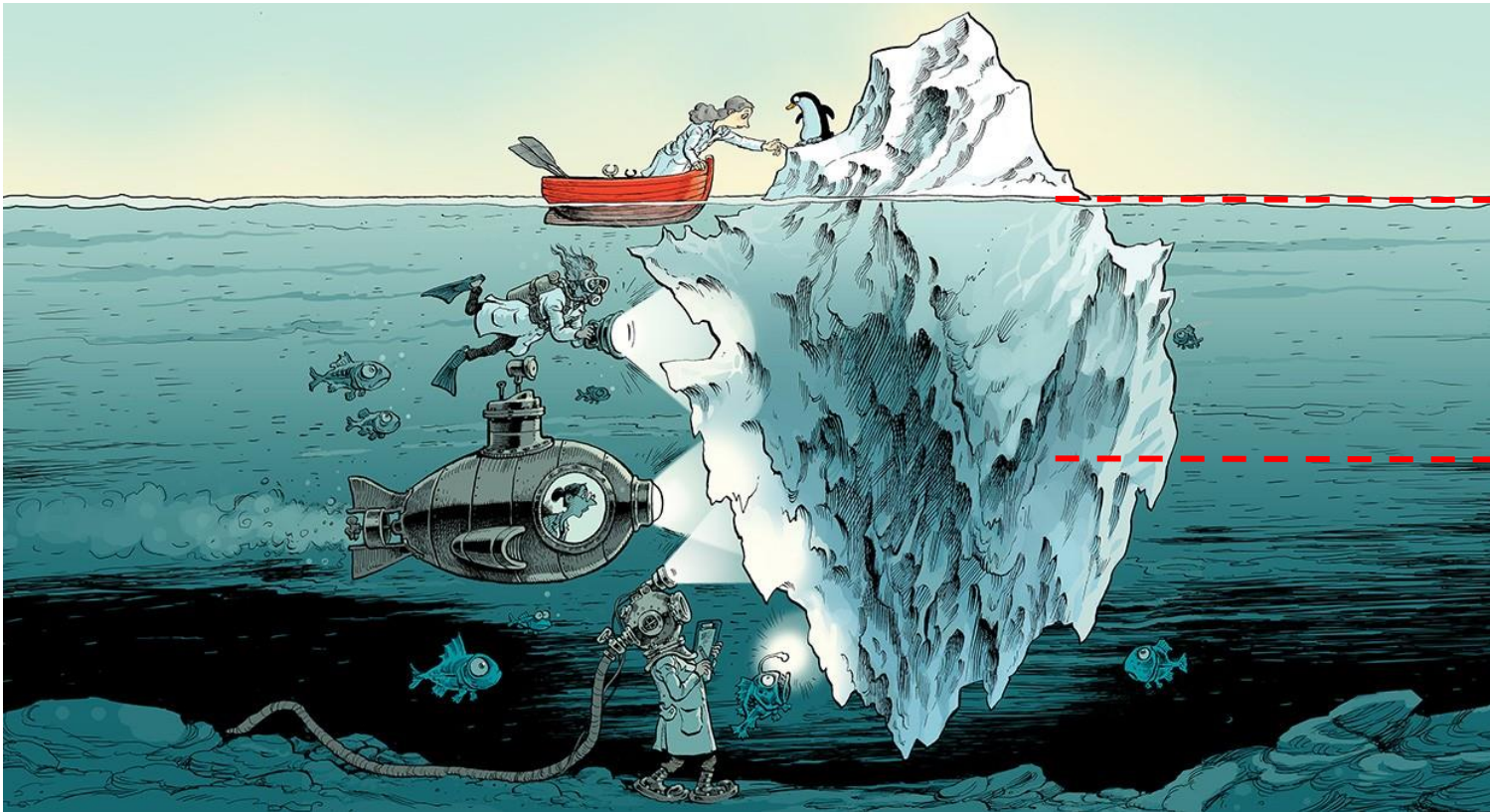


Biodiversity and Biofuel

- Crop and forest residue represent a potential carbon sink that provides energy for soil microorganisms and material for maintaining soil structure, i.e., a healthy soil ecosystem.
- Biofuel uses crops, crop residue and wood and forest residue as feedstock and material for the bioeconomy.
- This is a complicated and complex problem that cannot be solved with deterministic thinking alone.
- Do we know enough about the hard-to-negotiate trade-off between the use of these organic sources of energy and materials vs. their role in carbon sequestration and soil health?



Transformation for Biodiversity Conservation: a psychological, social and political process



Change Trends:

Biodiversity loss, Climate change,
Food insecurity, etc

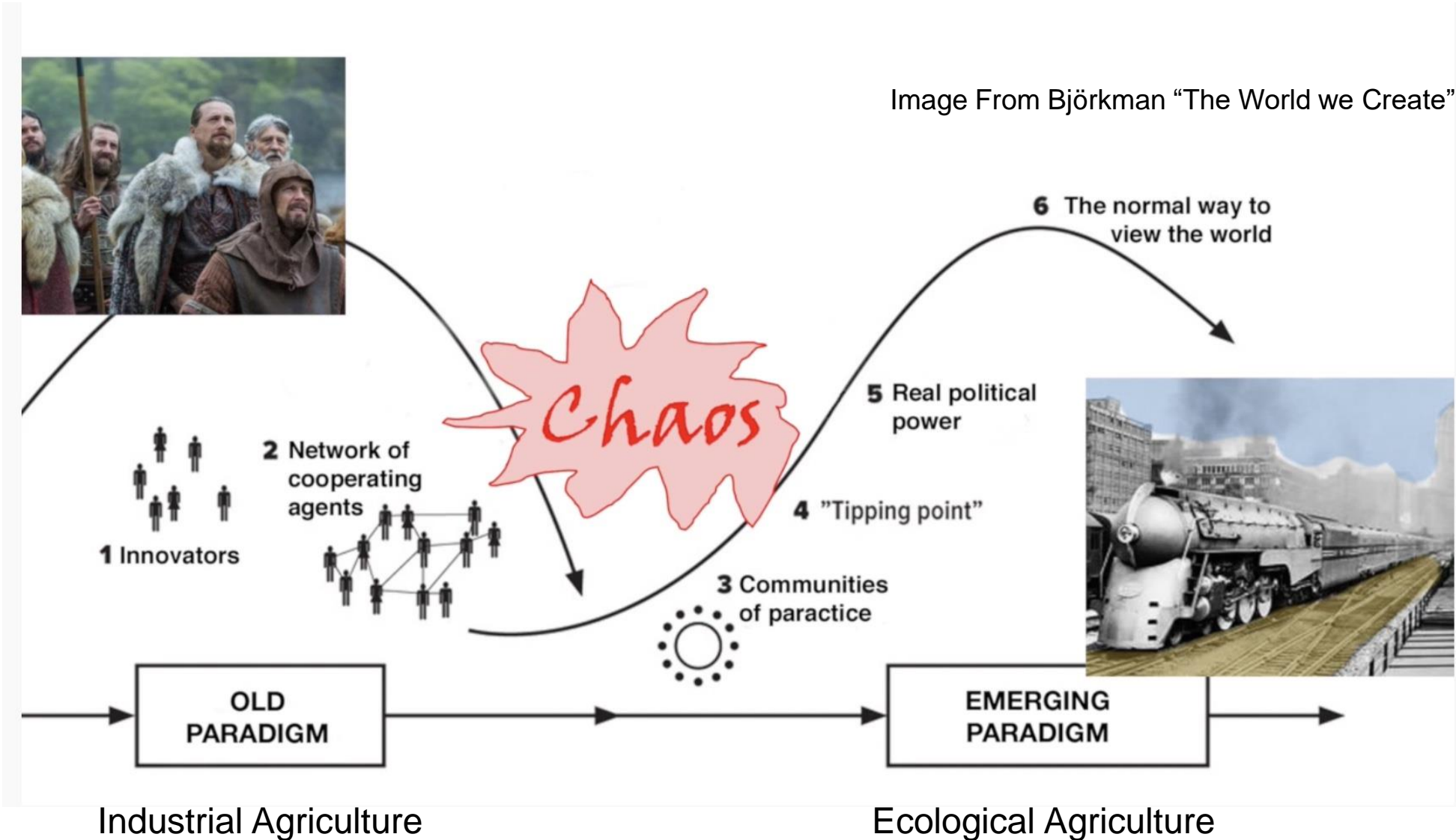
Change System Structure:

Goals, laws & policies
(e.g. GDP Growth & UNSDGs) a
social & political process

Change Mental Models:

Beliefs, values, ethics
(e.g. neoliberalism, reductionism,
anthropocentrism) a **psychological &
social process**

Transformation as Cultural Evolution



Capacity Development for Transformation

- Development of systems thinking skills for all students and for those faculty who engage in interdisciplinary and/or transdisciplinary research
- Development of interpersonal skills to negotiate trade-offs, lead visioning and biodiversity restoration interventions, such as the living laboratories approach to NBS
- Build collaborative relationships with universities that have strong departments of social and political sciences and psychology (unless your Life Sciences University has that capacity)



SCIENCE AND
EDUCATION **FOR**
SUSTAINABLE
LIFE