### Looking back and forward: Lessons from farming system research in France

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#### Plan



- > 30 years of history: the SAD Department within INRA
- > Knowledge production in the French FSR
- > What is to be learnt for the IFSA Community?



# Thirty years of history: the SAD Department within INRA



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# An organisational innovation creation of SAD Department in 1979

- ➤ INRA: a research institute committed to the modernization of agriculture during the 50's and 60's
- ➤ Some researchers start to question top-down approaches of innovation in the 70's.
- A strong habit of pluridisciplinary work in so called agronomic « engineering schools »
- ➤ Planning issues and pluridisciplinary research programmes in rural areas to limit drift from land
- Over production, environmental damages : first signs



### SAD Department: interdisciplinarity, systemic modelling, action and innovation

- ➤ agronomists and economists ...and animal scientists management scientists, social and human scientists, ecologists, geographers,...within permanent research units to:
  - build and explore new objects
  - develop systemic modelling
  - address problems expressed by farmers or various collectives

➤ Action-research or intervention-research: transforming the world to understand it, supporting innovation

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# **Knowledge production and FSR Research objects, key principles**





### Farm functioning and typologies: diagnosis and decision tools

- ➤ A systemic research tradition based on adaptive or bounded rationality and systemic modelling (Operating, Information, Decision, Memorizing system)
- > The project of the farmer and his(her) family: at the core of FS
- Diversity of farms = diversity of farm functioning
- Practices as a key analyser of the relations between different parts of system (practices versus techniques)
- ➤ New entities to be considered (« sole », batches..) to develop decision support systems

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# Collective action, norms building, learning processes: example 1

#### Fire management in the Mediterranean scrublands

- Reformulating the problem: strips or pastoral management to prevent bushfire?
- > Results:
  - new agreement between forest owners, local authorities firemen and shepherds
  - > training for shepherds and new fodder references
  - new knowledge on animal nutrition: the MEAL model



# Collective action, norms building, learning processes: example 2

#### Water management: mineral water and nitrogen leaching

- Finding an indicator to create the dialogue: the marginal cost of nitrogen
- > Results
  - Methods to measure nitrogen dynamics in a water catchment
  - ➤ An organisational innovation : role and skills of a third part in finding new agreements enabling learning processes at farm and collective level
  - ➤ Insight in an action-research and interdisciplinary work to support the emergence of a new management process.

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# Collective action, norms building, learning processes: example 3

Developing on-farm products in Corsica

- Finding a new concept: the pork sausage « ready to extend the eaten date »
- ➤ Results
  - ➤ New technologies to produce pork sausage
  - knowledge in food technology but also in the building of collective food standards
  - > Empowerment of local farmers and traders
  - Rules of co-ordination to develop new product qualification and food standards (AOC, IGP)



# Collective action, norms building, learning processes: example 4

#### Supporting local authorities in building a LEADER project

- Proposing an « empty » concept as a boundary object: « intermediate areas »
- > Results
  - Lessons to build an transdisciplinary project: individual and collective skills in the research team
  - Role of an « empty concept » to build a collective vision for the future
  - ➤ A LEADER proposal written with the various groups concerned by the local development of the French Pays Basque area.

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# Collective action, norms building, learning processes: common features

- Systemic thinking and modelling applied to: local food systems, local resources management, landscape and biodiversity
- Developing tools and concepts: intermediary or boundary objects among researchers and their research partners
- The socio-technical dynamics of the collective action as central to understand/support innovation
- Modelling: paying more attention to the process than to the resulting model



### Some key principles in French FSR

- « In situ » research , local involvement
- Problem finding as important as problem solving
- Projects and management entities as entry point for systemic modelling and systemic thinking
- Management entities and practices as socio-technical constructs
- Change and risk are key analysers to define the limits of the system with the concerned actors
- ➤ Reflexivity on action-research and research inquiries meant to address the technical and the cognitive and social dimensions

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### What can be learnt from this history by the IFSA Community?





### IFSA Community: open and creative

- ➤ A community in movement: new comers, new ideas, new theoretical background and a risk to never set the Thames!
- > A community which might have to
  - > build a research tradition which can be transmitted?
  - avoid vampirism: others pick the ideas but forget the research practices and tradition!
- Organizing the capitalization
  - > State of the arts?
  - Book editing
  - ➤ An IFSA sponsored journal?

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### IFSA Community: pluridisciplinary

#### A community which might have to:

- ➤ identify research objects which address the complexity of the situations and as well allow to carry on inter- and trans-disciplinary researches?
- ➤ to investigate further system modelling and thinking as processes to support problem finding and solving in local situations?
- ➤ take responsibility for developing ID skilled researchers
  - ➤ spaces for experience sharing (skills and abilities)?
  - ➤ training courses across Europe ?



### IFSA Community: local is beautiful!

A lot of nice and rich case studies ....how to create opportunities to build more generic knowledge within the Community?

#### Being local...but thinking global:

- ➤ linking what is at stake in local situations to global issues
- developing a dialogue with policy makers and stakeholders dealing with global issues

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### By way of conclusion

Diversity is nice and relevant .....but has to be organized to keep the dialogue going on amongst

- the disciplines
- newcomers and old fellow travellers
- researchers and their partners in local situations
- researchers involved locally and policy makers and stakeholders dealing with global issues.

### THANK YOU FOR YOUR ATTENTION!

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