

A resilience framework for 'land grabs' research

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Land grabs - definition

- * Large-scale “appropriation” of land that was previously in the hands of communities/smallholders *or* “reconfiguration” of land-use activities for:

Producing crops for energy and food security purposes (mainly for export)

Securing globally appreciated ecosystem services

- * Driven by private, non-profit and/or public investors
- * “Appropriation” rarely by force but facilitated by regulatory frameworks (Cotula et al. 2009)
- * “Reconfiguration” induced through financial and technical packages (Ariza-Montobbio et al. 2010)

Agrofuels & carbon grabs - the promoters

✿ Local development opportunities



‘Bioethanol production contributes to local economic growth and rent redistribution, thereby allowing local farmers to diversify their activities and increase their income. The world has enough arable land to support the sustainable production of bioethanol for many years to come’

ABENGOA BIOENERGY

The Global Ethanol Company

www.abengoabioenergy.com

Agrofuels & carbon grabs - the promoters

* Local development opportunities



‘The burning and clearing of tropical forests is a major – though often unrecognized – source of greenhouse gas emissions...It is now generally recognized that it will be impossible to achieve any of the needed targets for mitigating climate change without significantly curbing the clearing and burning of tropical forests... In addition, intact forests and other natural ecosystems also reduce the risk of catastrophic impacts like floods and droughts, ..., **and support the livelihoods of indigenous and local communities**’

Agrofuels & carbon grabs - the promoters

* **Security arguments**

Energy security at national scale - ‘Bioethanol is the only real alternative to reduce our dependency on fossil fuels. **Its use contributes to increase national autonomy and energy diversification levels, to reduce GHG emissions, and to guarantee fuel supply**’ (Abengoa Bioenergy)

Food security at national & local scales - ‘The principle causes of rising food prices are increasing fuel costs and increasing demand of a high growing middle class in Asia... **There is enough arable land for not compromising subsistence agriculture...** Second generation biofuels will slowly substitute those coming from cereals production’ (Abengoa Bioenergy)

Food security at local scale - ‘In addition, intact forests and other natural ecosystems also reduce the risk of catastrophic impacts like floods and droughts, **contribute to food and freshwater security for both rural and urban communities,**’ (Conservation International)

Agrofuels & carbon grabs - the critics

- * **Development opportunities may be context-specific, and unevenly realized** across actors. For example:

Dispossession & displacement of vulnerable groups (eg. unfavourable changes in land tenure and property relations)

Leads to 'winners and losers' (eg. resource intensive plantations vs. rainfed agriculture; forest conservation vs. slash&burn)

- * Food security may be challenged directly or indirectly

Constraining food supply at local and larger scales - prioritizing exports

Changing prices for food as a result of constrained land availability

- * An underlying justice concern: 'grabs **remove local control over NR** for the interest of national & global communities' (Safransky and Wolford, 2011)

The argument

- ✱ Realities and discursive perspectives on ‘land grabs’ lead to a set of central research questions. For example:
 1. How do ‘land grabs’ reconfigure livelihoods, as well as institutions at local scale and why?
 2. How do ‘land grabs’ shape and relate to economic & political systems & trends?
 3. How do the introduced NRM practices transform local ecosystems and why?
 4. How do ecological, social and political configurations enhance or reduce vulnerabilities of different actors, particularly at the local scale?

The argument continues...

- ✱ A resilience approach enables a nuanced understanding of these questions: from a 'land grab' focus to a systemic focus
- ✱ It helps to locate the 'socio-ecological system' in a historical perspective, and to analyze recurrent/novel transformations, thresholds and adaptive capacity:

What are the social factors that have allowed the land grab in the first place (insecure tenure, changing landscape values, changes in labour availability, recurrent corruption)?

Have ecological systems been subject to intensive cultivation or conservation in the past? Which factors are now different?

How have tenure regimes evolved over time and how reversible are current changes perceived?

Have there any perceived ecological & social *tipping points* been reached or are about to? (*radical shift in ecological or social conditions*)

Resilience ‘usefulness’

- * Resilience - no agreed definition... as for land grabs!

The ability of socio-ecological systems to absorb external change and still retain their essential states and the ability to adapt & change

The essential feature of a socio-ecological system is a multi-scale pattern (spatial&temporal) of resource use around which humans have organized themselves in a particular social structure (distribution of people, resource management, consumption patterns, norms&rules)

- * Resilience analysis aims to understand whether the system can be altered whilst continuing to deliver desired levels of ecosystem goods and services, or if it crosses critical thresholds that lead to *undesirable* configurations

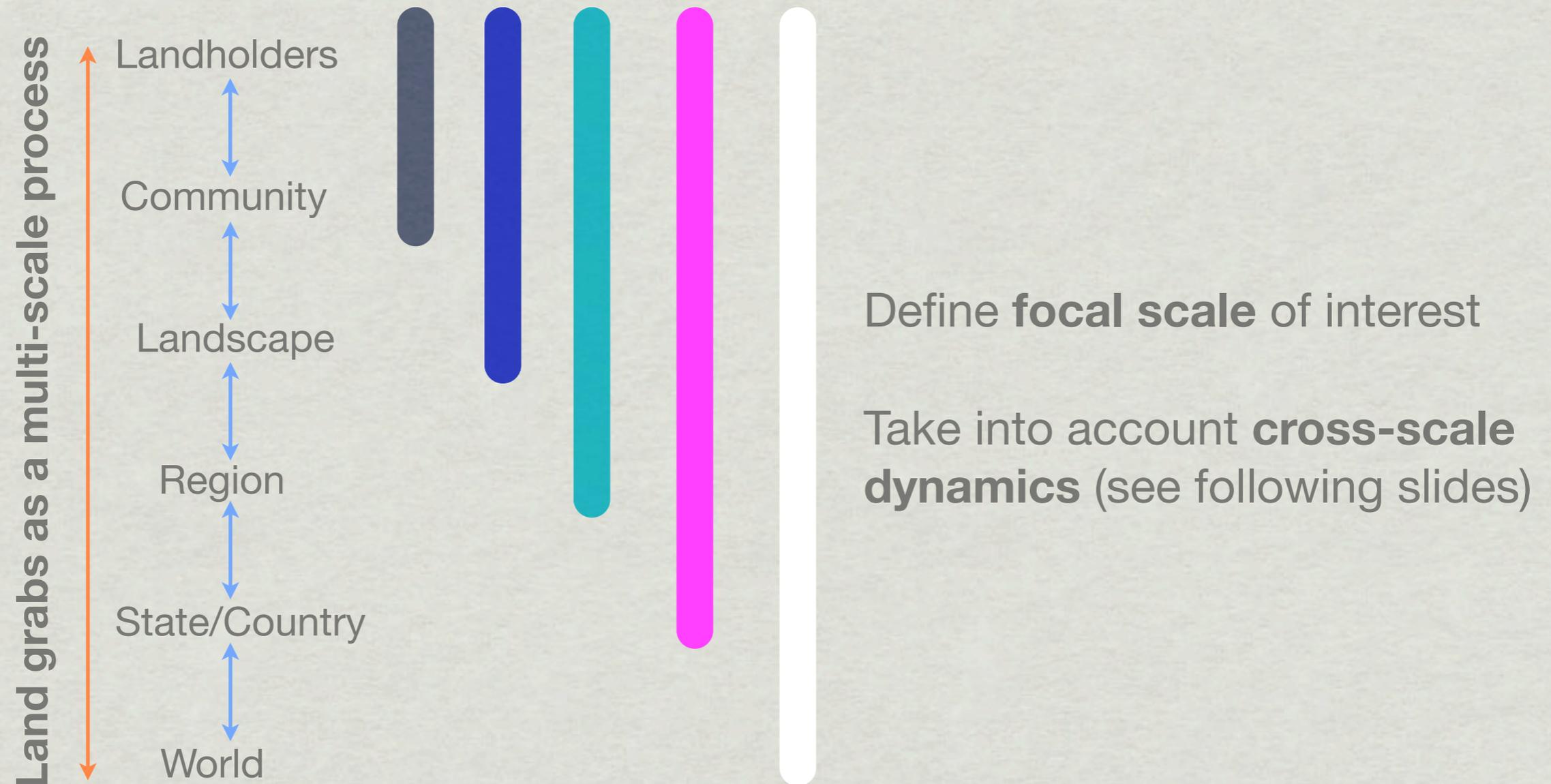
- * ‘Land grabs’ - hypothesized as a disturbance of the system - alter the performance of variables that constitute the socio-ecological system

Resilience framework for 'land grabs'

- * Resilience analysis is a multidisciplinary endeavor - brings together elements of ecological science, political ecology/economy, environmental history, anthropology
- * Draw on the Resilience Alliance (2007) **Workbook for Socio-Ecological Resilience Assessment**
- * Synthesized reference framework for 'land grabs' based on 3 procedural research steps, each accompanied by a set of questions and relevant concepts/methods
 1. **Framing & understanding the socio-ecological system** (4 slides)
 2. **Assessing resilience** (6 slides)
 3. **Managing for resilience** (deserves another presentation!)

1a. Resilience of what?

To identify the boundaries of the system, its essential social and ecological components, and the variables that determine the flows of goods and services that people care



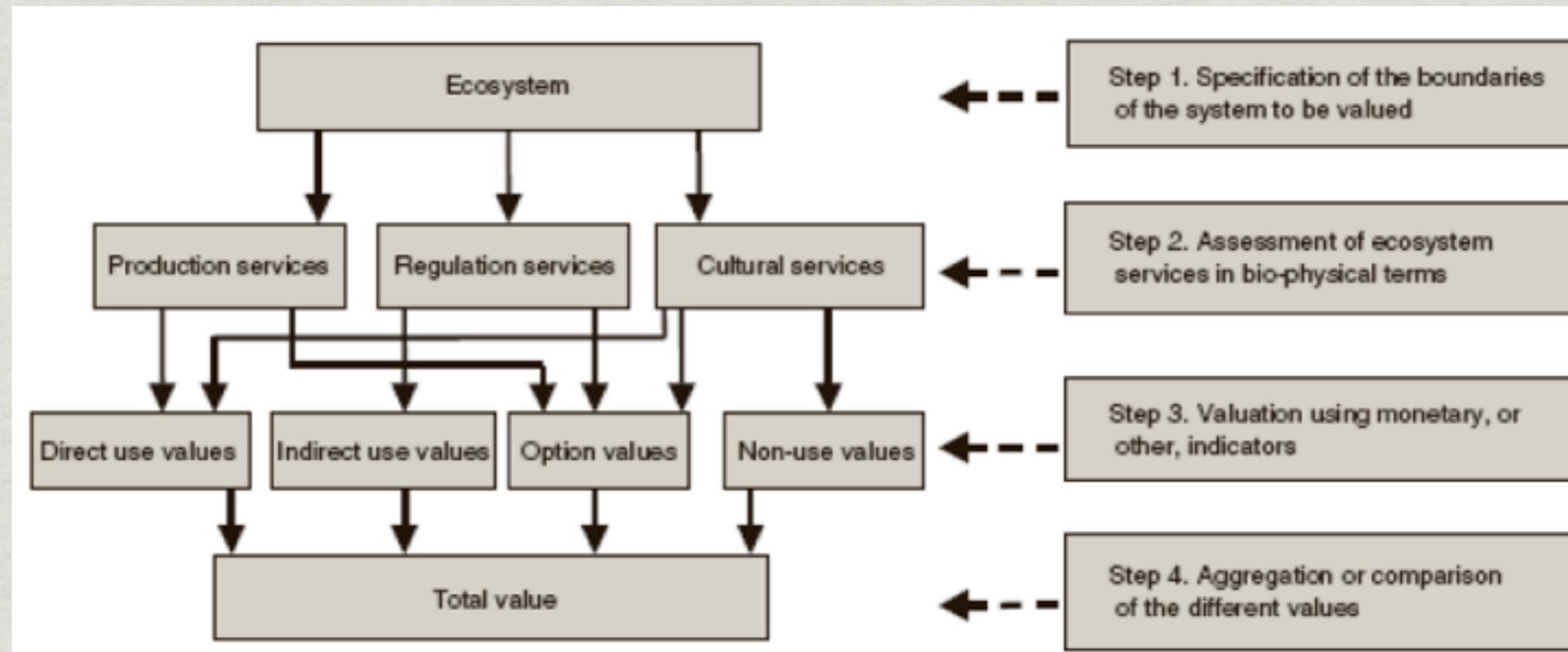
1a. Resilience of what (cont')?

- ✱ What are the variables defining the structure of the system?

Direct use ecosystem goods & services (eg cash crops)

Non-market ecosystem services (soil fertility, water filtration, carbon?)

Social context (migration, declining terms of trade)



- ✱ What conflicts, issues, and challenges do people face? And future generations?

1b. Resilience of whom?

- * What are the key actors that have a direct or indirect role in influencing the system at focal and larger scales?
- * How are property relations & bundles of rights at the focal scale?
- * Who can exercise authority to secure or impose particular interventions at the focal scale and larger scales?
- * How are cross-scale interactions between actors played out?

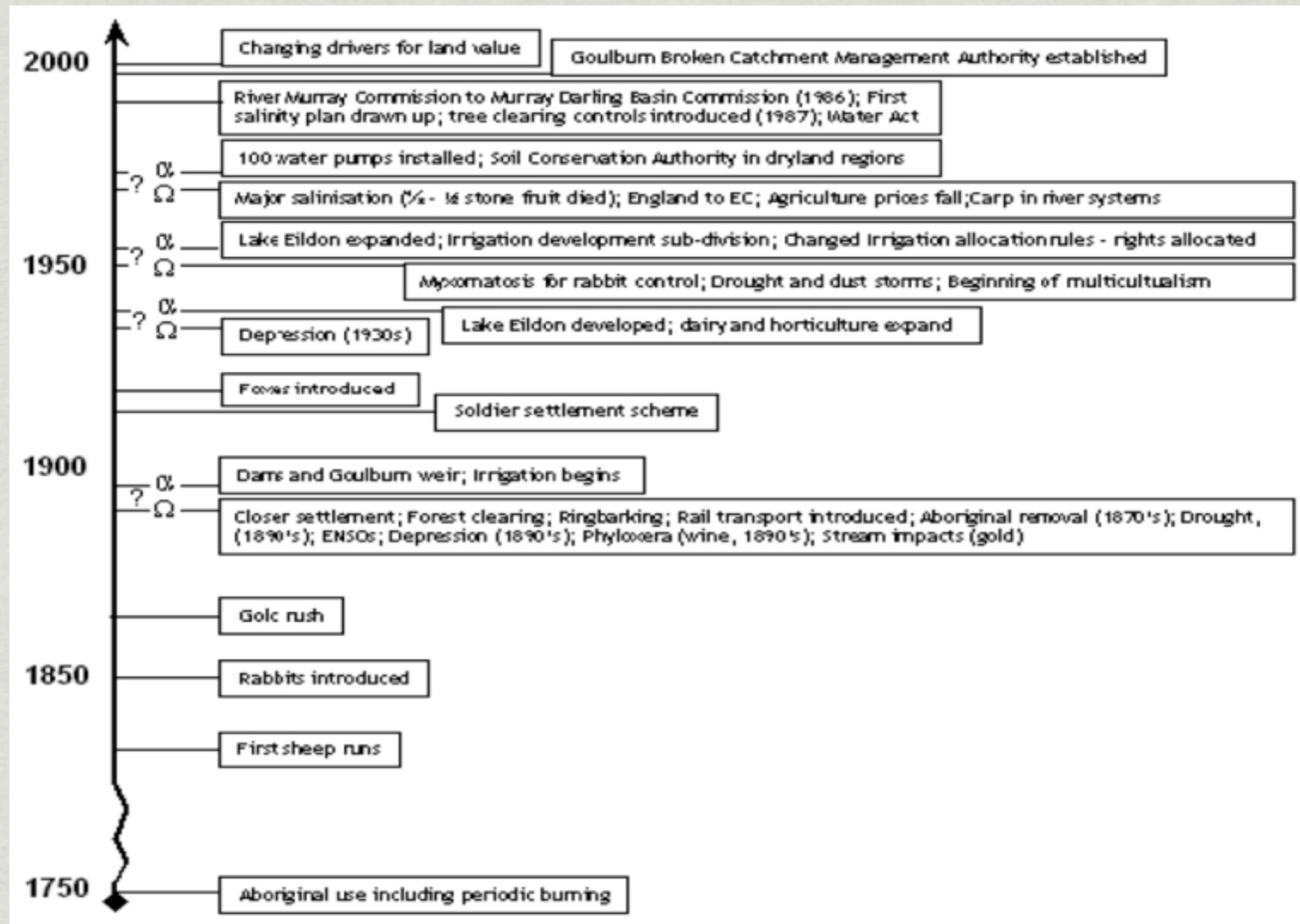
[Emphasis on governance, institutions, property, actors, networks]

1c. Resilience to what?

- * What are the present drivers and disturbances of the system (including land grabs)?
- * What are the trends in the major resources and resource users and how 'land grabs' are shaping those?
- * How are these trends related to the "relevant variables" of the system identified before?
- * How are disturbances related to events at lower/higher scales?
- * Were other major disturbances to the system in the past?

[Emphasis on livelihoods, ecological dynamics, historical profiles]

1c. Resilience to what?



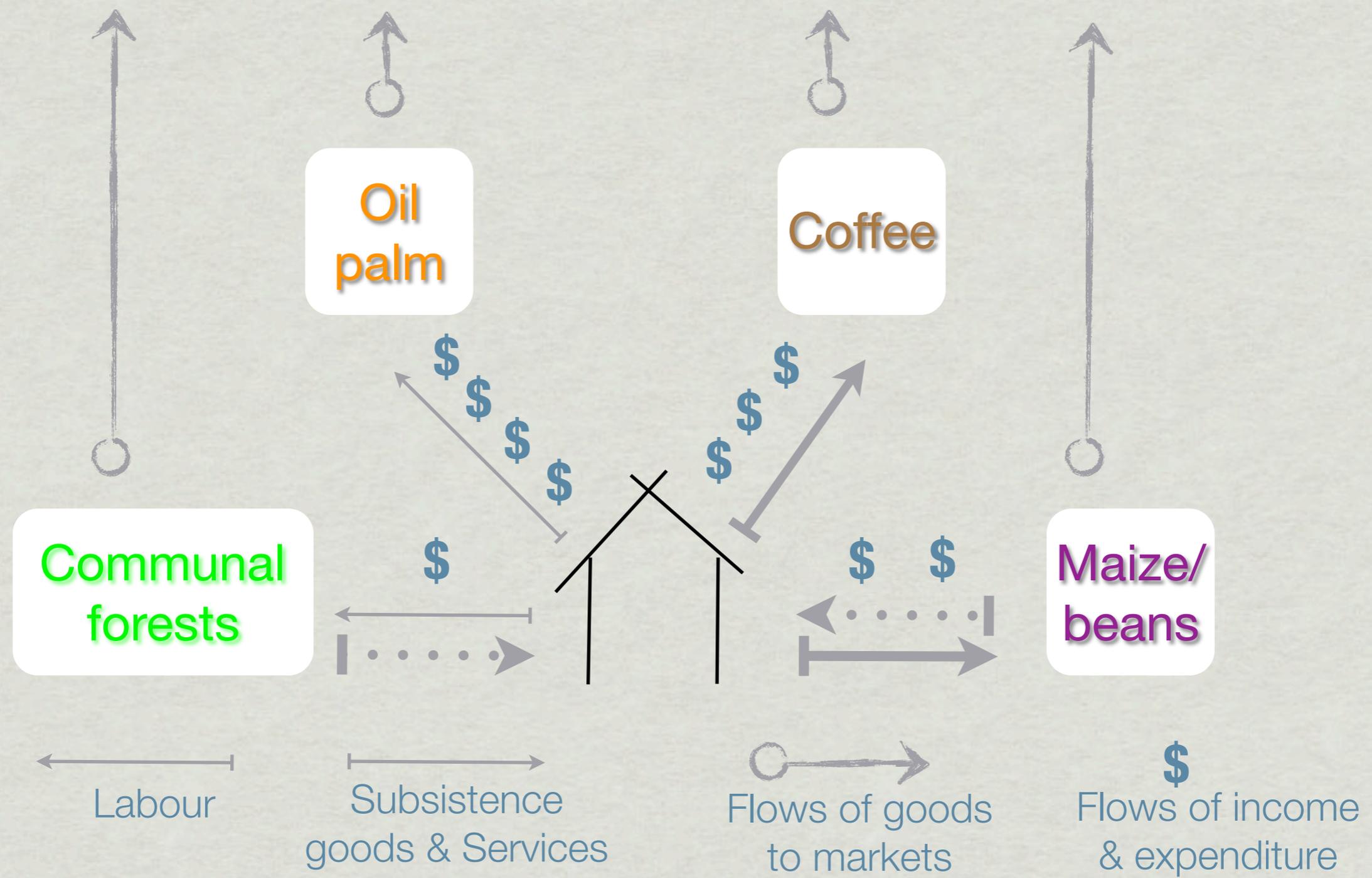
Historical profile of major events and developments in a UK catchment. The periods with "? , α or Ω " denote times of major events or crisis, followed by reorganization (Walker et al. 2002)

2a. Assessing resilience - states & pathways

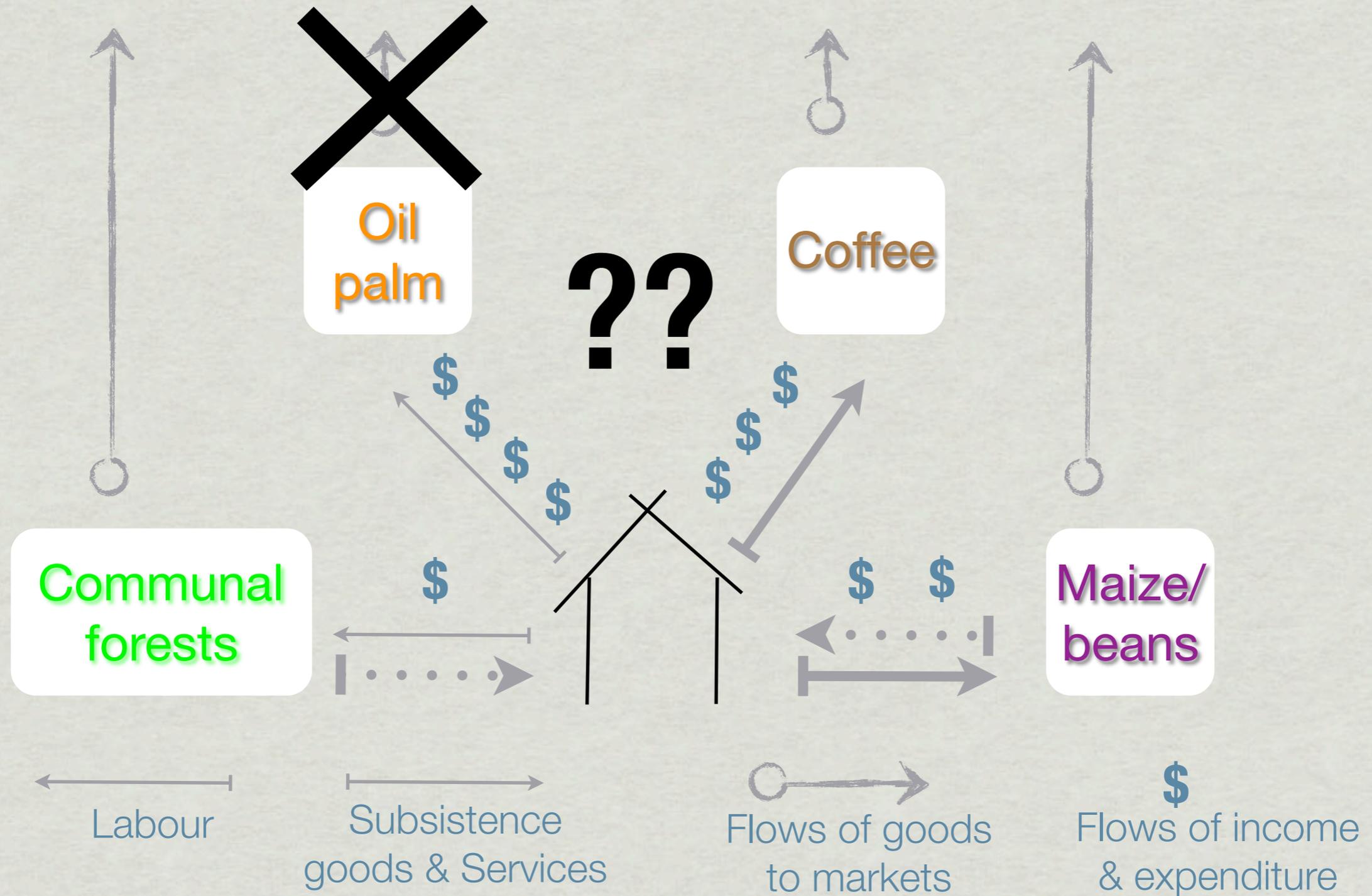
To develop multiple ways of portraying the system, each of which providing insights into how and why the system changes over time

- * Build on what we have learned before to describe the state of the system at a particular time, taking into account the controlling variables and the drivers/disturbances identified (using boxes and arrows?)
- * Identify and draw other possible “states” in which the system can be in at another point in time
- * Can we identify **future development pathways** of the socio-ecological system? -with and without ‘grabs’

2b. Assessing resilience - states & pathways



2b. Assessing resilience - states & pathways



2c. Assessing resilience - thresholds

- * Are there no-return points in the ecological or social systems that foreclose moving to other “states” or pathways?
- * What role do ‘grabs’ play in inducing/foreclosing transitions of the system towards a new (*undesirable*) “state”?

Does carbon enclosure of communal forests lead to relocation of grazing activities and therefore a reduction of biodiversity through reduced seeds dispersion?

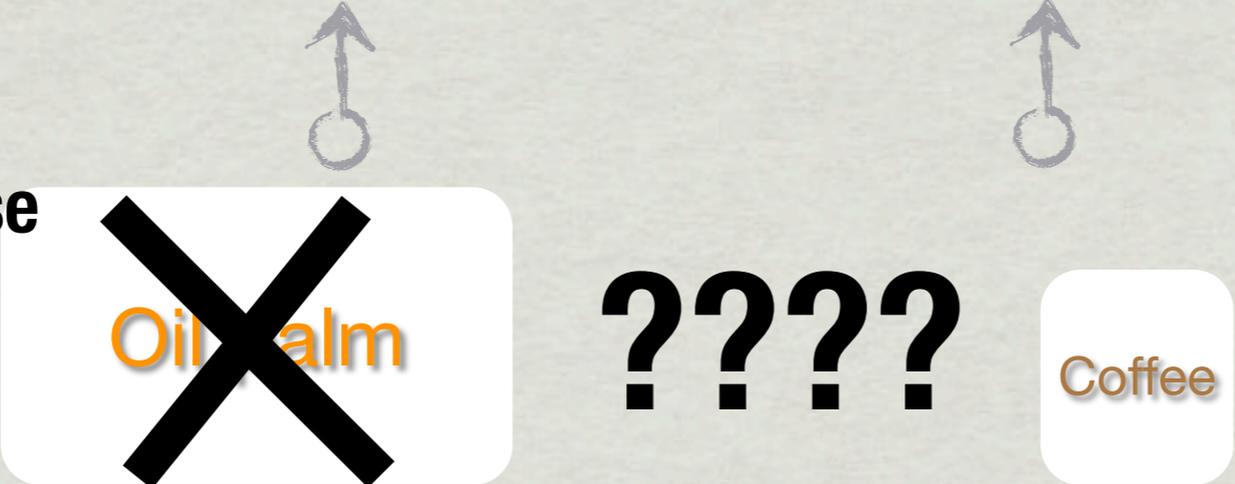
How may biodiversity loss in the commons affect livelihoods?

How are the new actor and socio-political configurations of ‘land grabs’ affecting people’s (and particularly the most vulnerable) ability to adapt to the new situation or even benefit from it?

How are ‘grabs’ public/private enforcement tactics or opposition movements contributing to reach or move away, respectively, of tipping points?

2b. Assessing resilience - states & pathways

**Markets collapse
(Higher scale)
Local revolt
(Bottom-up)**



Communal forests

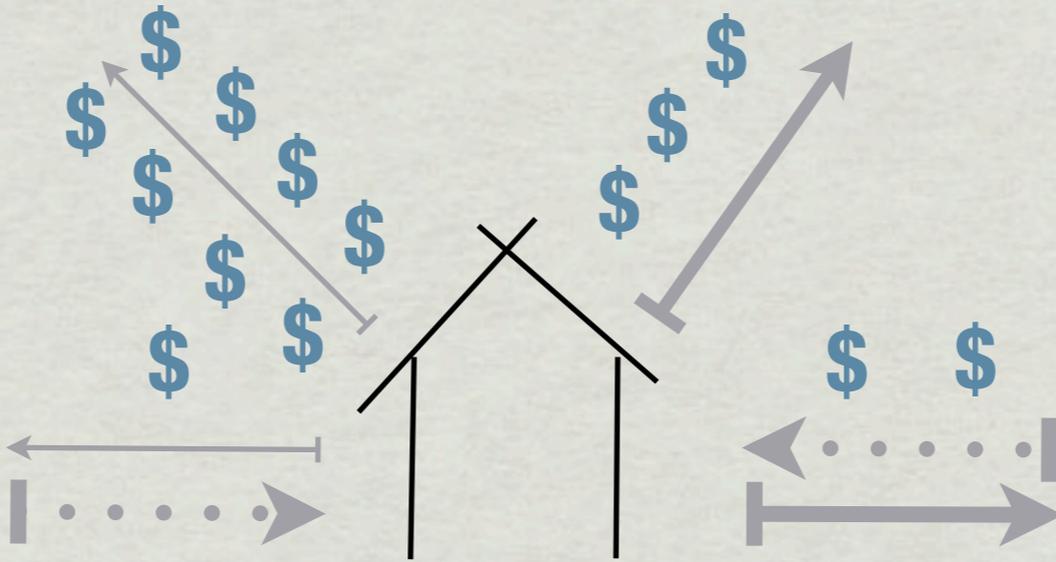
Maize/beans

← Labour

→ Subsistence goods & Services

○ → Flows of goods to markets

\$ → Flows of income & expenditure



Conclusions

- ✱ Resilience offers a multi-dimensional, -scale analytical lens to understand socio-ecological systems
- ✱ It is based on three analytical pillars:
 - 1) Understanding and framing the system (ecosystem goods and services, institutions, actors)
 - 2) Defining the variables and drivers shaping its configuration (income returns, labour availability, gatekeepers)
 - 3) Identifying pathways of future change and implications (scenario building & discussion)
- ✱ For 'land grabs' research, resilience can shed light on how:
 - New LU activities alter previous LU patterns, and how they relate to past trends of agrarian change and rural development
 - Identify the likely impact on ecological systems and livelihood assets
 - Identify possible pathways of future landscape reconfigurations with and without 'land grabs'