

Managing biodiversity in a context of increasing urbanization and intensified human-nature interactions

WP3. Human-environmental interaction

WP2. Impact of climate change & anthropogenic changes on Mediterranean ecosystems and services

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PURPOSE in relation with WP3 & WP2

How do we perceive our natural environment?

*Assess biodiversity sensitiveness and knowledge embedded in institutional decisions affecting Mediterranean **anthropo-constructed ecosystems** (ACECOs)*

How do we adapt to this environment?

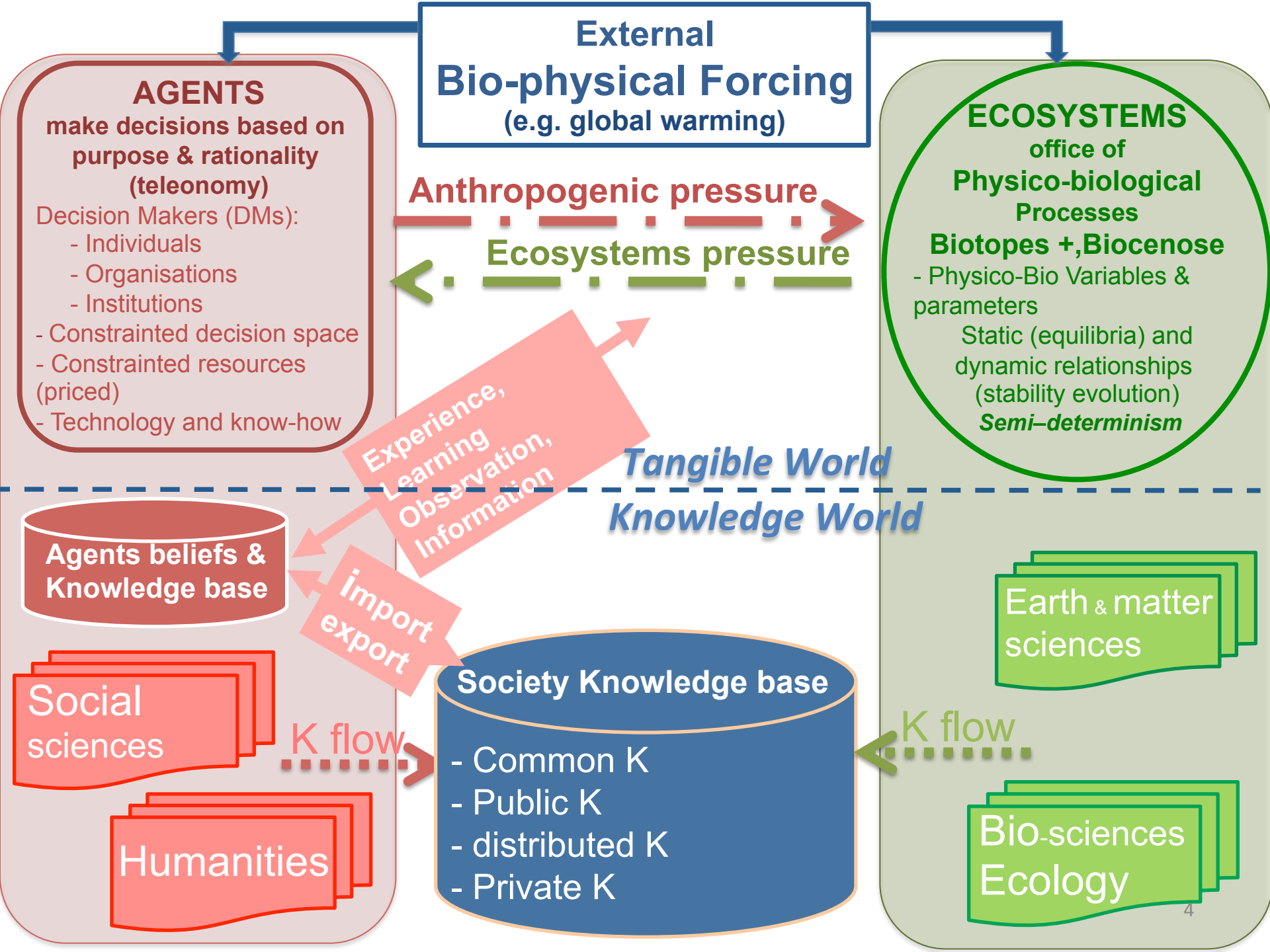
In ACECO, human beings struggle primarily to adapt themselves to artificial environments. So « they do not adapt to their natural environment », « they do change it » by definition, creating unpredictable risk for biodiversity and ecosystems services.

What can we do to preserve or improve our environment?

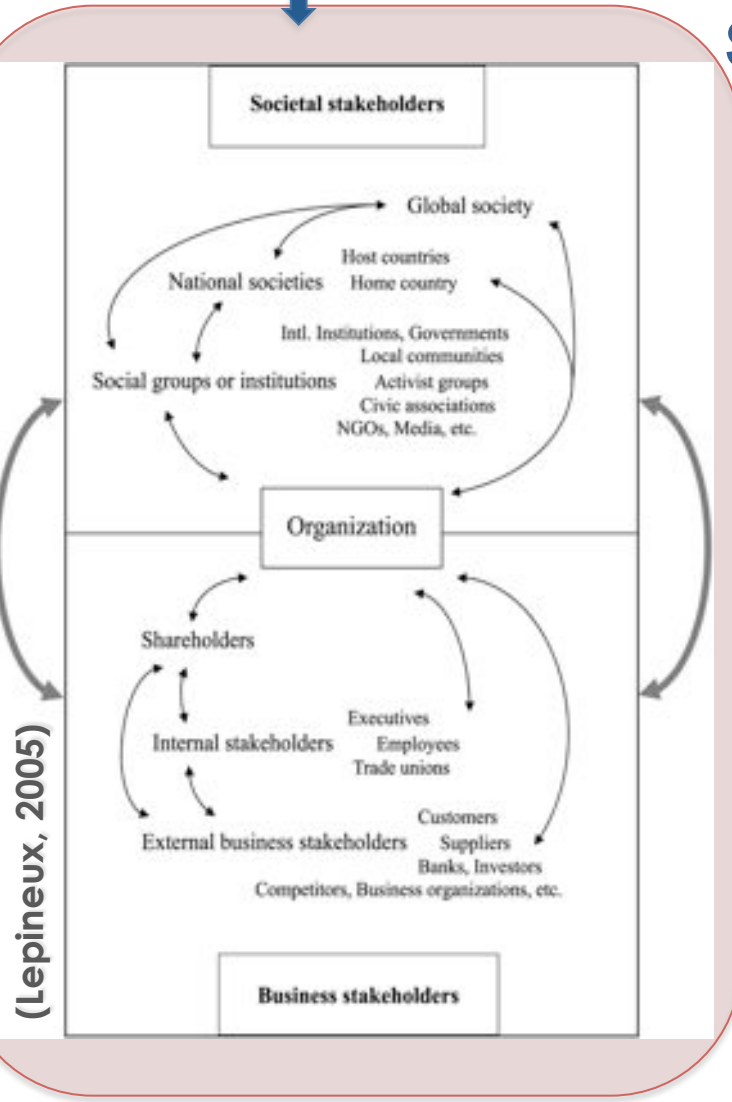
The challenge is to understand the complex interactions between man and ecosystems in territories in which millions of decisions are interacting with very little concern for natural phenomena. So adaptation and mitigation policies are likely to remain ineffective if they are not associated with decentralized incentive mechanisms and effort in education and transformation of values to include biodiversity concern in the regular many conflicts and dilemma arising in ACECOs

Ecosystem services in ACECO

Ecosystem services, their role and value in territories with high anthropogenic activity might be an key to bridge Ecosystems evolution within highly artificial environments



Social and Ecological Systems (SES)

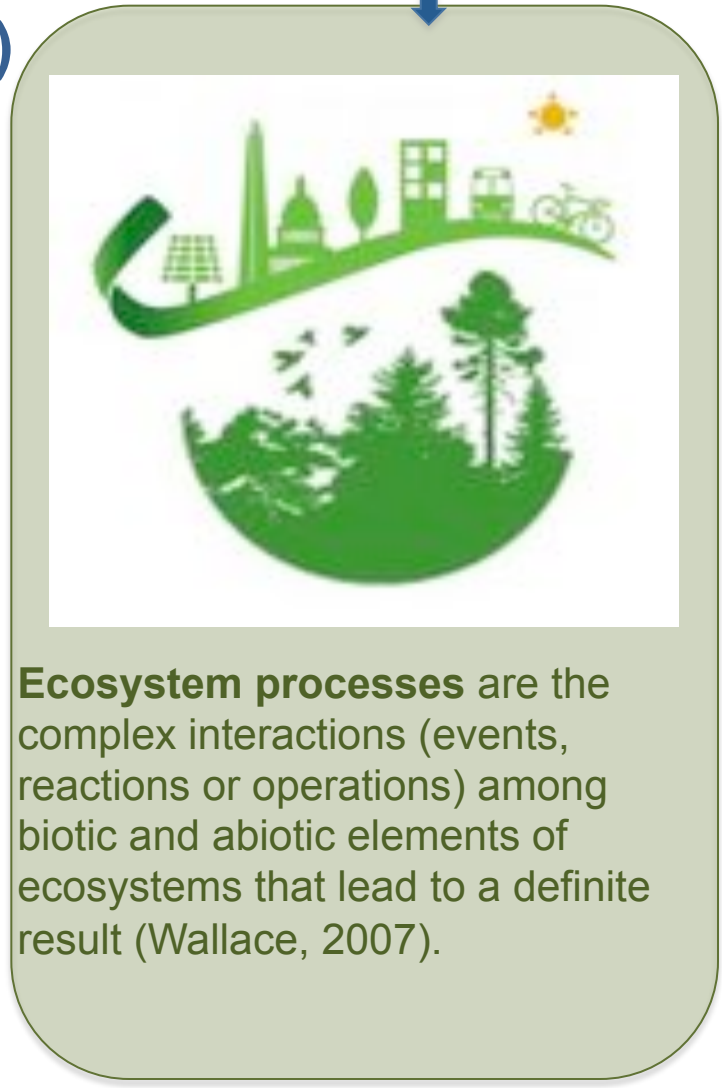


(Lepineux, 2005)

Tightly coupled (Berkes and Folke 1998) in which any separation between the two is artificial (Fabinyi et al. 2014)



Values
intrapyschic
constellations of norms and precepts that guide human judgment and action. They refer to the normative and moral frameworks people use to assign importance and necessity to their beliefs and actions. Farber, Costanza & Wilson, 2002



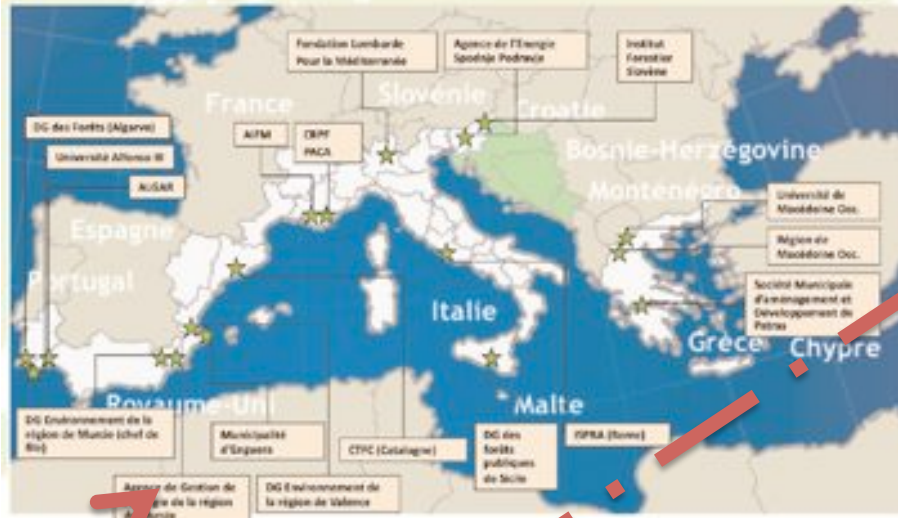
Ecosystem processes are the complex interactions (events, reactions or operations) among biotic and abiotic elements of ecosystems that lead to a definite result (Wallace, 2007).

Ecosystem Services

« the benefits people obtain from ecosystems. » (MA, 2005) These benefits include food, water, timber, cultural values, etc., and are the outcomes sought through ecosystem management. The term 'service' is somewhat ambiguous...Ecosystem services consistently relate to specific human value. Wallace, 2007

Mediterranean Basin pressures

Proforbiomed Network : Strategic MED project dedicated to the promotion of forest biomass in the Mediterranean basin; Spain, Portugal, France, Slovenia, Italy and Greece
 Sourc : Roque Perez Palazón (Proforbiomed)



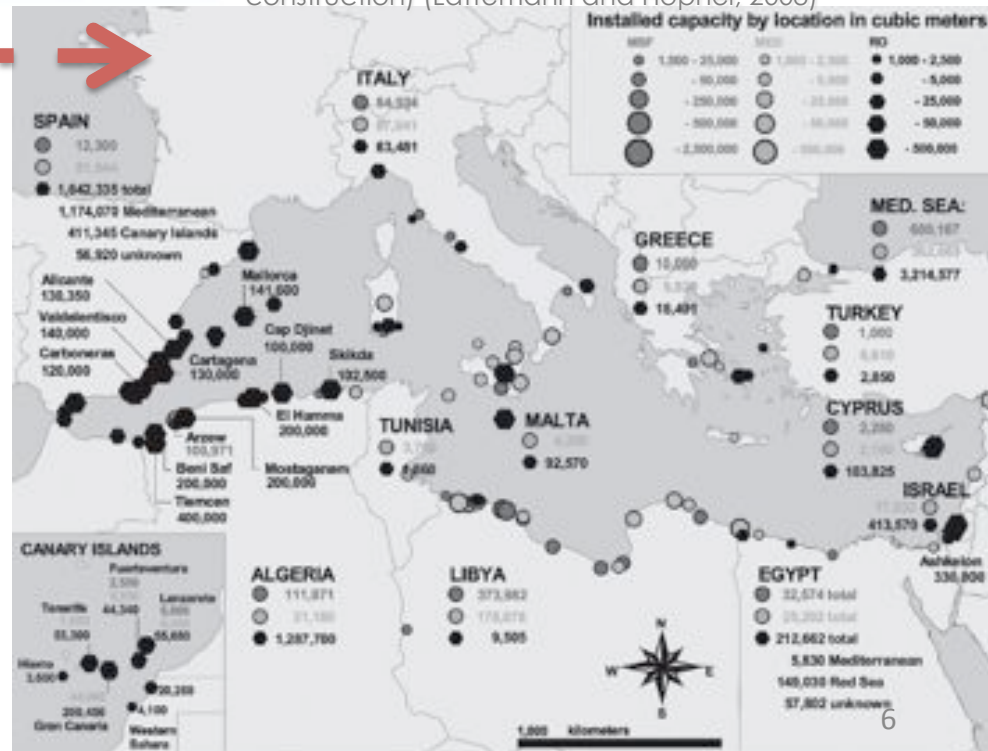
ABOVE: Rare Earth Element deposit (Bauxite) in circum-Mediterranean: Olmedo, Sardinia, Italy (1), San Giovanni Rotondo, Italy (2); Parnassos-Ghiona, Greece (3), Marmara, Greece (4); Evia Island, Greece (5); Štitovo pit, Nikšić, Montenegro (6); Grebnik, Kosovo (7); Vlasenica, Bosnia and Herzegovina (8) – BELOW: Seawater desalination plants that are presumed online or in construction (Lattemann and Höpner, 2008)

CLIMATE CHANGE Forcing

URBANIZATION & INDUSTRIALISATION

524 million by 2025 (Blue Plan, 2010). Mediterranean region is on the way to becoming an advanced economy.

Mitigation



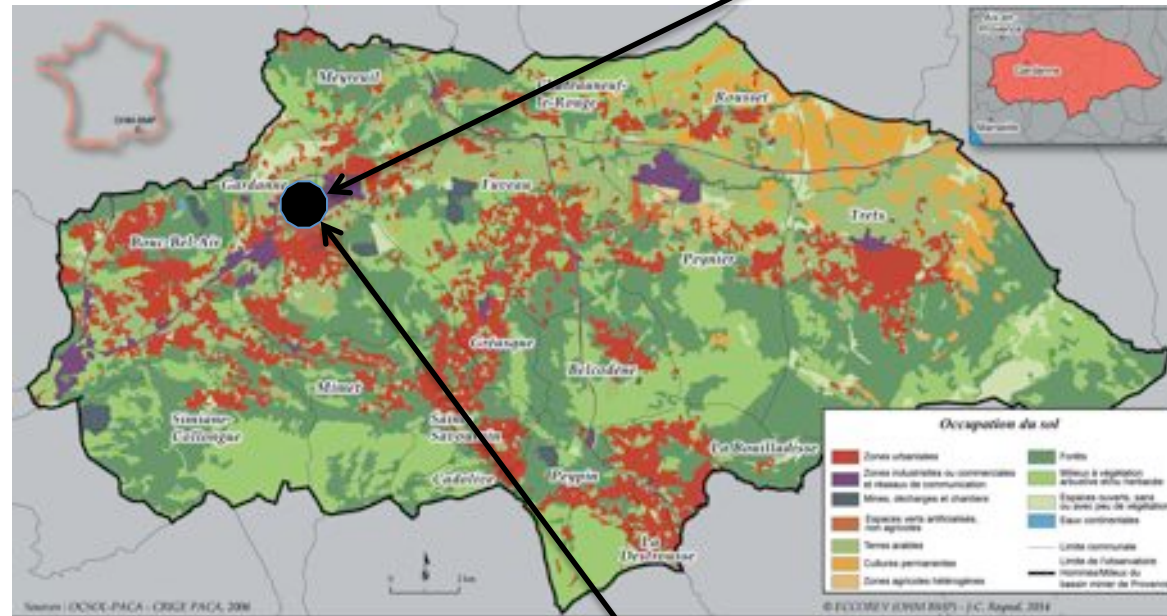
Relationship between ES and BIODIVERSITY preservation?

(in specific contexts: dilemma)



TWO CASE STUDIES OF TYPICAL DILEMMAS

1. The biomass project of the E-On Group power plant, Gardanne (2015)
2. Stopping the discharge of red muds into the Sea by the Alumina plant Alteo, Gardanne (2015)



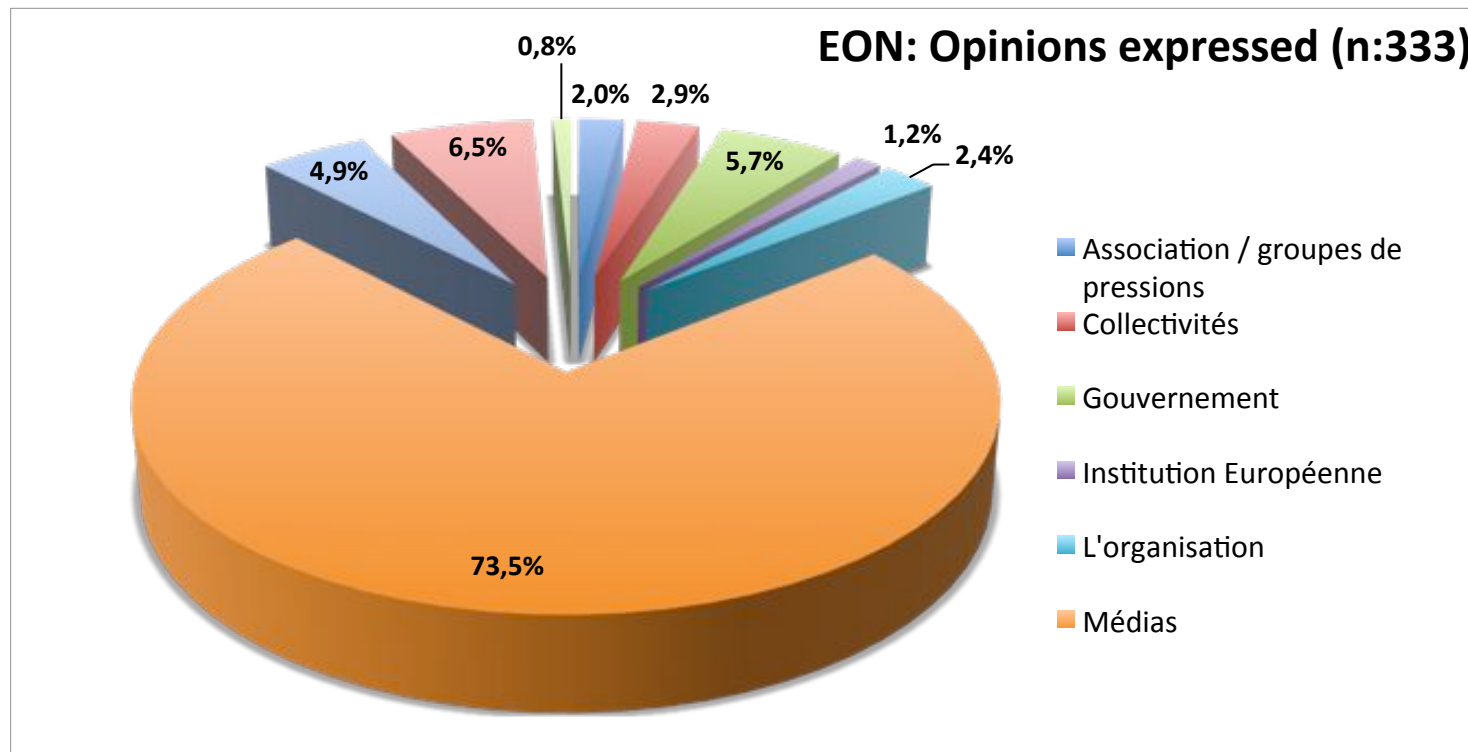
Some findings (E.On)

Variables extracted from database of communications: Dialogue approach (Valentin, 2006 ; Morsing and Schultz, 2006)

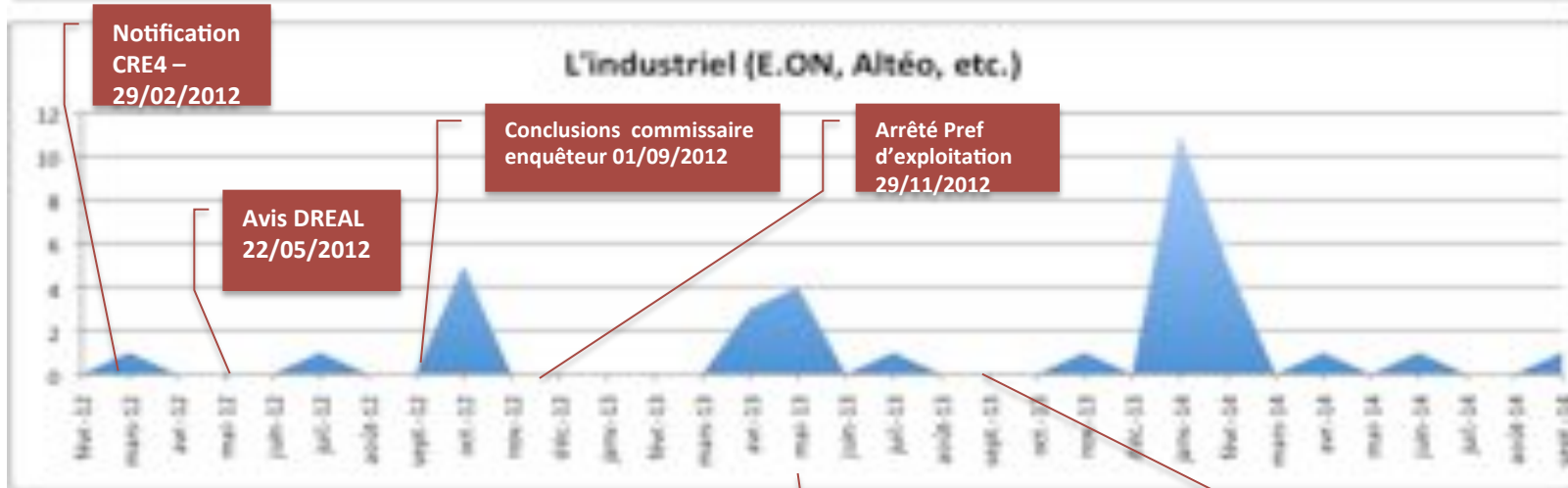
- **Type of stakeholders** (Freeman, 1984, 1994 ; Savage et al. 1991 ; Clarkson, 1994 ; Lepineux, 2005 ; Reed, 2008)
- **Geographical distance to the project (3 levels)**
- **Opinion expressed (BOTTOM-UP approach)**
- **Arguments involved (verbatim extracted from communications)**

Data (E.On)

La Provence	2011 - 2014
Base de données Factiva	2009-2014
Google alerte	Depuis avril 2014
Procès verbaux des conseils municipaux	2009-2014
Journal de la commune de Gardanne	2009-2014
Rapports institutionnels (publics et privés)	2009-2014
Documents réglementaires et d'orientation	2009-2014



Stakeholders « dialogue » (E.on)

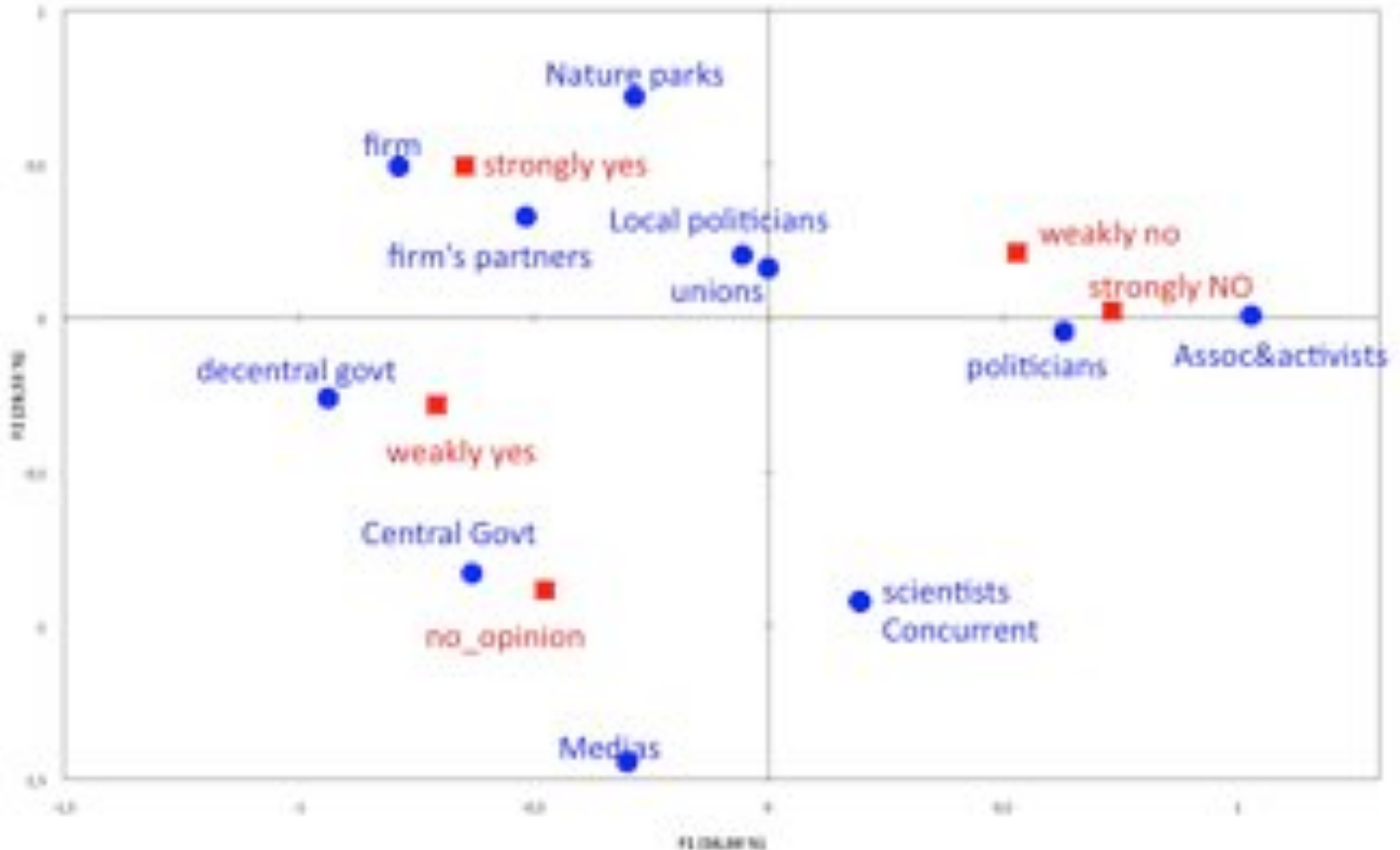


Communication EON : phase de « mise en œuvre » ; négociations et plan sans licenciement

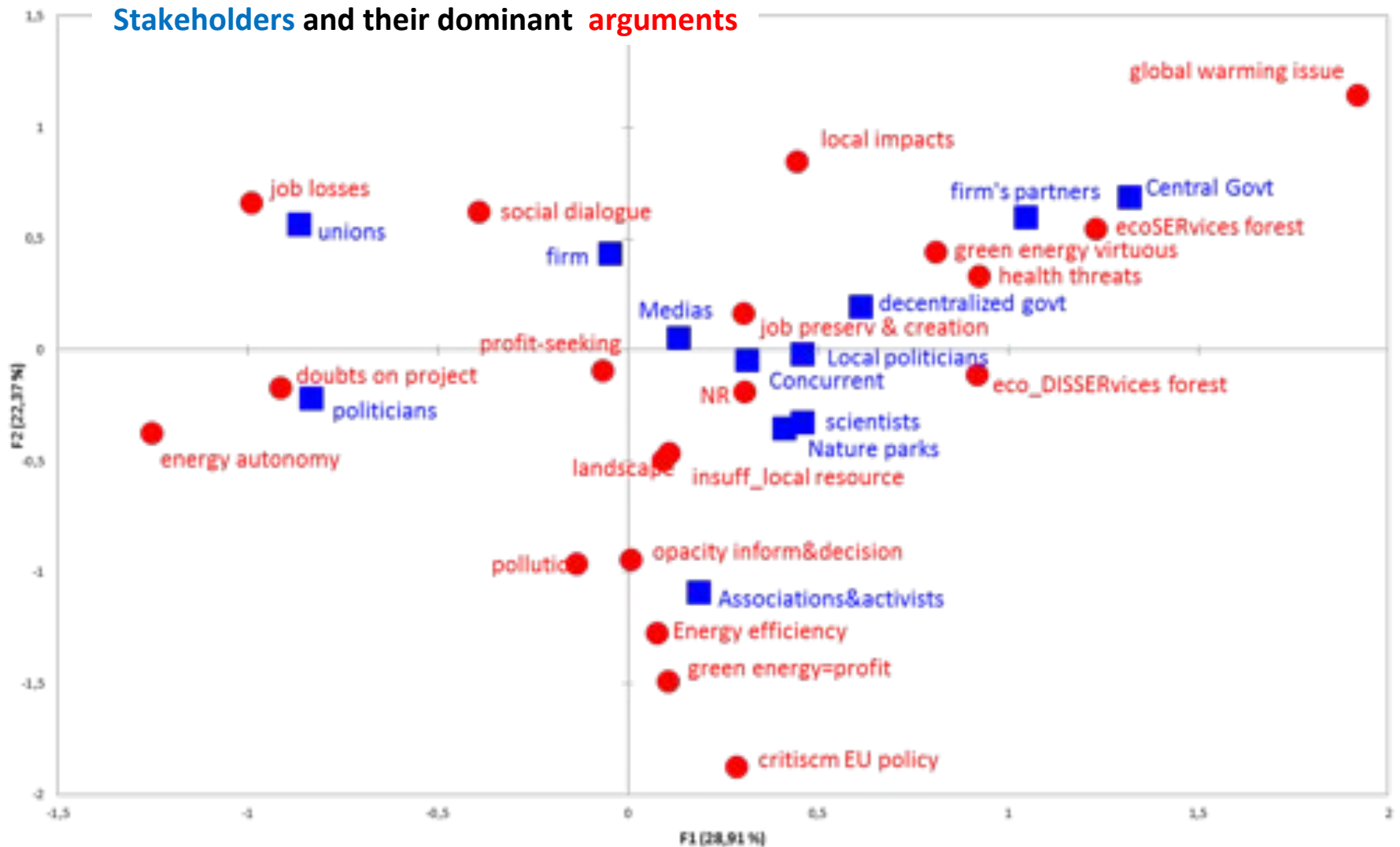
Communication EON : signature protocole de travail avec le Parc des Cévennes

Opinions (E.on)

stakeholders and opinions

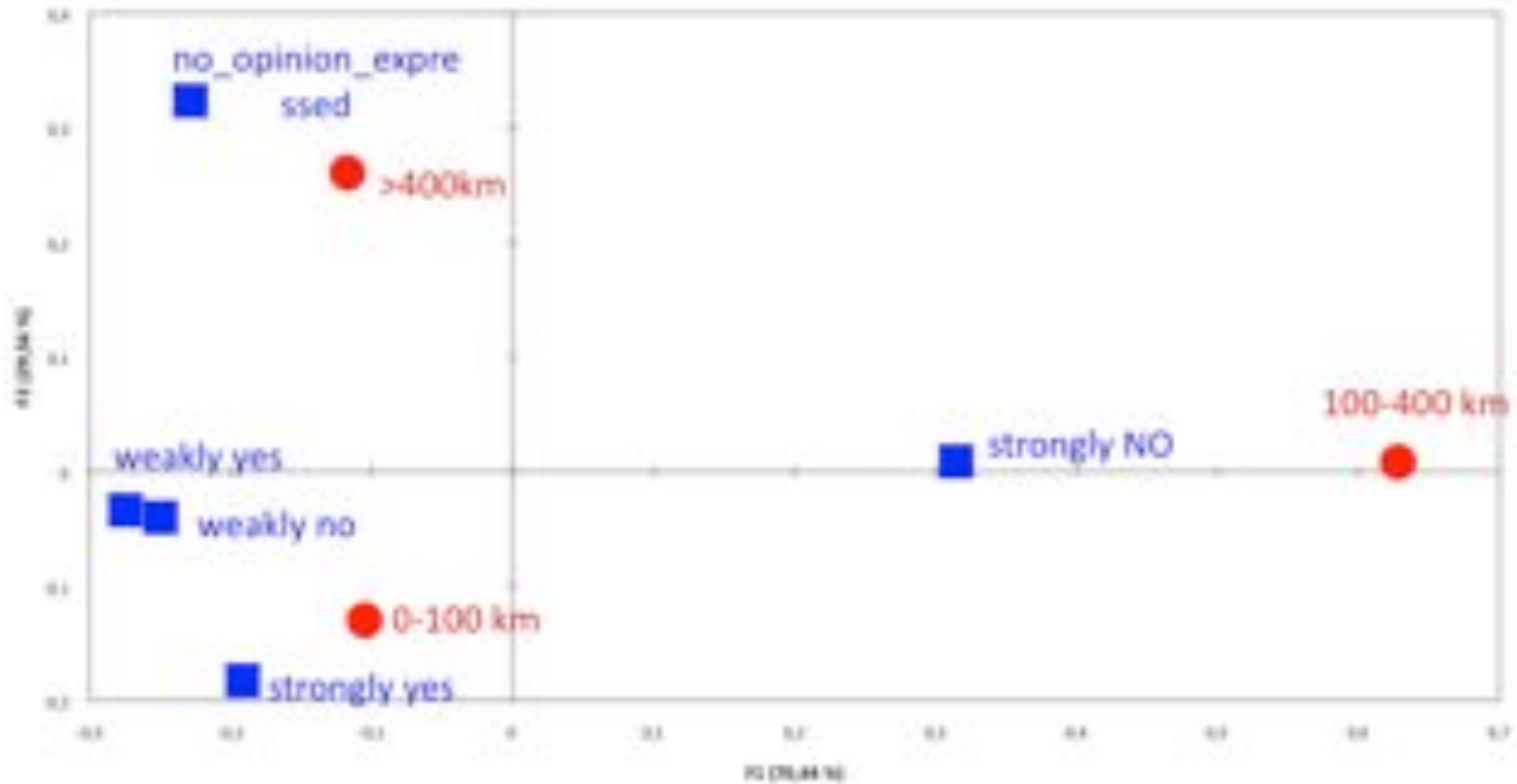


Arguments (E.on)



Opinions (E.on)

Opinions vs distance of the stakeholder



Next stage

- Semi-structured interviews

Centrale thermique : la CGT manifeste pour l'emploi

► GARDANNE / PARUÉ LE LUNDI 11 FÉVRIER À 09H17

Les salariés réclament le maintien des effectifs et l'organisation d'une table ronde



La Provence 08/01/2014 - Crédit photo : Bruno Souillard

- Questionnaire

