



Scenario praxis for systemic and adaptive governance: a critical review

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Experiences

- **Two rounds of scenario development in The Open University (UK) – 4000 FT and 7500 PT staff & 150 – 200k students;**
- **Exploratory use of scenarios in my own Department**
- **Participation in an evaluation study of OU's use of scenarios – Trudi Lang, Oxford**
- **Use of scenarios as part of Systemic Development Institute (SDI) suite of approaches**



Open University Futures – four scenarios

<p>Hand-Woven A highly competitive, local market where made-to-measure learning is available on your doorstep</p>	<p>Patchwork A fearful, diverse world of many separated and introverted cultures where education services are provided locally and only a rich elite is able to exercise choice</p>
<p>Mix and Match A global higher education market exists in which 'pick 'n' mix' DIY learning is the norm.</p>	<p>Off the Peg Familiar responses fail to resolve global problems: global educational alliances offer new solutions</p>



Open University Futures – internal evaluation

- **the OU is more alert to change and somewhat more willing to change than before the scenario process**
- **the scenarios and activities around the scenarios have raised consciousness in OU community**
- **embedded and unconscious assumptions are beginning to shift and, though we are not yet a learning institution, we are now a much more self-aware one.**
- **but there is a long way to go - our horizons are still too narrow.**



Open University Futures – internal evaluation recommended

- **that the University should continue to use scenarios to stimulate, challenge and stretch thinking and to inform strategic planning**
- **that a new generation of scenarios should be created during 2005 for use at the institutional level**
- **that a ‘lighter’ process of scenario building should be developed for use at unit and project level**



Key concern which motivated our work

- **we seek to explore whether scenario praxis has potential to contribute to more effective governance of situations framed as coupled social-ecological systems?**
- **we understand this as a key question to pursue in a climate change world and as central to climate change adaptation**

EARTH



- GOT A
PIECE WITH
'HUMANS'
ON IT?

... NOT
NECESSARILY...

Ison, R.L. (2010) Systems practice. How to act in a climate-change world. London: Springer.



Some conceptual and theoretical background

- **praxis** - practice which is theory informed;
- **purposeful action** – action that consciously pursues an articulated purpose
- **heuristic** – a model or tool designed to guide thinking
- **reflexive practitioner** – capable of reflecting on reflection (double loop learning)
- **scenario-ing** - a verb, used deliberately to draw attention to scenario praxis
- **reification** – what happens when scenarios are made into things, or objects



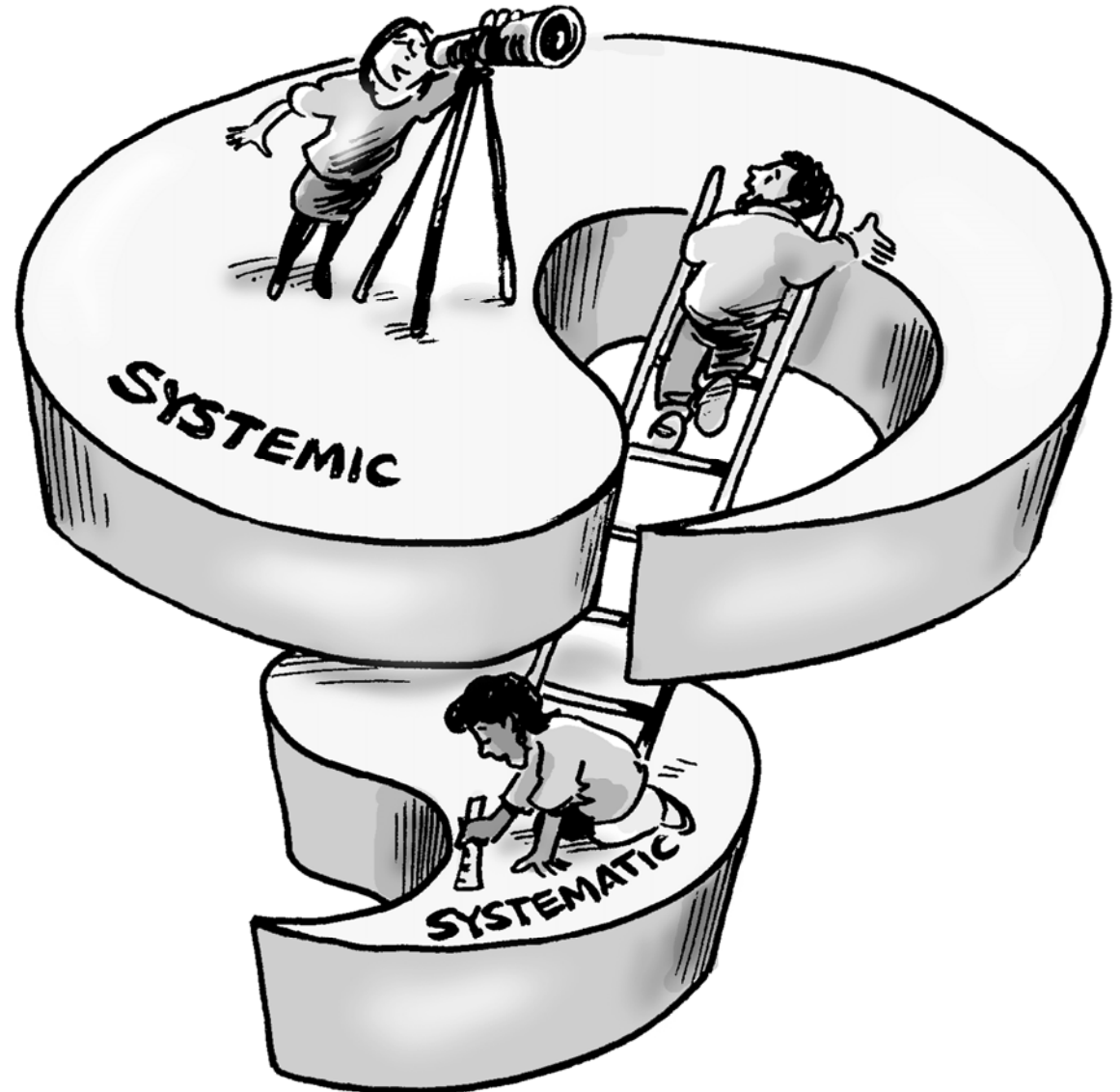
Governance – systemic and adaptive



- **Cybernetic i.e. responding to feedback**
 - *kybernetes* = helmswoman or steersman
- **charting a course (purpose)**
- **adaptive as in a co-evolutionary dynamic**
- **a particular form of performance for a climate-change world**



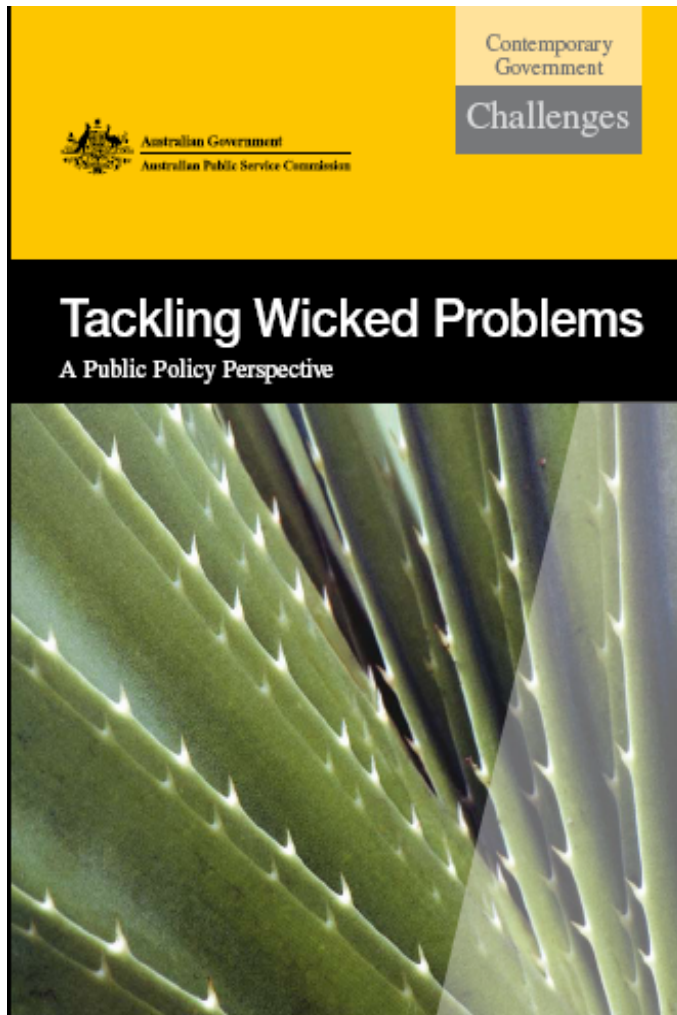
- The systemic, systematic duality





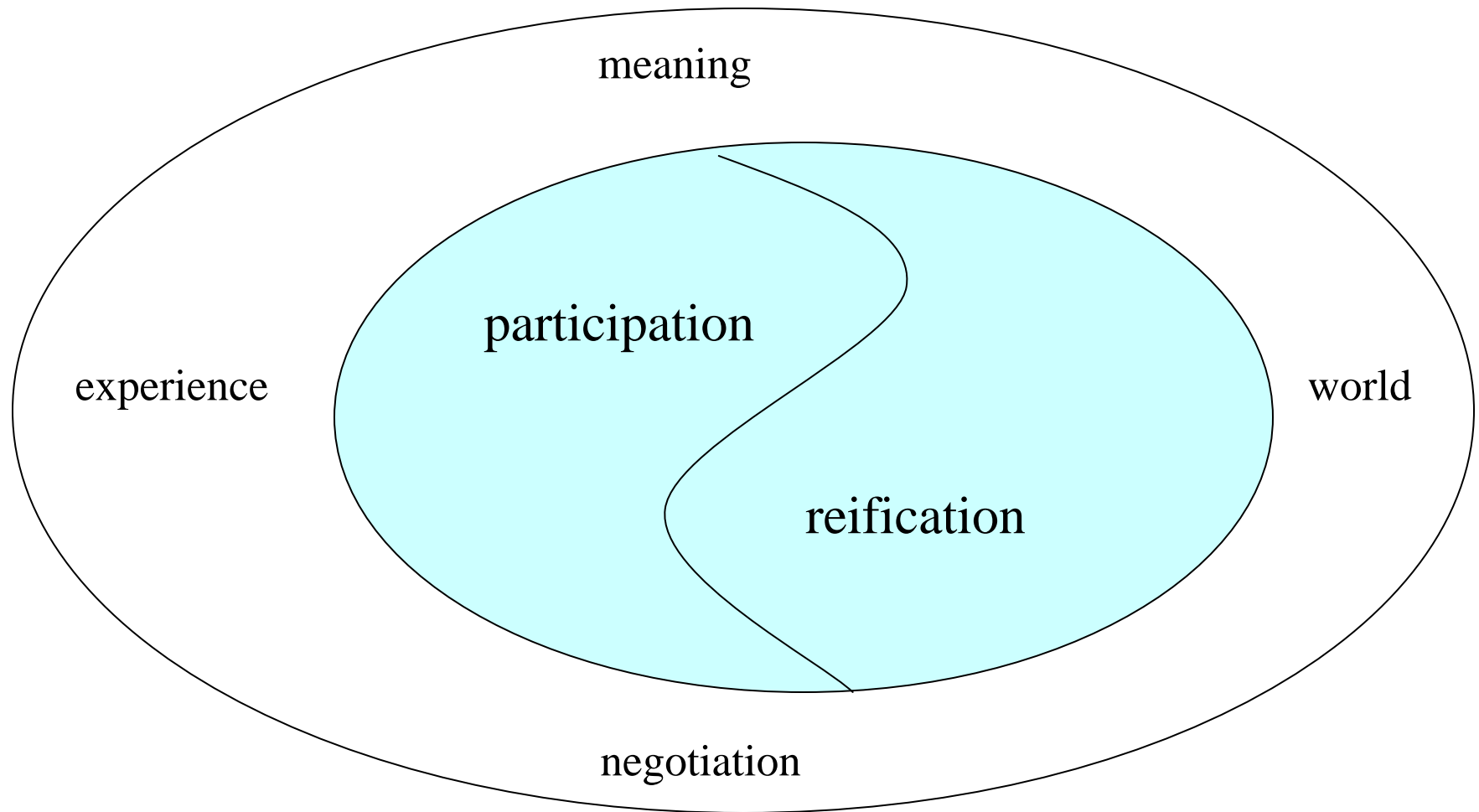
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The duality of participation and reification - Wenger 1998 p.63





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Go  Boldly.

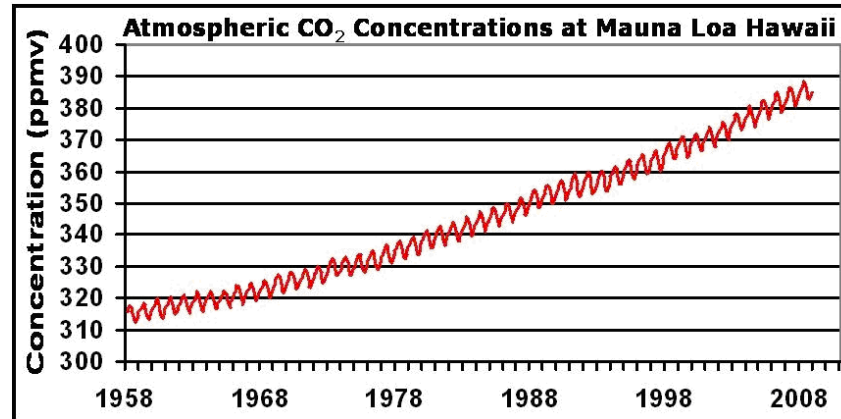
A coupled, co-evolutionary dynamic?



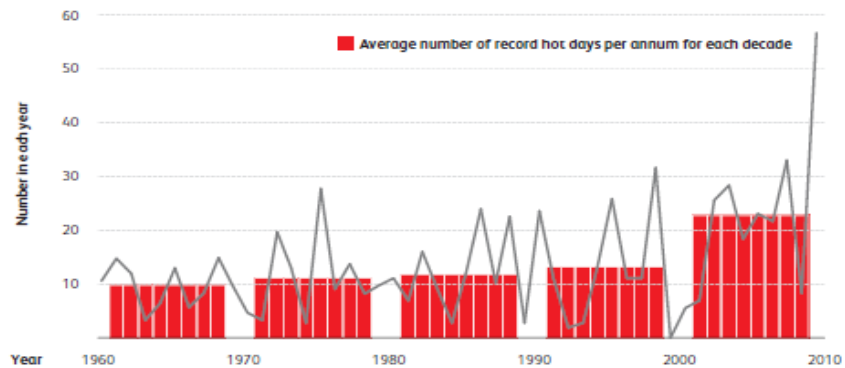
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Scientific findings are necessary but not sufficient



Number of record hot day maximums at Australian climate reference stations



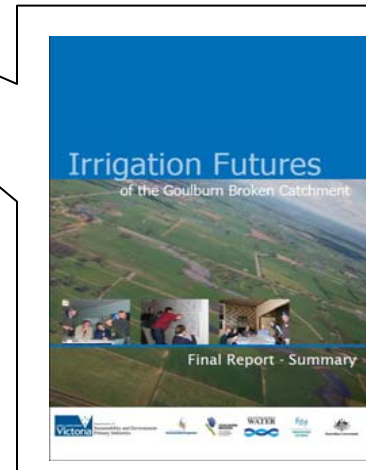
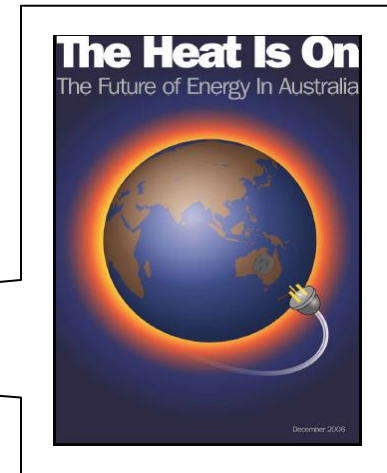
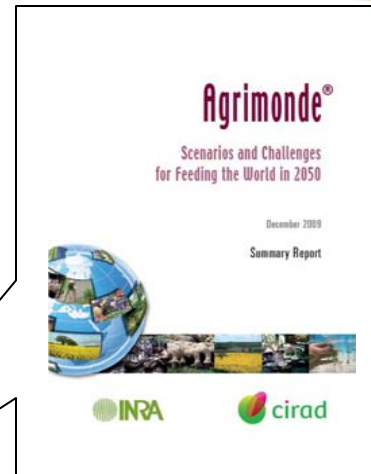
Is it possible to 'build' systemic and adaptive performances with scenario-ing?



Are 'we' are over-committed doing the wrong thing righter?



Our systemic inquiry





Questions to 'interrogate' case studies:

11 key praxis settings:

- 1) **Doing the work to reach agreement to use scenarios for some purpose?**
- 2) **Process design for using scenarios in a specific context?**
- 3) **Scenario building (who, when? Who learns? Who participates?);**
- 4) **Possible contributions to epistemic (and worldview) shifts of those who participate in scenario construction?**
- 5) **Reification of scenarios – how etc?**
- 6) **Using scenarios in communication with others?**



Questions to 'interrogate' case studies:

11 key praxis settings:

- 7) Using scenarios as mediating technical objects (actor network theory)?
- 8) Managing the participation/reification duality of scenario praxis?
- 9) Scenario praxis as a means to mediate a strategic conversation?
- 10) Appreciating institutional constraints and possibilities to the on-going conservation of point 8?
- 11) Scenario praxis as a form of systems praxis contributing to social learning?

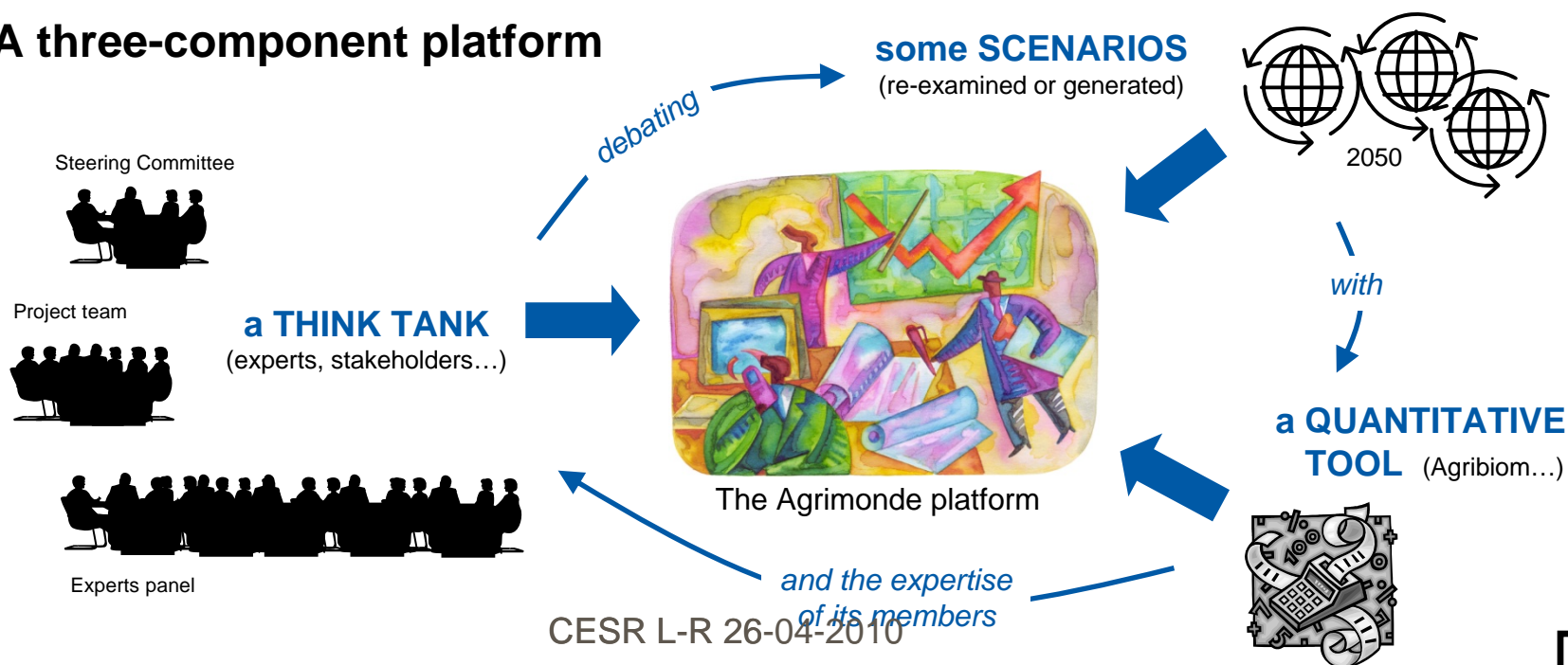
The foresight exercise Agrimonde (introduction)

- **A joint INRA-CIRAD project** (2006-2008 = 1st phase)
 - French National Institute for Agricultural Research (www.inra.fr)
 - French Agricultural Research Centre for International Development (www.cirad.fr)→ under their common group **IFRAI** (French Initiative for International Agricultural Research)

Objectives

- (1) to explore possible futures of food and farming systems up to 2050
- (2) to design and debate orientations and strategies for INRA - CIRAD research agendas
- (3) to contribute to international debates on food, agriculture and the environment

A three-component platform





CONSTITUENTS OF WELL-BEING

Security

- PERSONAL SAFETY
- SECURE RESOURCE ACCESS
- SECURITY FROM DISASTERS

Basic material for good life

- ADEQUATE LIVELIHOODS
- SUFFICIENT NUTRITIOUS FOOD
- SHELTER
- ACCESS TO GOODS

Health

- STRENGTH
- FEELING WELL
- ACCESS TO CLEAN AIR AND WATER

Good social relations

- SOCIAL COHESION
- MUTUAL RESPECT
- ABILITY TO HELP OTHERS

Freedom of choice and action

OPPORTUNITY TO BE ABLE TO ACHIEVE WHAT AN INDIVIDUAL VALUES DOING AND BEING

Source: Millennium Ecosystem Assessment

ARROW'S COLOR

Potential for mediation by socioeconomic factors

Low

Medium

High

ARROW'S WIDTH

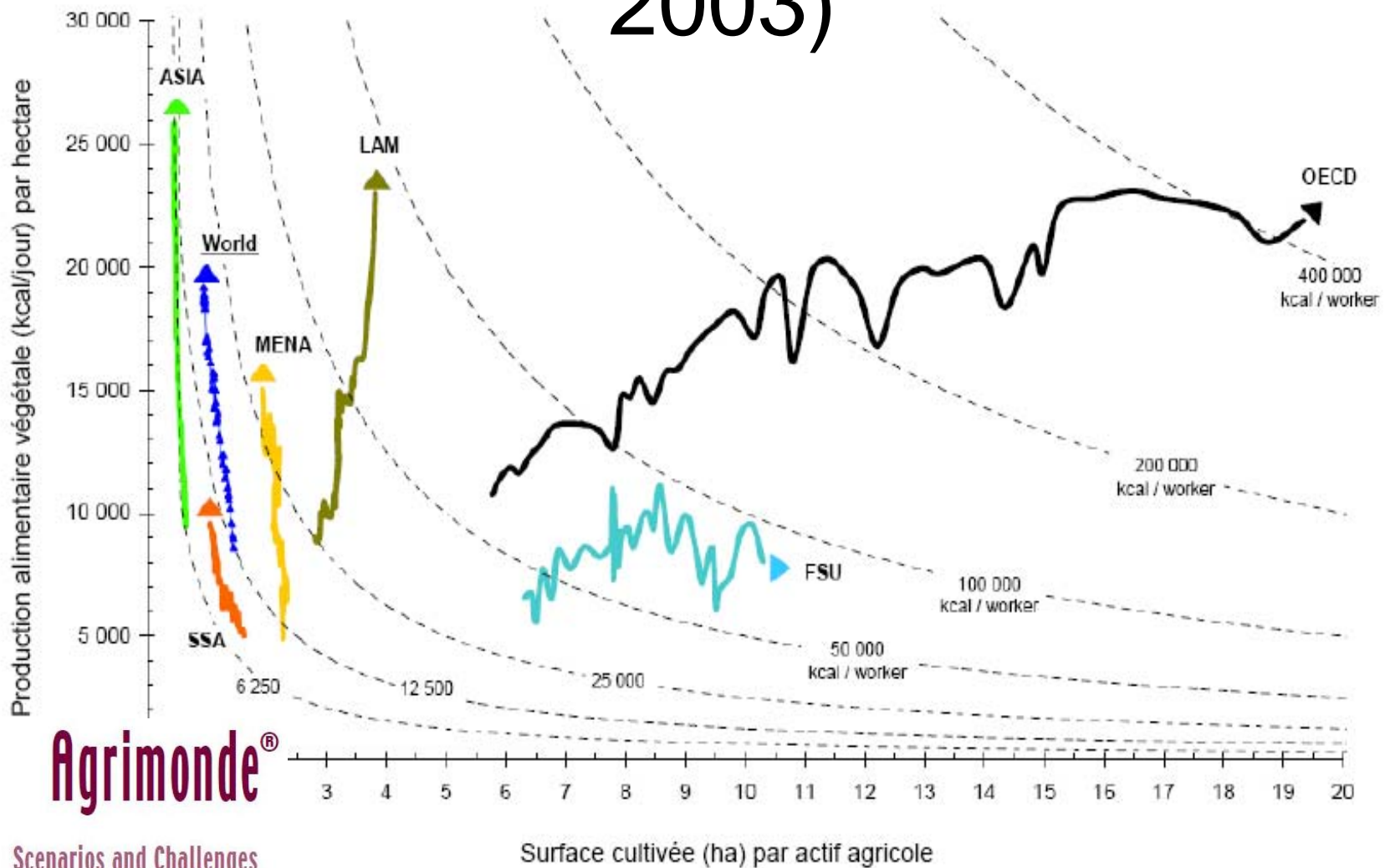
Intensity of linkages between ecosystem services and human well-being

Weak

Medium

Strong

Crop yields (kcal/d/ha) / Labor productivity (ha/worker) (1961 – 2003)







Agrimonde®

Scenarios and Challenges
for Feeding the World in 2050

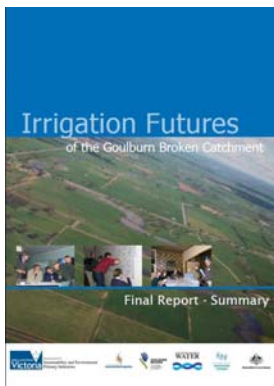
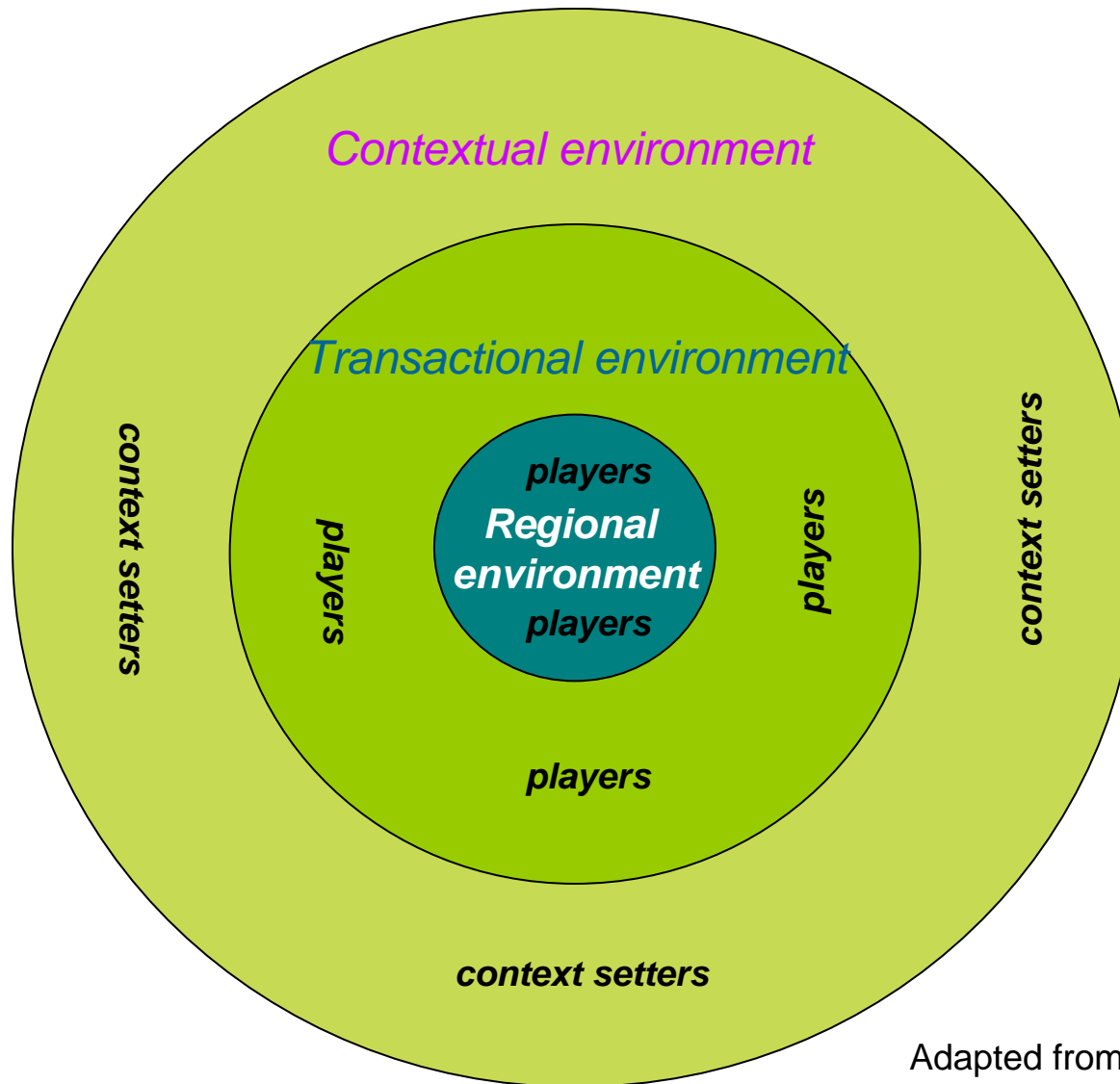
Dorin and Hubert 2010

	Power to the People	Centralised Failure	Technology to the Rescue
 Climate Change	Global management regime, effective	Global management regime, ineffective	Global management regime, effective
 Geopolitical Stability	Stable	Stable	Stable
 Sustainability	Improved sustainability	Sustainability declines	Improved sustainability
 Innovation	Significant technological innovations	Late introduction of technological innovation	Significant technological innovations

	The Day After Tomorrow	Atomic Odyssey	Cultural Revolution
 Climate Change	Global management regime	Global management regime, effective	Global management regime, effective
 Geopolitical Stability	Stable	Stable	Stable
 Sustainability	Improved sustainability	Improved sustainability	Improved sustainability
 Innovation	Moderate technological innovations	Significant technological innovations	Significant technological innovations

	Clean Green Down Under	Rough Ride	Blissful Indifference
 Climate Change	Global management regime, effective	Global management regime, ineffective	Global management regime, ineffective
 Geopolitical Stability	Stable	Instability	Stable
 Sustainability	Improved sustainability	Sustainability declines	Sustainability declines
 Innovation	Significant technological innovations	Few technological innovations	Few technological innovations

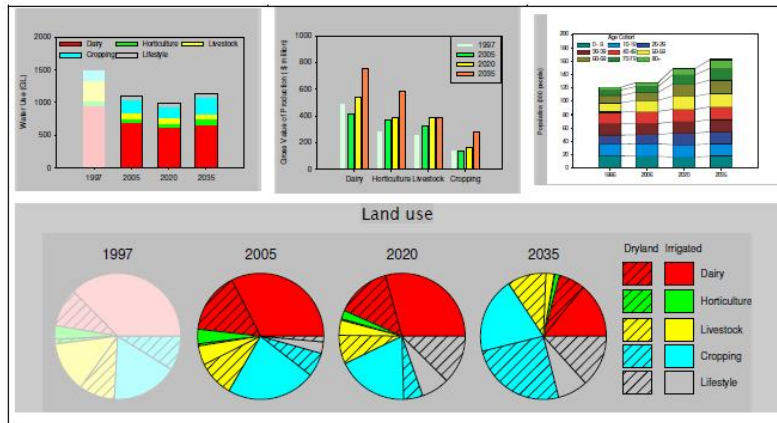
The region in its operating environment



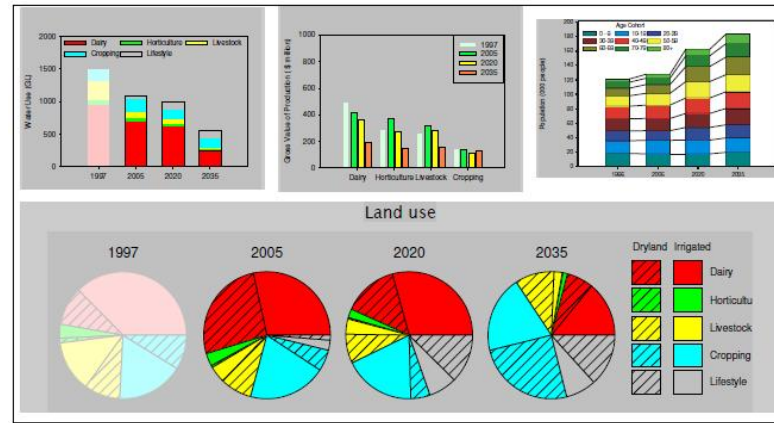
Adapted from van der Heijden
1996 cited in Wang et al 2007

GBIF scenarios of the future

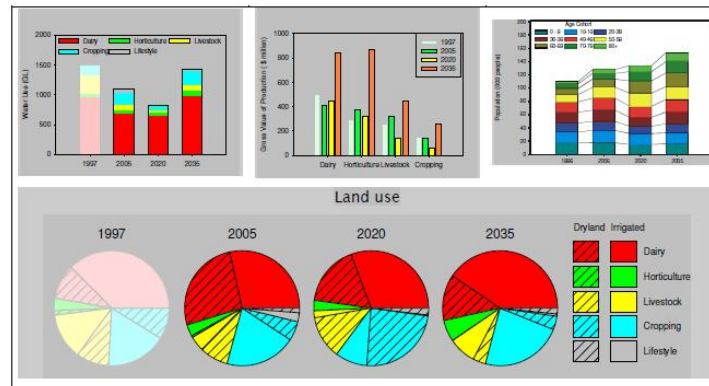
S1 Moving on



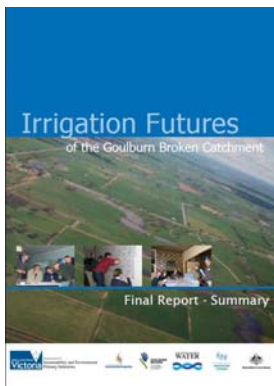
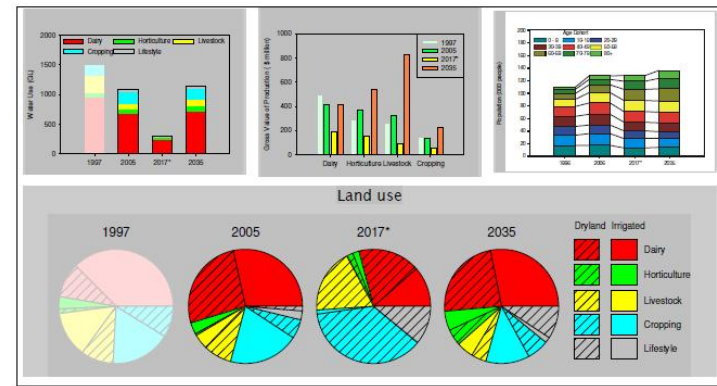
S2 New frontiers



S3 Pendulum

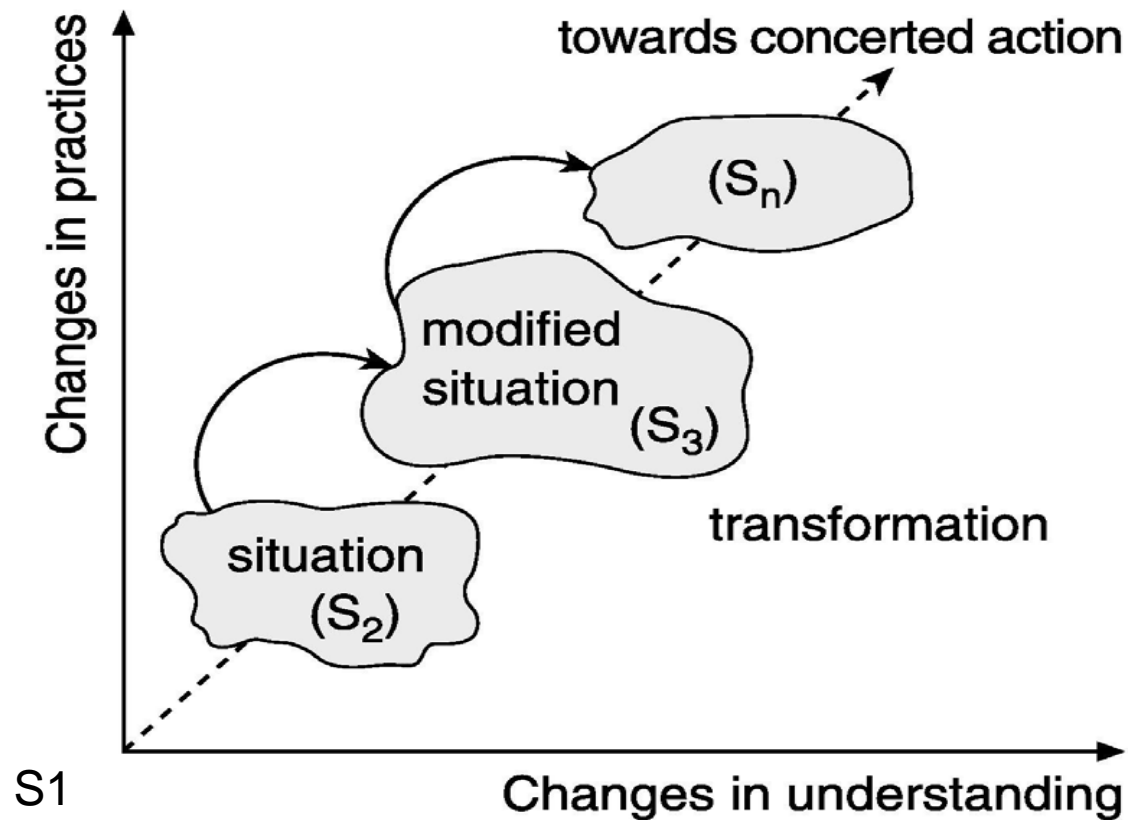


S4 Drying up



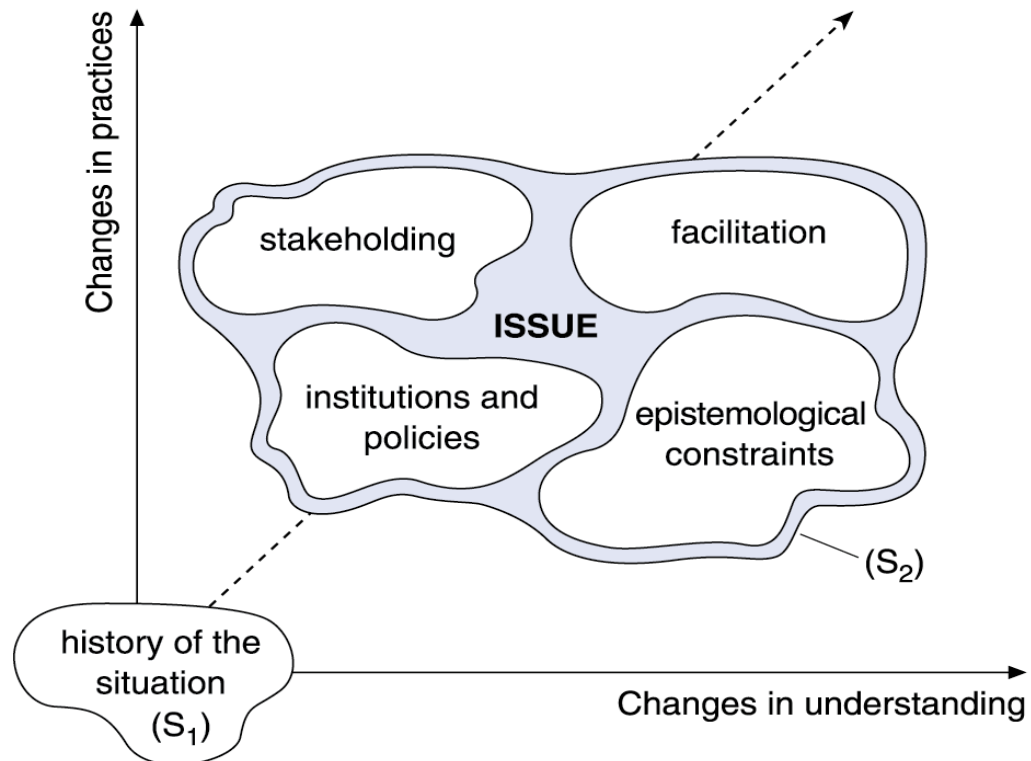


Social learning as transformation



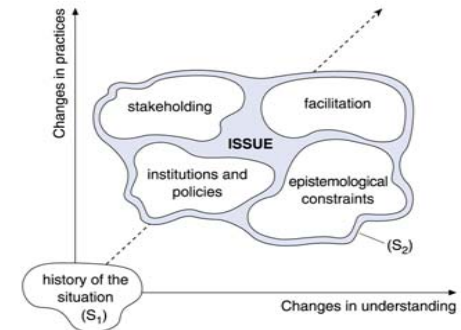


Five key variables which constrain or enhance transformation





Findings - examples

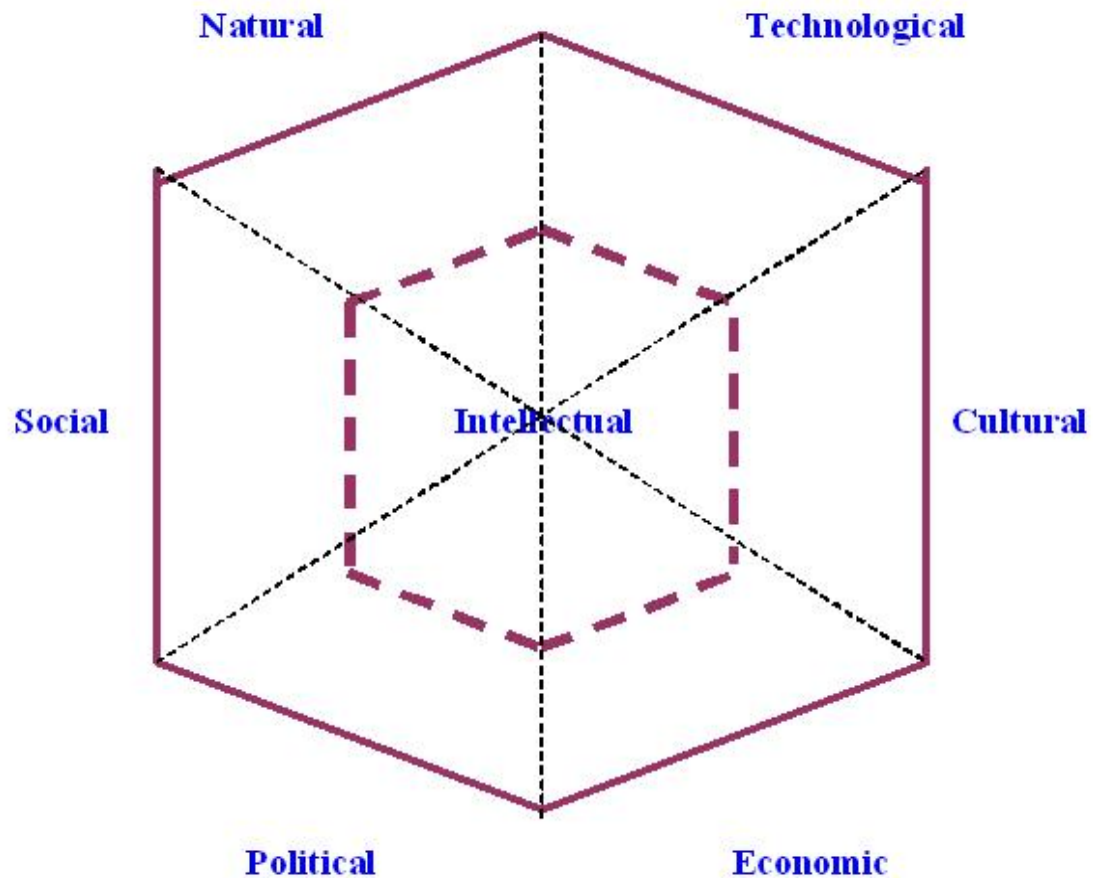


- **History** - no conscious exploration of framings held by actors and/or institutionalised in the MEA (Agrimonde) or technical assumptions (EFF);
- **Institutions** - no evidence of institutionalising outcomes
- **Stakeholding** – IF open to regional community, regional institutions such as CMA and GMW, Shires, but limited with state authorities, e.g., in planning
- **Facilitation** – an integrative platform created (Agrimonde); IF had highest degree of deliberation of key actors/ agents
- **Epistemological constraints** – anticipated in international policy circles (Agrimonde); irrigated agriculture vs other forms of regional development, ecological constraints and community development (IF)

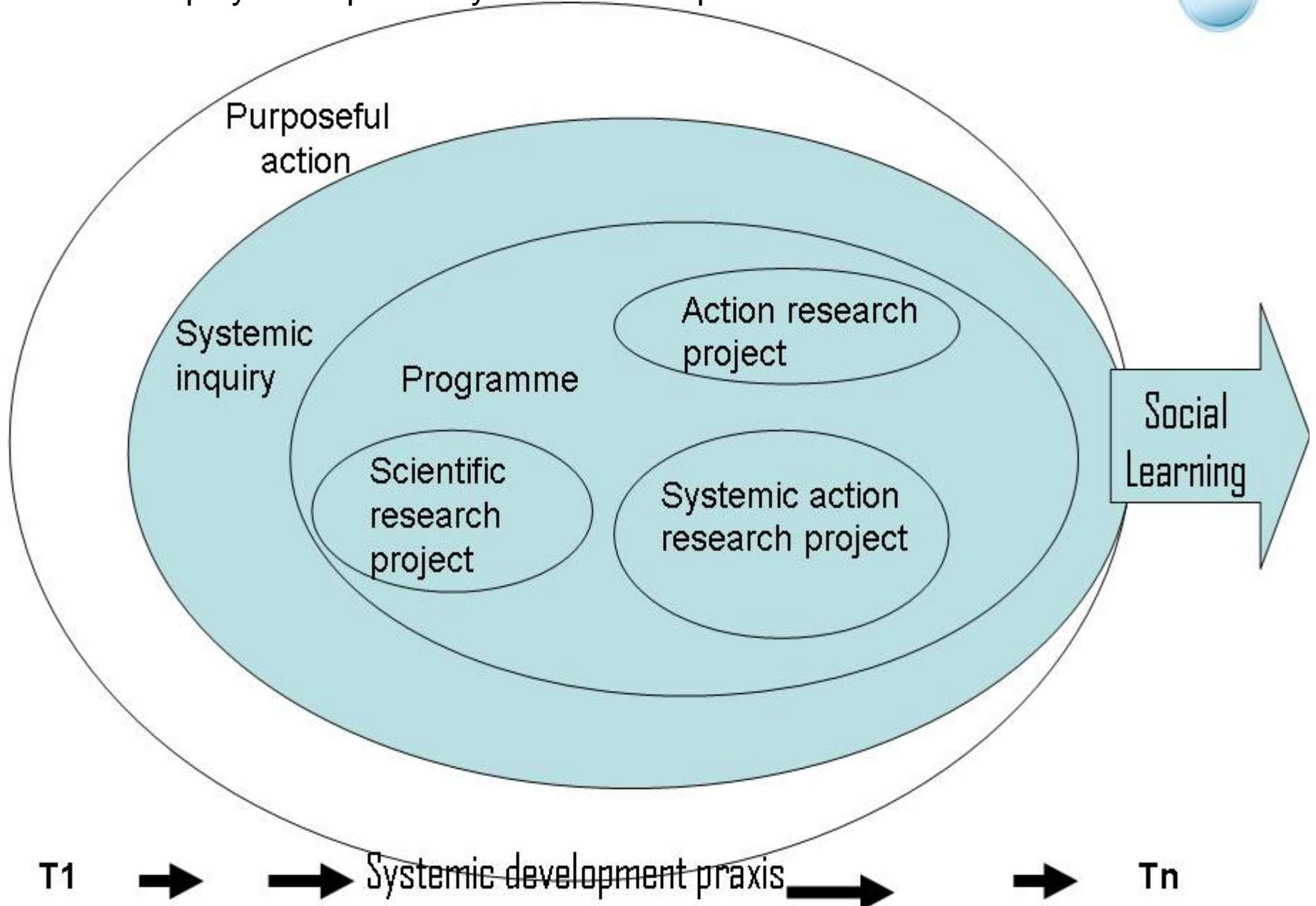


Scenario-ing- embedded in systemic development praxis

(I)NSPECT
hexagraph
for
exploring
situations in
relation to
different
historical
and current
dimensions



Scenario-ing becomes an approach built into systemic inquiry ... as part of systemic development





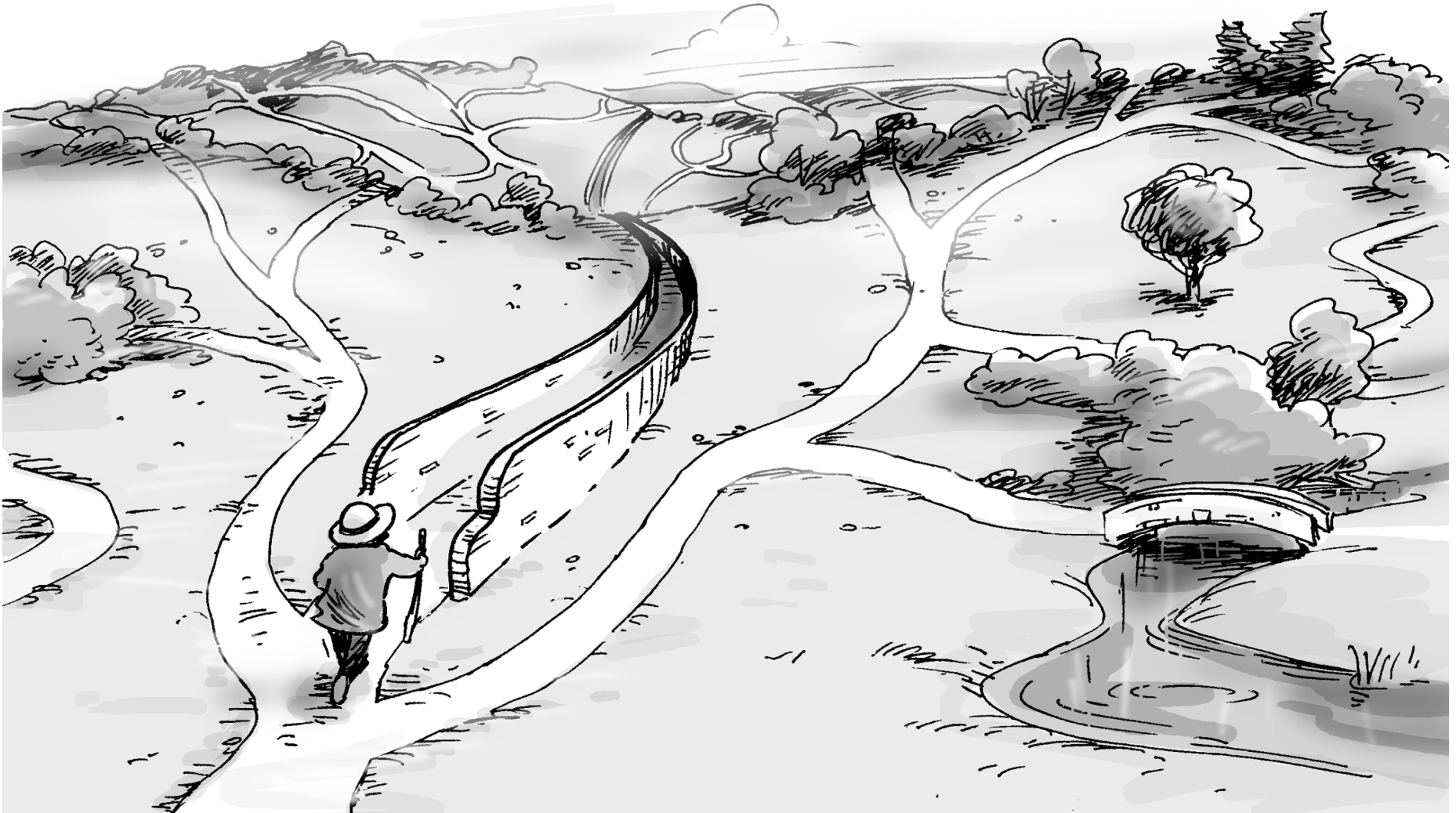
The critical challenges are, we suggest to:

- **recognise the historicity of scenario-ing as a form of praxis;**
- **appreciate different praxis lineages;**
- **conceptualise scenario-ing as a coupled practice-context system;**
- **understand scenario-ing as a particular manner of living in language;**
- **recognise that effectiveness of scenario-ing is likely to be highly sensitive to initial starting conditions;**
- **recognise that the true benefits do not come till the outcomes are institutionalised**

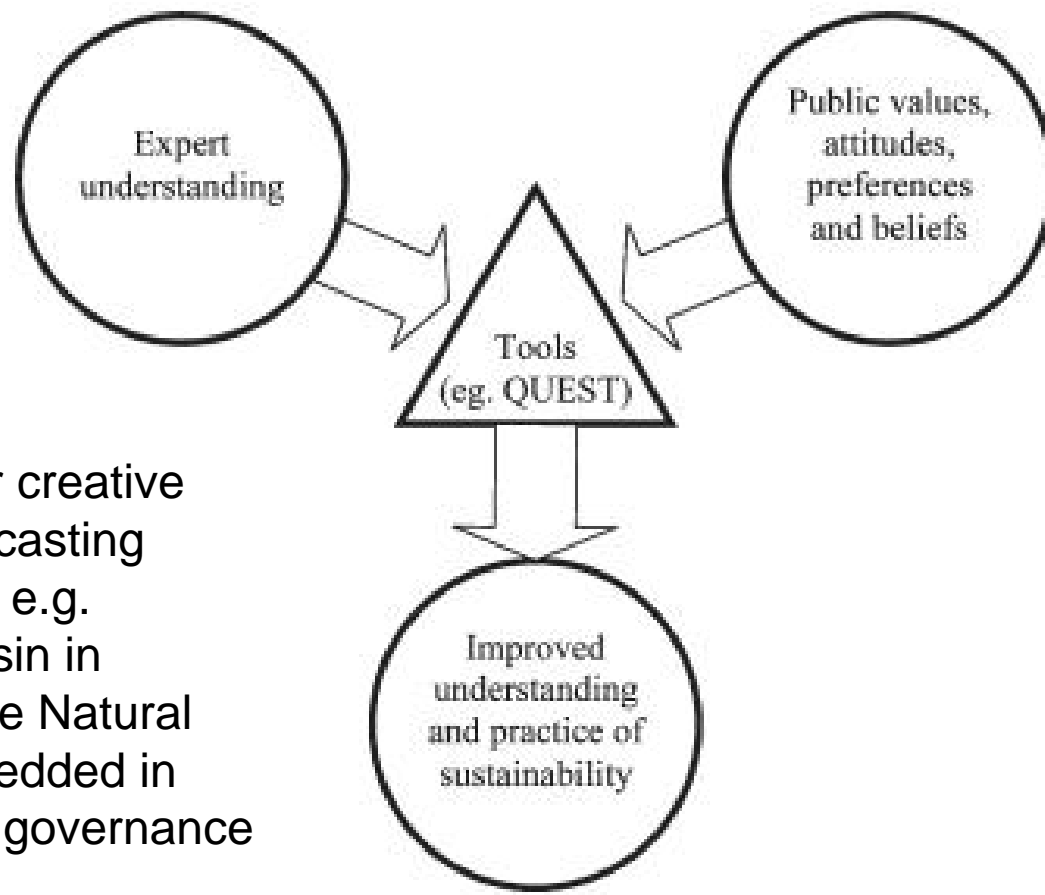


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Combining expert and lay knowledge in a new knowledge form – experiments in horizontal governance



Potential for creative use of backcasting approaches e.g. Georgia Basin in Canada; The Natural Step – embedded in appropriate governance regimes



Finding it challenging to create and sustain 'good performances' in relation to 'wicked policy issues'?

