

Evaluating the societal impact of public agricultural research

ASIRPA

Mireille Matt
LISIS, INRA, France

The ASIRPA approach

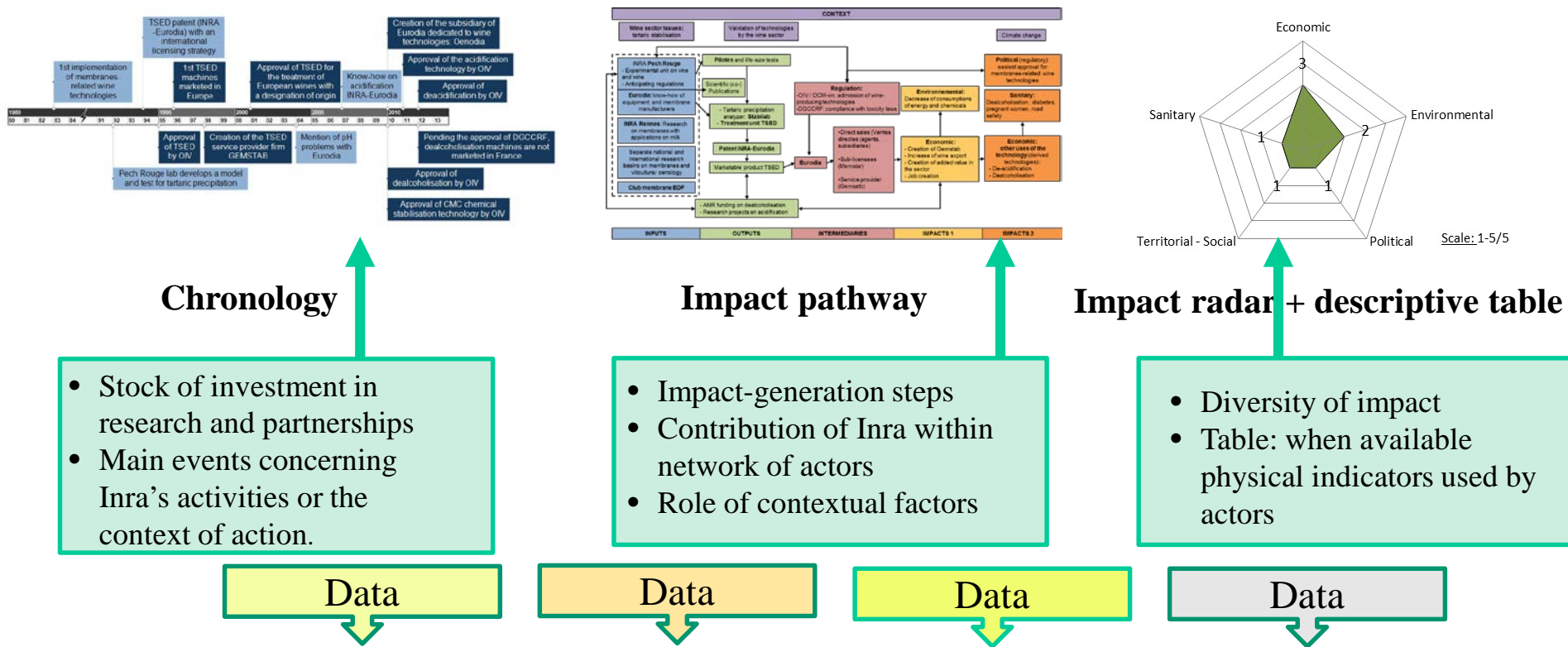


- **Basic considerations for the design of the approach**
 - ✓ *The distribution of impact is highly asymmetric* - Ex post, a reduced number of cases can allow to capture a high proportion of the impact of a single organisation
 - ✓ Evaluation entails *valuation* - consider public values of science instead of economic impact only – diversity of impacts (environnement, inequalities, health, cultural, education, public debate)
 - ✓ *Impact is produced by a set of complex interactions within dynamic networks* - Need to understand the contribution of the different actors along the impact pathways
 - ✓ *The “project” is not the relevant level of analysis (Problem of project fallacy)* - Construction of case studies starting from observed impacts
 - ✓ *The method will be implemented on a routine basis within INRA*
- **A major challenge: how to shift from individual case studies to general lessons?**
 - Systematic use of three tools: Chronology, Impact pathway, Multidimensional measure of impacts
 - Codification of cases, construction of database

I- Case selection: criteria

Significant impact + Reasonably recent (publication less than 15 years) + diversity of cases at the level of INRA = 40 cases

II- Report : standardized analysis of the case study



III- Analysis at the level of Inra

IMPACT PATHWAY

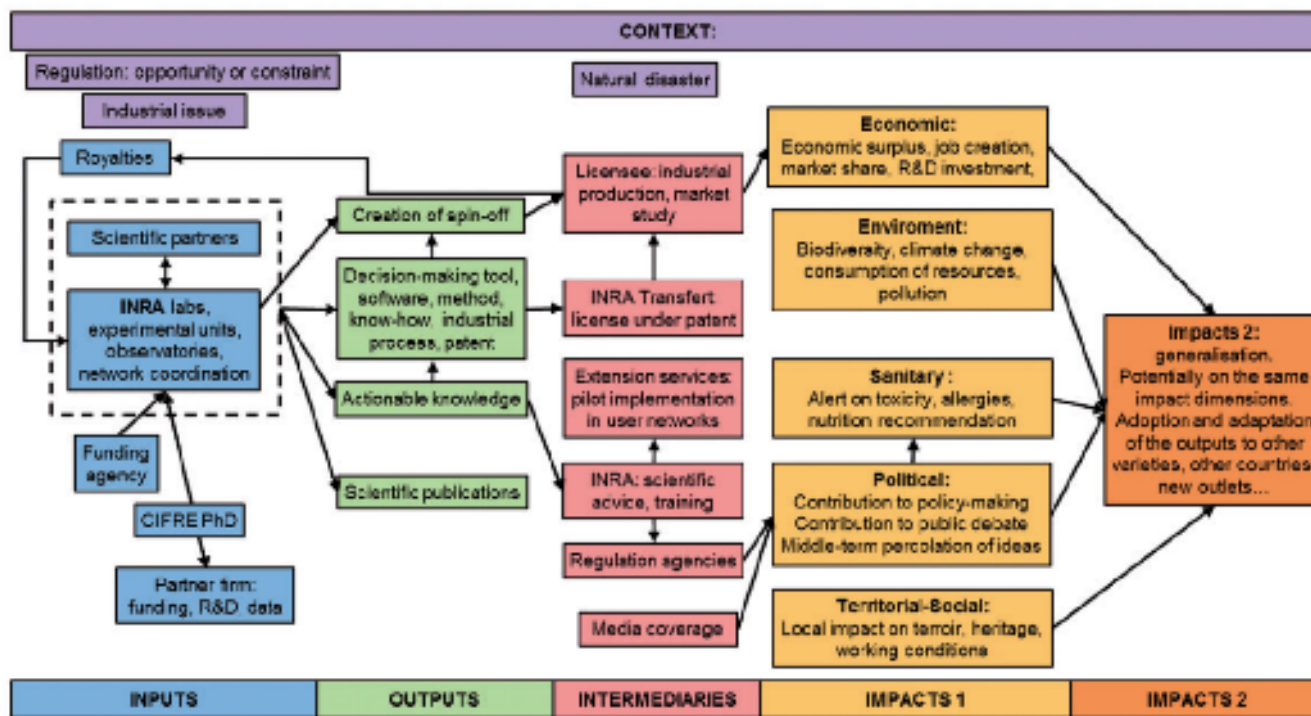


Figure 2. A fictive impact pathway according to ASIRPA.

A processual and contextual analysis:

- That aims at identifying actors and *productive interactions*
- That takes into account synergetic and systemic effects
- That allows to identify the *contributions* of different actors to the generation of impact
- Understanding the different dimensions of impacts

A SYSTEMATIC ASSESSMENT OF THE DIFFERENT DIMENSIONS OF IMPACTS

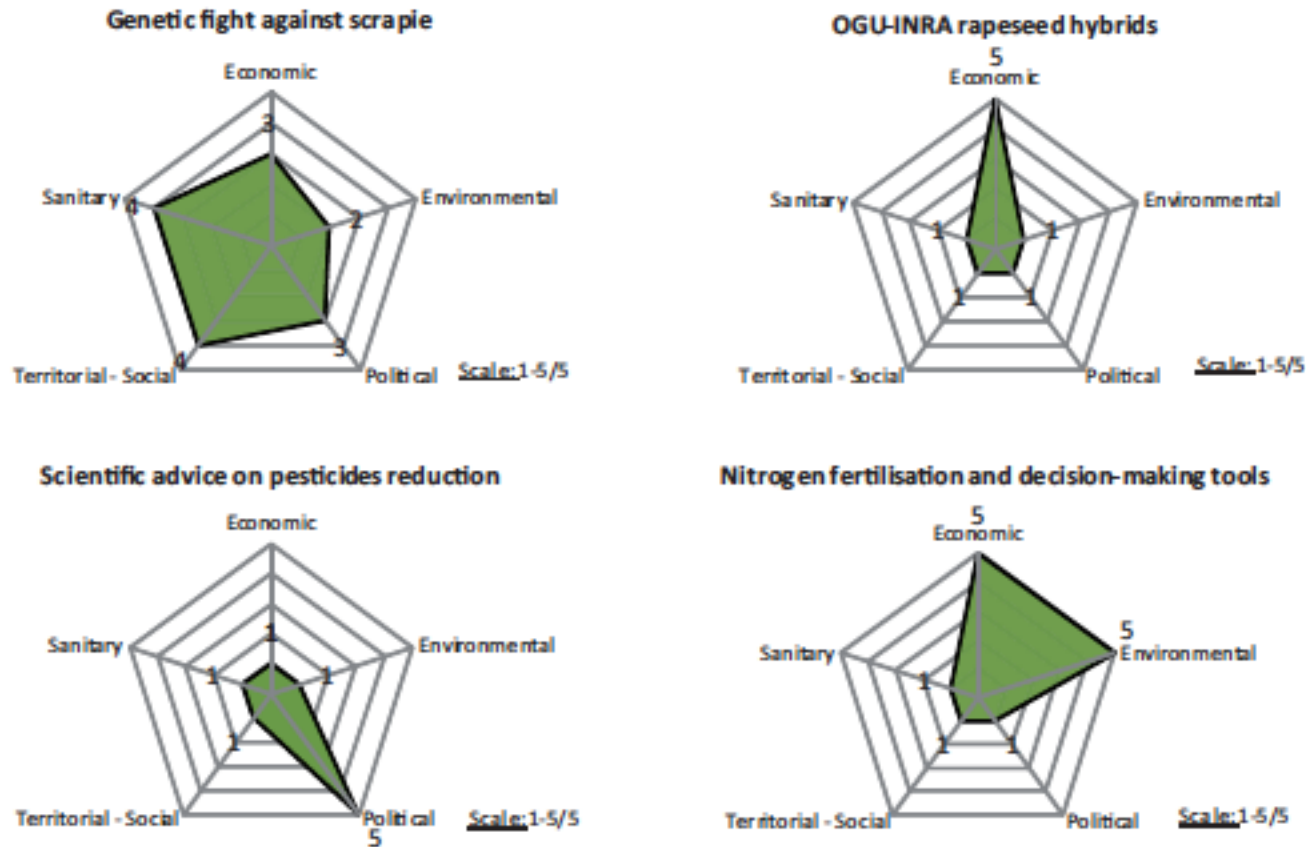


Figure 3. Example of impact radars from ASIRPA case studies.

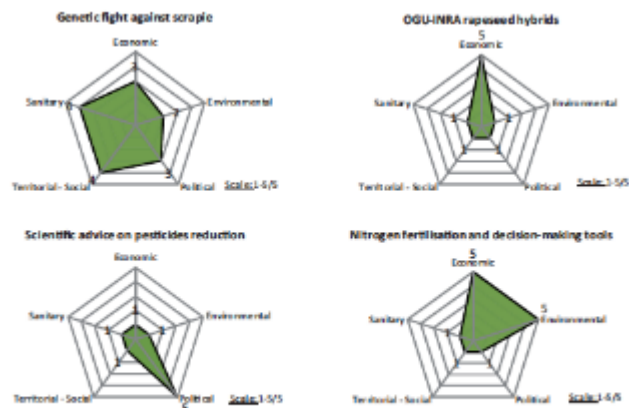


Figure 3. Example of impact radars from ASIRPA case studies.

A methodology designed to:

- Take into account the different *values* of research
- Allow comparability

We propose a methodology that :

- Produces qualitative standardised measures on the basis of local descriptors used by actors involved
- Develops metrology frameworks to quantify some impacts (on policy making, environmental impacts, social impacts) based on expert panel
- Economic impact: cumulated variation of economic surplus

- **General characteristics of Inra's impact pathways**
 - Distribution of impact is highly skewed: few cases with major impacts
 - Diversity of impacts related to Inra's contribution
 - Major impacts are not only economic ones
 - Time lag between research and first impacts = 19.9 years
 - Network of adoption often different from network of knowledge creation
- **A reduced number of impact pathways: Typology**
 - From 32 standardized case studies to 4 ideal-types of Impact Pathways
 - Codification of 100 variables along the Impact Pathway: productive configuration, results, intermediaries, impacts
 - Two discriminating variables : (i) co-production of knowledge ; (ii) transformation of users' sphere
 - For each case we calculate a score for the co-production knowledge index and for the transformation of users' sphere index

=> 4 typical impact pathways further characterized by transversal analysis

TYOLOGY OF IMPACT PATHWAYS



Low.....

Co-production of knowledge index

High

<p>Type 4: Public Research as key initiator of intensive transformation</p> <p>6 CASES</p>	<p>Type 1: Intensive transformation drawing on existing networks</p> <p>11 CASES</p>
<p>Type 3: Market for technology</p> <p>7 CASES</p>	<p>Type 2: Strong collaboration in long term research programs</p> <p>8 CASES</p>

High

**Transfor^o
of user's
sphere
index**

Low

TYOLOGY OF IMPACT PATHWAYS

<p>Type 4 : Public research as key initiator of intensive transformation</p> <p><u>Productive configuration:</u> Research phase rather long (13 years) - Research partners are academic (43% of partners) and technical centers (36%); no firms. Partnership produces excellent knowledge</p> <p><u>Outputs:</u> Products (83%) and methods (50%)</p> <p><u>Diffusion:</u> Hampered by demand failures. Intermediaries are public institutions and technical centers. INRA highly involved in diffusion activities (coordination: 67% of cases; expertise: 83%, training: 83%; contribution to regulation: 67%; production of resources: 80%)</p> <p><u>Impacts:</u> Low (33% cases $\geq 4/5$), mostly political</p>	<p>Type 1 :Intensive transformation drawing on existing networks</p> <p><u>Productive configuration:</u> Shortest research phase (9 years). Largest research network (3 research partners/case) with numerous non-academic partners (82% in research phase; 48% early involved and 56% co-produce knowledge)</p> <p><u>Outputs :</u> Complex objects (3.3 different types/case)</p> <p><u>Diffusion:</u> Large partnerships (3.5 intermediaries/case) and stable (48% of intermediaries were involved in inputs) playing structuring roles. INRA orchestrates diffusion. Major barriers overcome (market access, regulation)</p> <p><u>Impacts:</u> Very high impacts (91% cases $\geq 4/5$) generated quickly (4 years after outputs)</p>
<p>Type 3 : Market for technologies</p> <p><u>Productive configuration:</u> INRA performs research alone (10 years). Smallest research networks (1.4 partner/case with 50% private firms)</p> <p><u>Outputs:</u> Products (71%) or methods (43%). Intellectual property rights with licensing (86% of cases)</p> <p><u>Diffusion:</u> 75% of research partners are intermediaries. New actors involved mainly firms. INRA is not involved in diffusion</p> <p><u>Impacts:</u> Low (43% cases $\geq 4/5$) mainly economic</p>	<p>Type 2 : Strong collaboration in long-term research programs</p> <p><u>Productive configuration:</u> Longest research period (25 years) on risky research programs. High co-production of knowledge (73% of partners). Strong participation of non-academic partners (79% of partners) providing infrastructures (60%), but involved later in the research phase (79%)</p> <p><u>Outputs:</u> Mature technical objects and methods</p> <p><u>Diffusion:</u> Renewed network (21% of research partners are intermediaries), mostly private actors. Important role of INRA in experimentation and market structuring</p> <p><u>Impacts:</u> High environmental and health impacts. Longest diffusion phase (10 years)</p>



Thanks for your attention!

To know more about ASIRPA

<http://www6.inra.fr/asirpa/>

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