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## **Ecosystem services, social interdependencies and collective action: moving from a conceptual to an actionable framework**

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# Ecosystem services, social interdependencies and collective action : moving from a conceptual to an actionable framework

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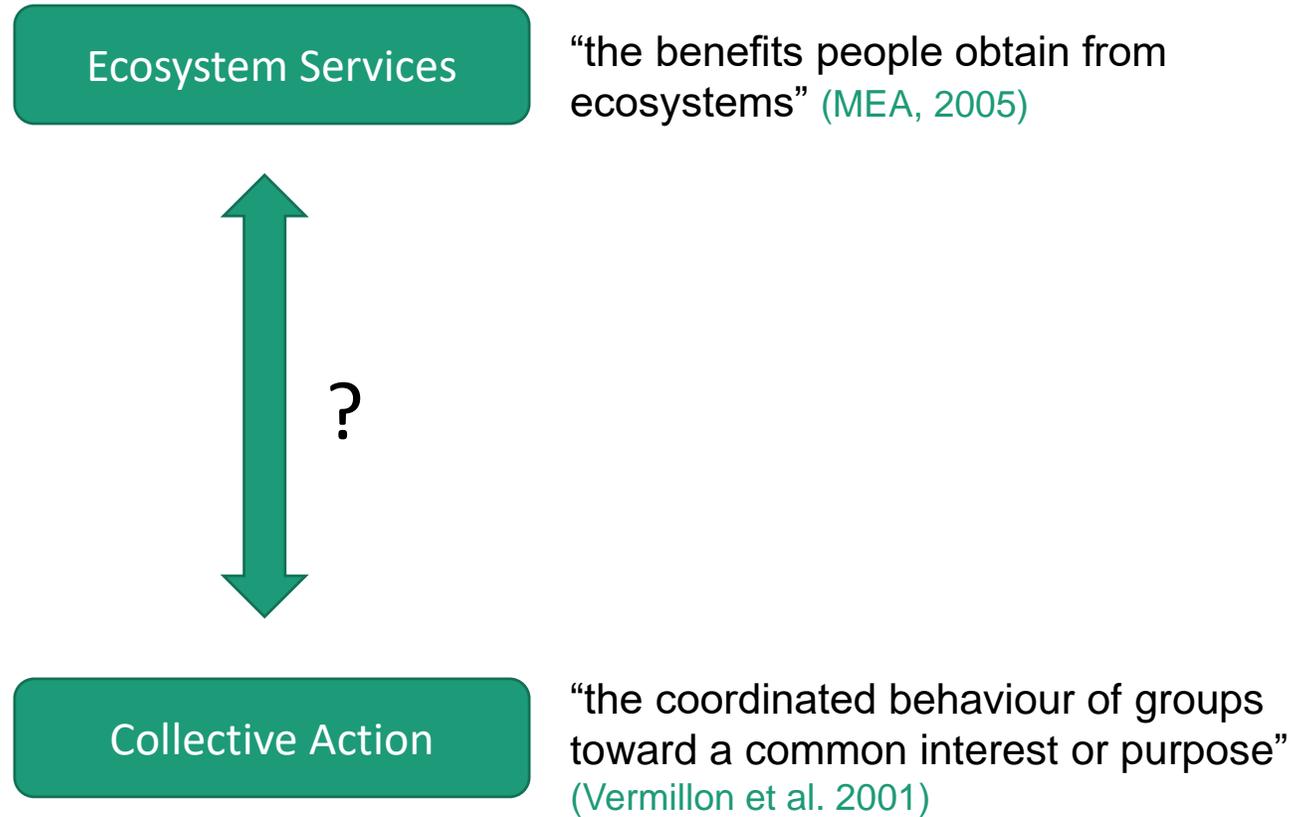
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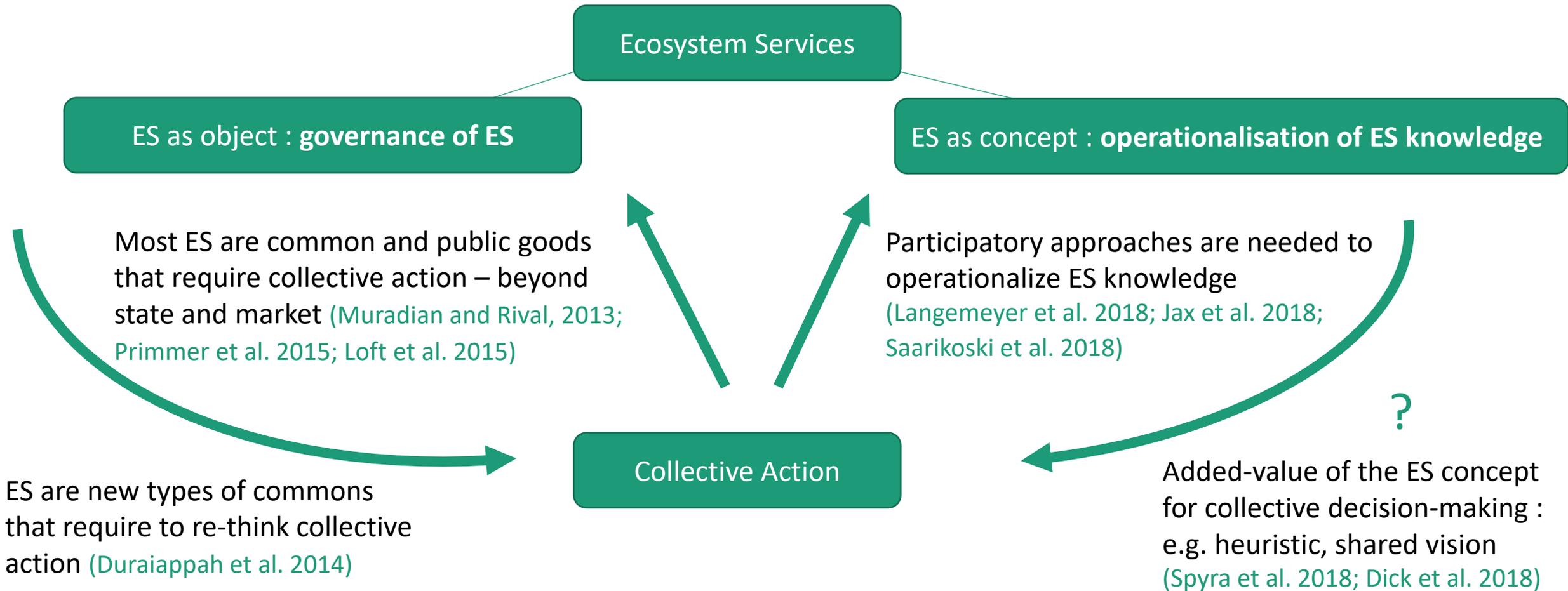
<sup>c</sup>French Institute of Pondicherry, India

3 July 2019, IASC Conference, Lima, Peru

# Ecosystem Services and Collective action : which connections?



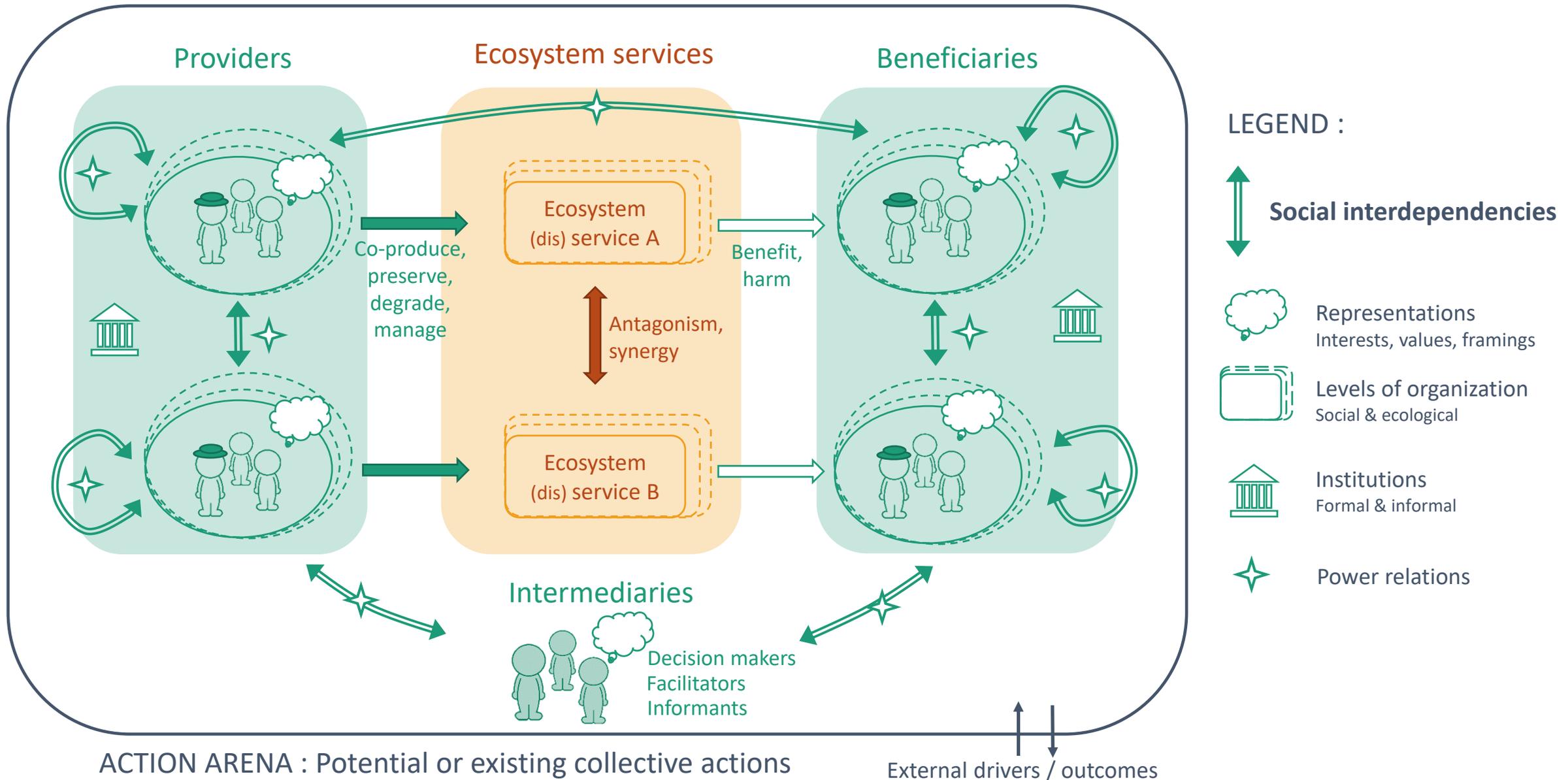
# Ecosystem Services and Collective action : which connections?



## Research question

Used to highlight **social interdependancies**,  
could the ES concept help to  
understand *and foster* **collective action**?

# Conceptual framework



# Moving from an analytical to an actionable framework

→ Using the ES concept to increase people's awareness of interdependencies



**Biological control  
Apple production (France)**



Salliou et al. (2019) Sustainability

**Land abandonment  
Pyrénées National Park (France)**



Barnaud et al. (subm.) J. Rural Studies

**Land abandonment  
Cévennes National Park (France)**

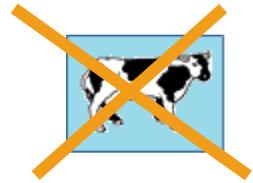


Moreau et al. (in press) DDT

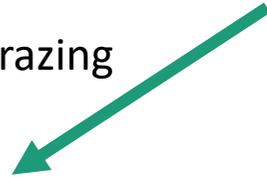
**Land abandonment  
Montseny Biosphere Reserve (Spain)**



# Context : a conflict over farming practices in the Cévennes National Park



No grazing



Shrublands and woodlands

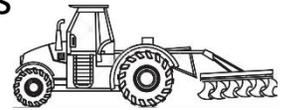


Open grasslands with rocks



How to conciliate agriculture with heritage and biodiversity conservation?

(!) Permits  
Removing rocks  
Ploughing



# SECOLOZ : a Role-Playing Game highlighting trade-offs among ES

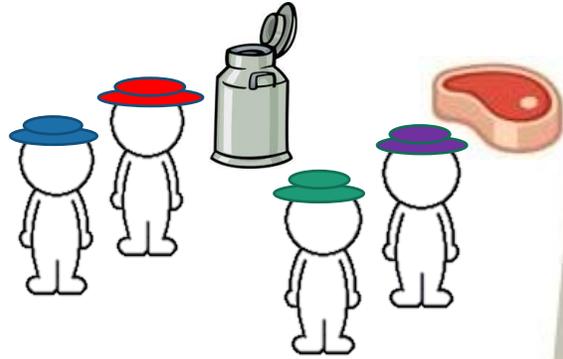
**A Role-Playing Game** = a model, a simplified representation of a socio-ecological system



**Objective of the Secoloz game** = each player tries to achieve his/her own objectives, which implies **negotiating trade-offs among ES**

# ROLES of the GAME

4 farmers aiming to maintain their livestock



## Targetted ES

Hay + grass

## Actions

- Remove rocks (!)
- Plough meadows (!)
- Cattle grazing
- Re-open shrubland

3 National Park Agents with competing objectives

## Targetted ES



Tourism satisfaction  
Patrimonial landscape



Grass  
Patrimonial landscape



Biodiversity

## Actions

- (!) Give permits
- Distribute subsidies



Among them : a mayor

Targetted ES Water quality



SECOLOZ : a role-playing game for collaborative management of landscapes on the Mont-Lozère

<https://www.youtube.com/watch?v=evUtcM5zX1Y&app=desktop>

# Effects of the RPG on the participants

Enhanced mutual understanding, empathy

Aknowledging and dealing with uncertainty

- Cumulative effects / thresholds
- Ambiguity / Disputed knowledge claims

Increased awareness of social interdependencies

- Between farmers and national park agents
- Among farmers
- Among national park agents
- With other stakeholders and the society as whole

Exploring institutional innovations

- Need for concerted management at landscape scale



**Added-value of the ES or the RPG?**

# CCL : lessons on social interdependencies and.. commons!

**Cultural landscapes : commons** that are **socially constructed** and should therefore be **inclusively negotiated**

- Social interdependencies are +/- perceived
  - Awareness of interdependencies (**learning**): necessary, but not sufficient (**Leeuwis, 2000**)
- Social interdependencies are +/- asymmetric, +/- desired, +/- voluntarily hidden
  - Need to negotiate interdependencies : deal with multiple interests, power asymmetries (**negotiation**) (**Saarikaski et al. 2018**)
- Social interdependencies are +/- regulated by institutions
  - Need to create institutional space for interdependencies (**institutional innovation**) (**Muradian & Rival 2013; Loft et al. 2018**)

