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## **An assessment of the societal impacts of French soil databases**

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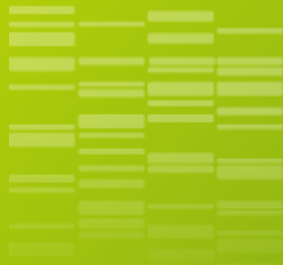
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# An assessment of the societal impacts of French soil databases

M. Bardy, A. Gaunand, N. Saby, D. Arrouays,  
L. Colinet, N. Munier-Jolain



# Context

## ❖ French soil data

- ❖ Collection coordinated by the French Soil Interest Group since 2001

# GisSol

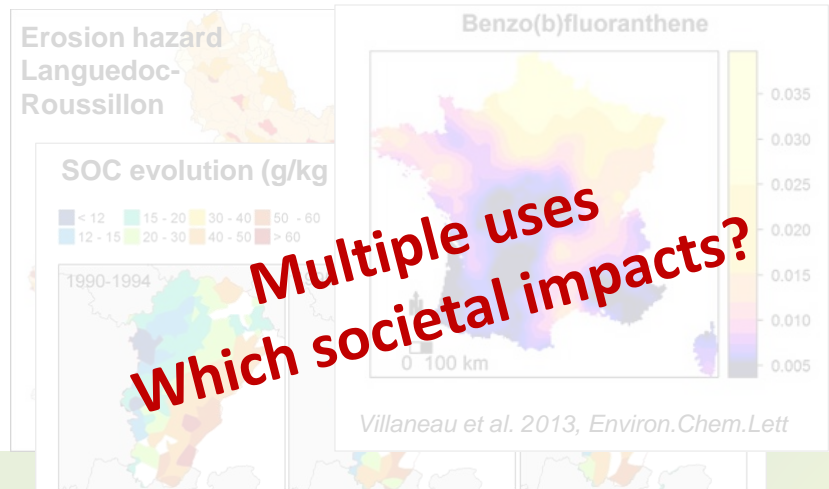
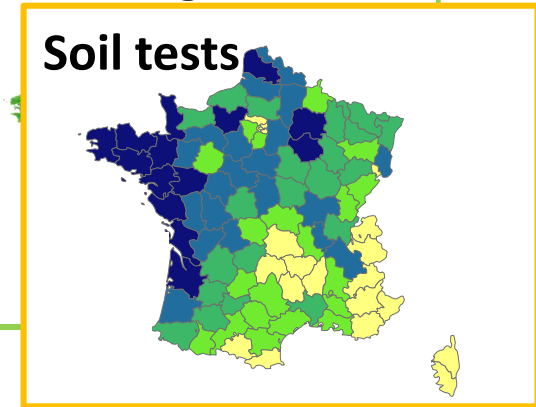


## National Soil Information System

### Soil inventories

### Monitoring network

### Soil tests



**Multiple uses  
Which societal impacts?**

Saby et al. 2008, Soil Use and Management

Villaneau et al. 2013, Environ.Chem.Lett

# The Asirpa method (1/2)

Research Evaluation Advance Access published July 25, 2015

*Research Evaluation* (2015) pp. 1–14

doi:10.1093/reseval/rvv015

## ASIRPA: A comprehensive theory-based approach to assessing the societal impacts of a research organization

Pierre-Benoît Joly<sup>1,\*</sup>, Ariane Gaunand<sup>2,3</sup>, Laurence Colinet<sup>4</sup>,  
Philippe Larédo<sup>5</sup>, Stéphane Lemarié<sup>2,3</sup>, Mireille Matt<sup>2,3</sup>

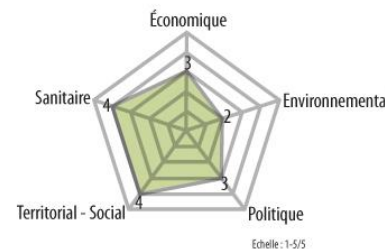
- ❖ Based on case studies
- ❖ Standardized description
- ❖ Scaling-up to the organization level

*ASIRPA = Socio-economic analysis of the diversity of Impacts  
of Public Research for Agriculture*

# The Asirpa method (2/2)

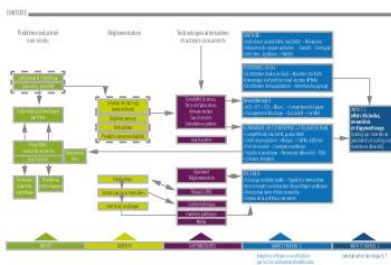
## ❖ Three main deliverables

### Case studies



### 1. Chronology

- Long term investments
- Capacity building
- Key events



### 2. Impact pathway

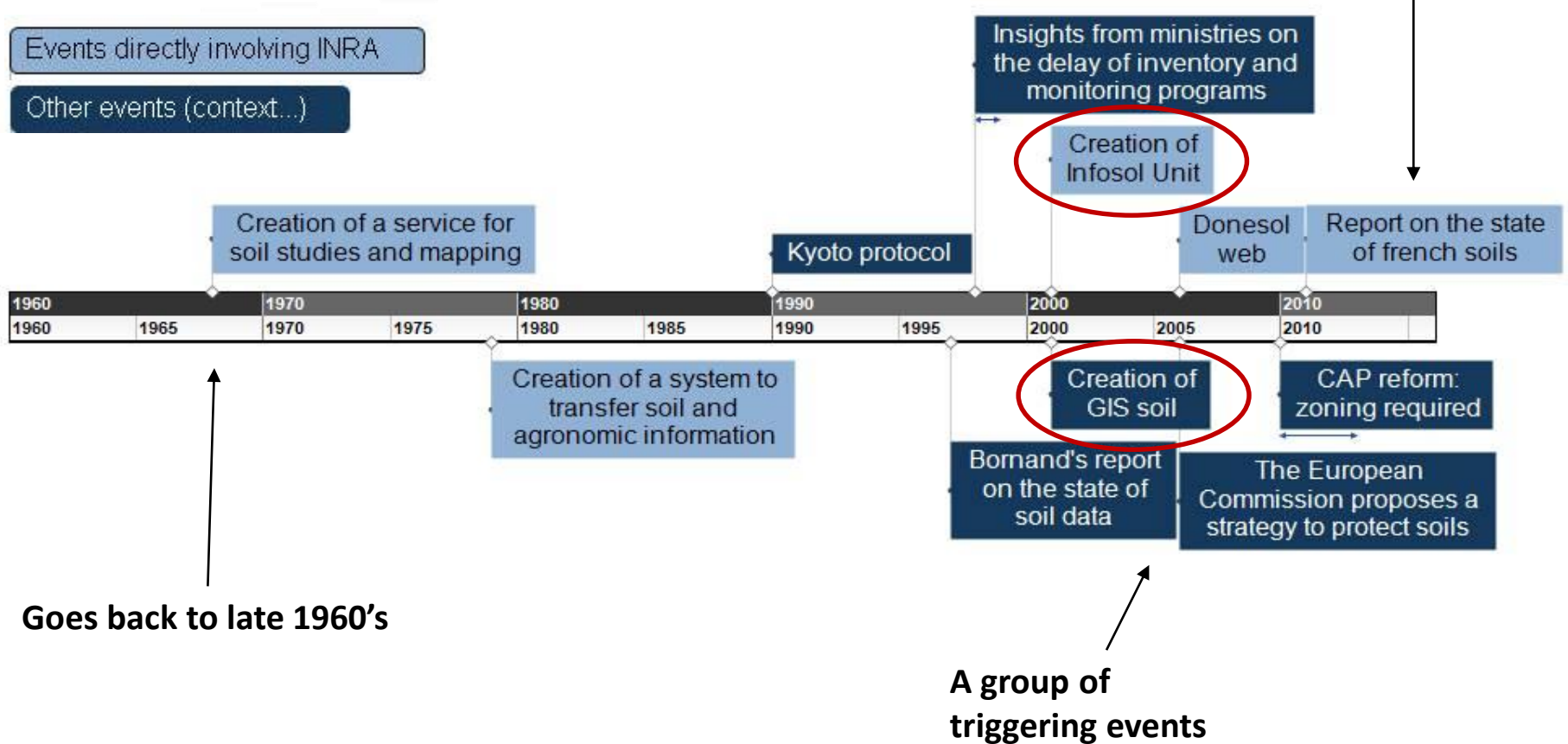
- From research to impact
- Contributions of various actors
- External context

### 3. Impact assessment

- Various dimensions of impact:
  - ✓ Economy
  - ✓ Public health
  - ✓ Environmental
  - ✓ Territorial – social
  - ✓ Public policies

# Impact of French soil databases

## ❖ Chronology



# Impact of French soil databases

## ❖ Selected case studies

### ❖ Identification of potential impacts:

- ❖ Direct relationship with end-user
- ❖ Direct relationship with intermediary organisations (provision of data + regular surveys)
- ❖ « By chance »: spontaneous feedback

### ❖ Description of confirmed impacts:

- ❖ Series of interviews... sometimes many intermediaries before reaching THE end-user
- ❖ Impact confirmed (and described)... or not

# Impact of French soil databases

## ❖ Selected case studies

### *Public policies*

- Zoning habitats to implement biodiversity conservation measures
- Revision of the delineation of less favoured areas

### *Economy*

French Fertilizer Industries Union: market research based on national analysis of soil liming requirements

### *Health*

Implementation of environmental inequality characterisation tools, with risk prevention plans including exposure to soil trace elements

### *Territorial impact*

Set-up of the bypassing of built-up areas around Lyon for high-speed rail

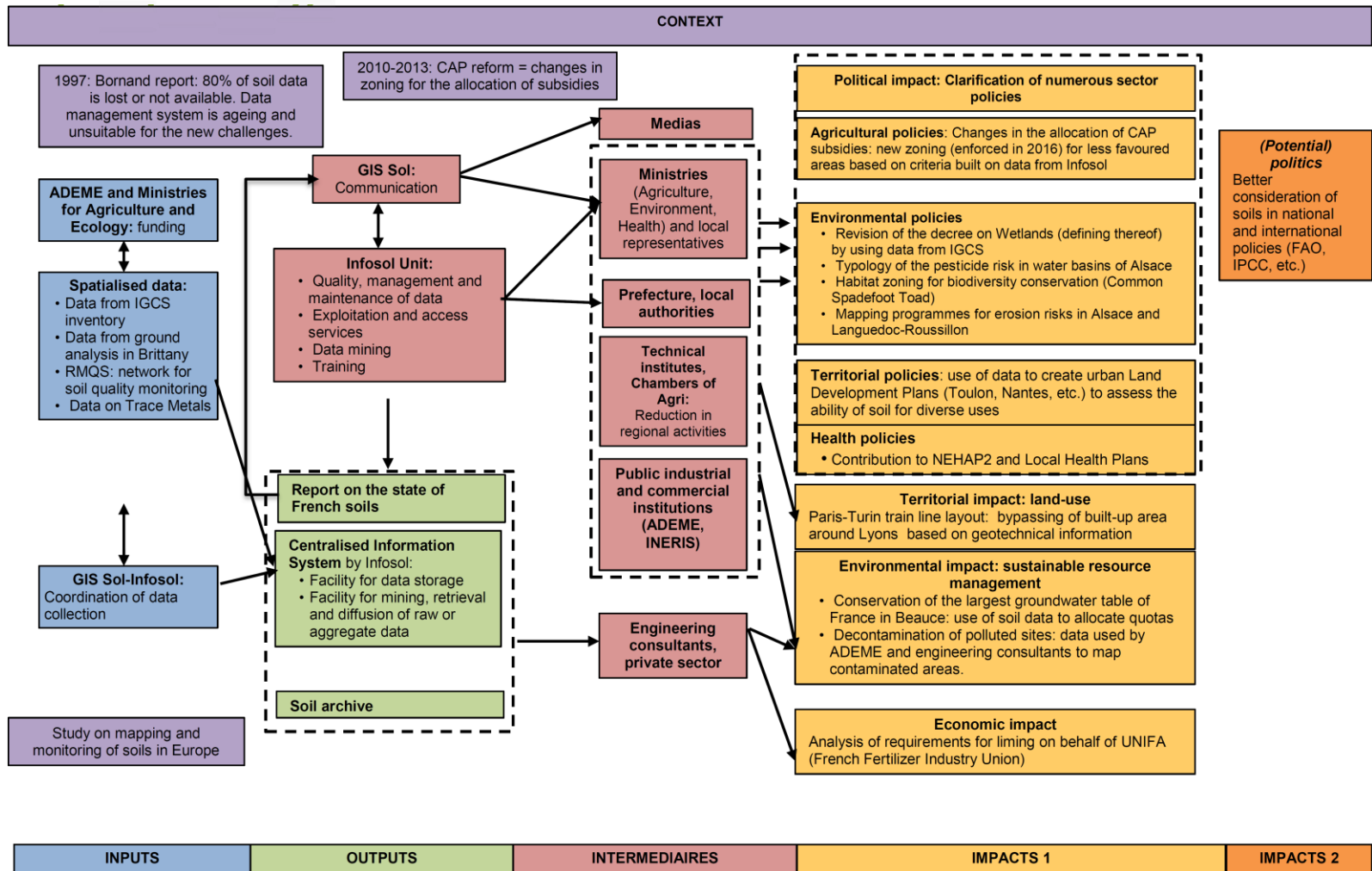
### *Environment*

Calculation of the recharge of the Beauce groundwater table as an element of negotiation for the allocation of irrigation quotas



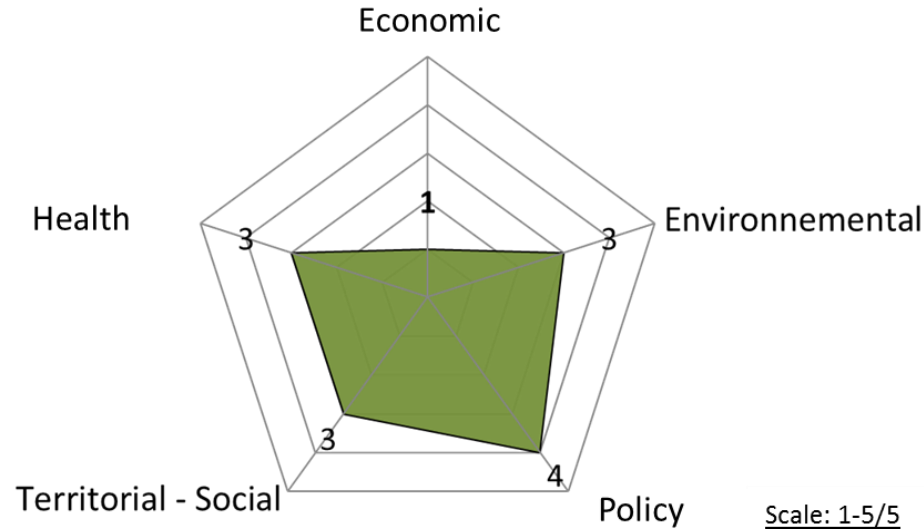
# Impact of French soil databases

## Impact pathway



# Impact of French soil databases

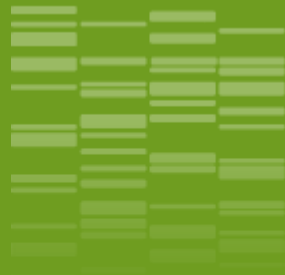
## ❖ Impact assessment



- ❖ Balanced impacts on the various dimensions
- ❖ Economic impact acknowledged but difficult to quantify

# Conclusions and perspectives

- ❖ **1<sup>st</sup> assessment of societal impacts of French soil databases**
- ❖ **More than the impacts themselves:**
  - ❖ Better knowledge of data end-users
  - ❖ Enhanced recognition of the usefulness of French soil databases
  - ❖ Basis for setting up a new communication strategy regarding soil databases: very successful national conference with testimonies of end-users
- ❖ **Perspectives :**
  - ❖ Add new impact descriptions
  - ❖ Gather testimonies of end-users in a booklet or a documentary



# Thanks for your attention!

*For any question regarding :*

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- ✓ *The Asirpa methodology: [ariane.gaunand@inra.fr](mailto:ariane.gaunand@inra.fr)*