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

Cécile Barnaud, Clémence Moreau, Raphael Mathevet

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

Cécile Barnaud<sup>a</sup>, Clémence Moreau<sup>a,b</sup>, Raphaël Mathevet<sup>b,c</sup>

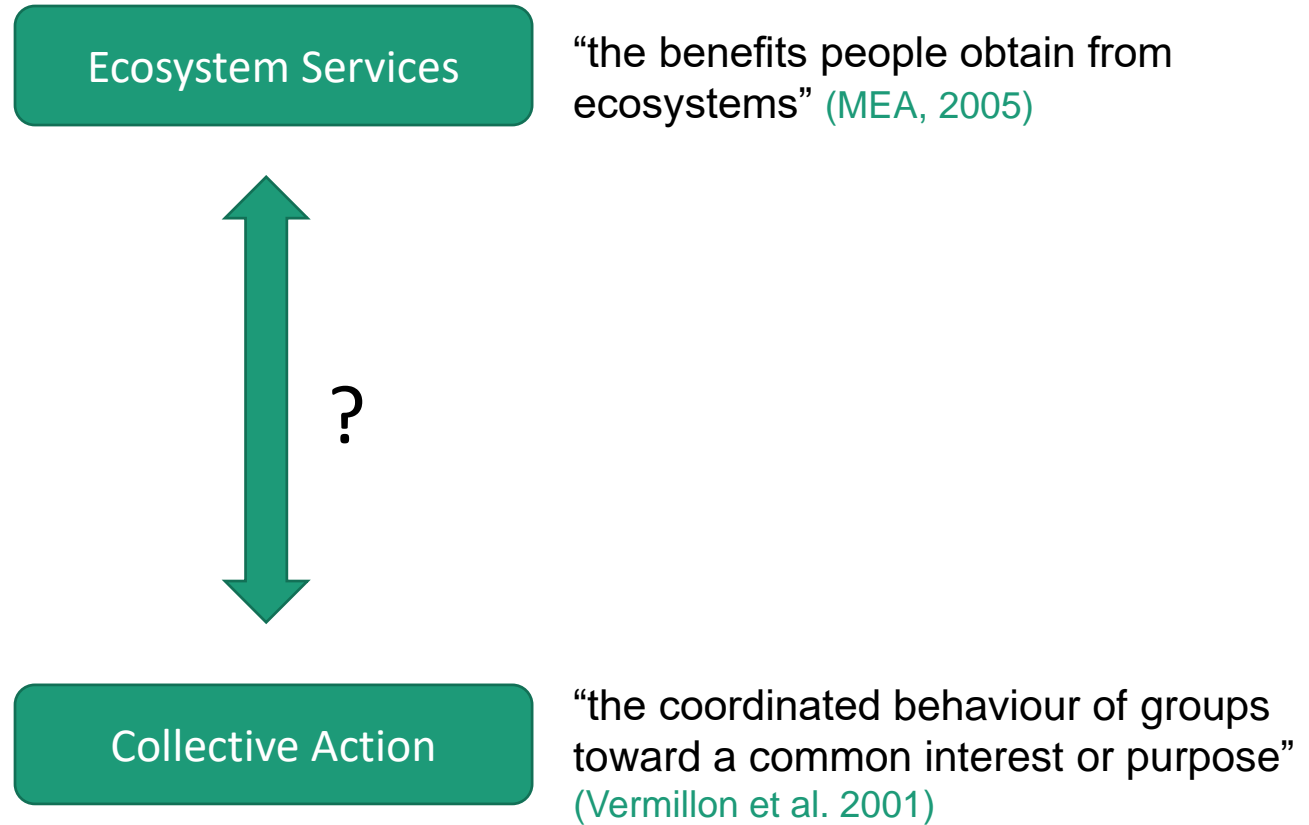
<sup>a</sup>UMR Dynafor, INRA, Toulouse University, France

<sup>b</sup>UMR CEFE, CNRS, Montpellier, France;

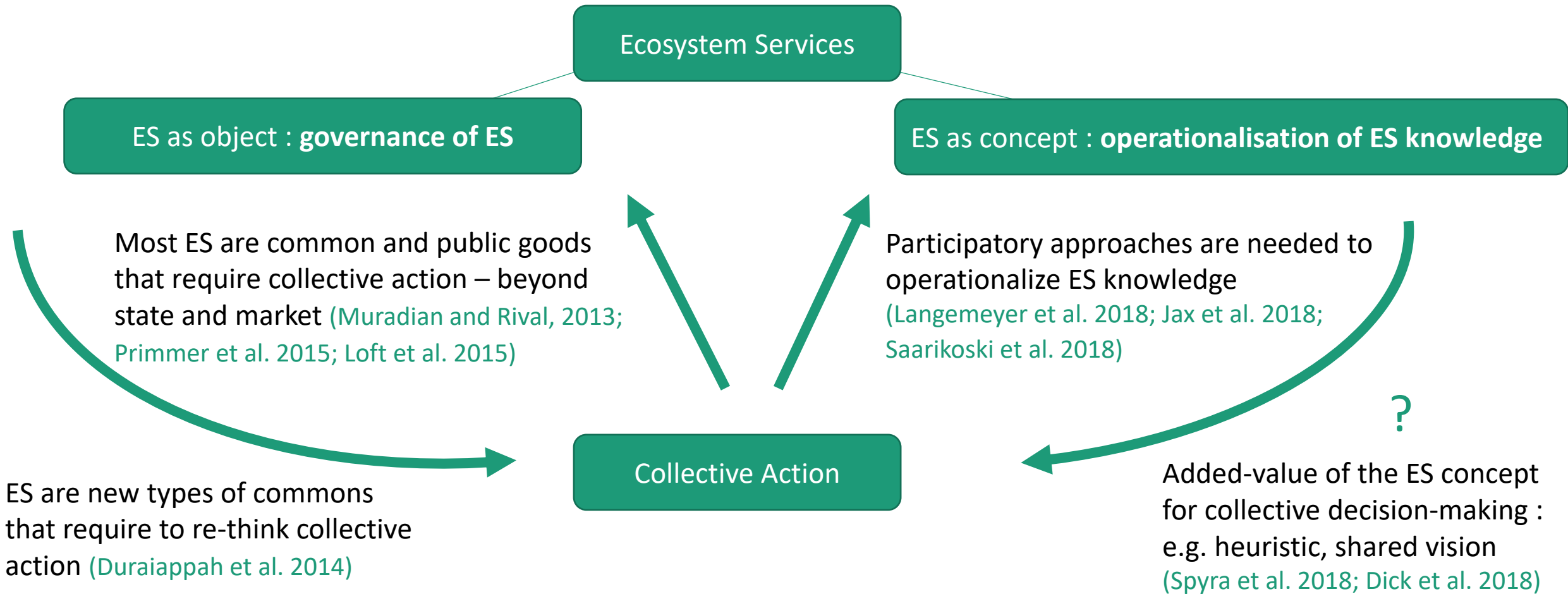
<sup>c</sup>French Institute of Pondicherry, India

3 July 2019, IASC Conference, Lima, Peru

# Ecosystem Services and Collective action : which connections?



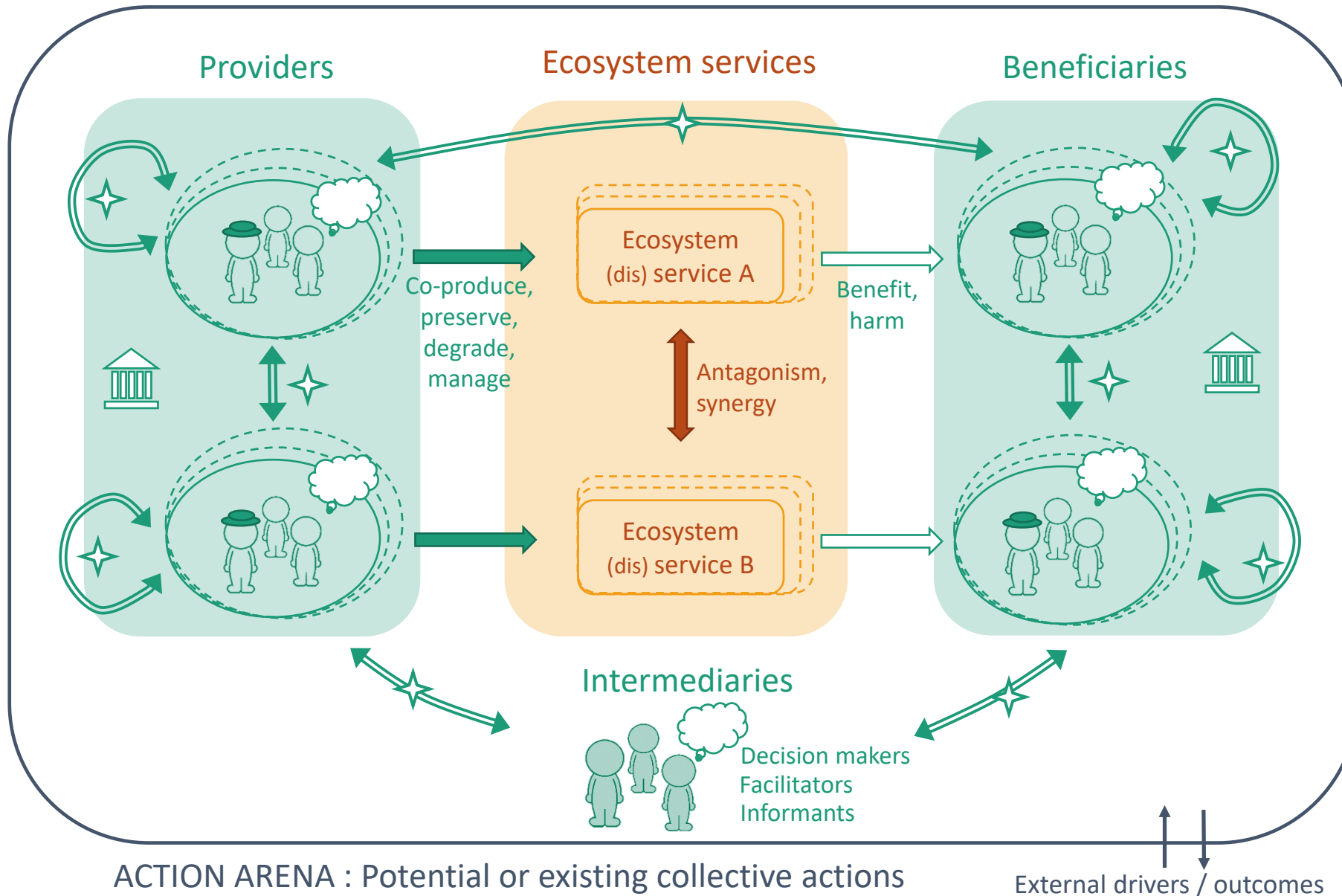
# Ecosystem Services and Collective action : which connections?



## Research question

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

# Conceptual framework



## LEGEND :

-  **Social interdependencies**
-  Representations  
Interests, values, framings
-  Levels of organization  
Social & ecological
-  Institutions  
Formal & informal
-  Power relations

# 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)**

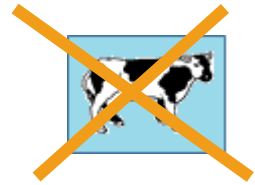


Moreau et al. (in press) DDT

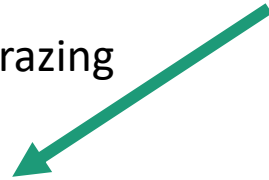
**Land abandonment  
Montseny Biosphere Reserve (Spain)**



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



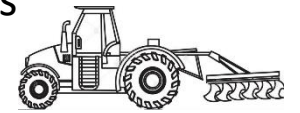
No grazing



Open grasslands with rocks



(!) Permits  
Removing rocks  
Ploughing



Meadows : permanent / temporary

Shrublands and woodlands



How to conciliate agriculture with heritage and biodiversity conservation?





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

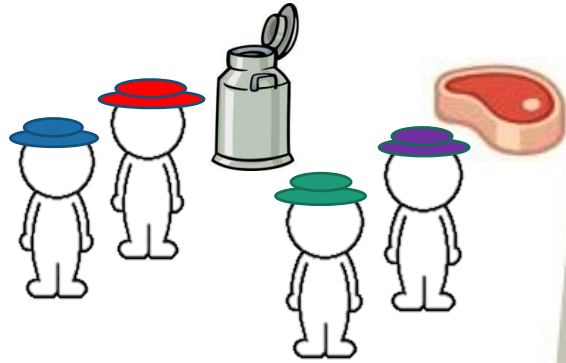
**A Role-Playing Game** = a model, a simplified representation of a socio-ecological system



**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**)

