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LINKING INNOVATION AND RESEARCH

SCAR-cwg Agricultural Knowledge and Innovation Systems

CONTENT OF THE PRESENTATION

o Background of SCAR and the Collaborative Working Group

o Some theoretical notions on Innovation Systems, AKIS and social innovation

o Science, R&D and Innovation – and the role of the EU

o Conclusions from the collaborative working group AKIS-2

INNOVATION IS A BROAD CONCEPT

- The implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organisational method in business practices, workplace organisation or external relations. [source: OECD]

- Also the public sector can innovate !
  (and public aspects of agriculture)

Social Innovation

- The concept of social innovation originates in critiques of traditional innovation theory. By calling for social innovation, new theories point at the need to take the social mechanisms of innovation into account (*social mechanisms of innovation*)

- In the context of rural development, social innovation refers to the (social) objectives of innovation – that is those changes in the social fabric of rural societies, that are perceived as necessary and desirable in order to strengthening rural societies and addressing the sustainability challenge *(social inclusion / equity: the innovation of society as well as the social responsibility of innovations*)

NEED FOR INNOVATION

- How to feed 9 billion in 2050 in a sustainable way
- Economic crisis and the need for innovation
- Agriculture and food industry as an attractive sector to invest in:
  - *Good returns expected*
  - *Sustainability problems have to be solved*
  - *Not much risk that the industry will leave the region*

- Reflected in policy measures, including Horizon2020 and the renewed CAP

THE FOOD CHAIN AND AKIS
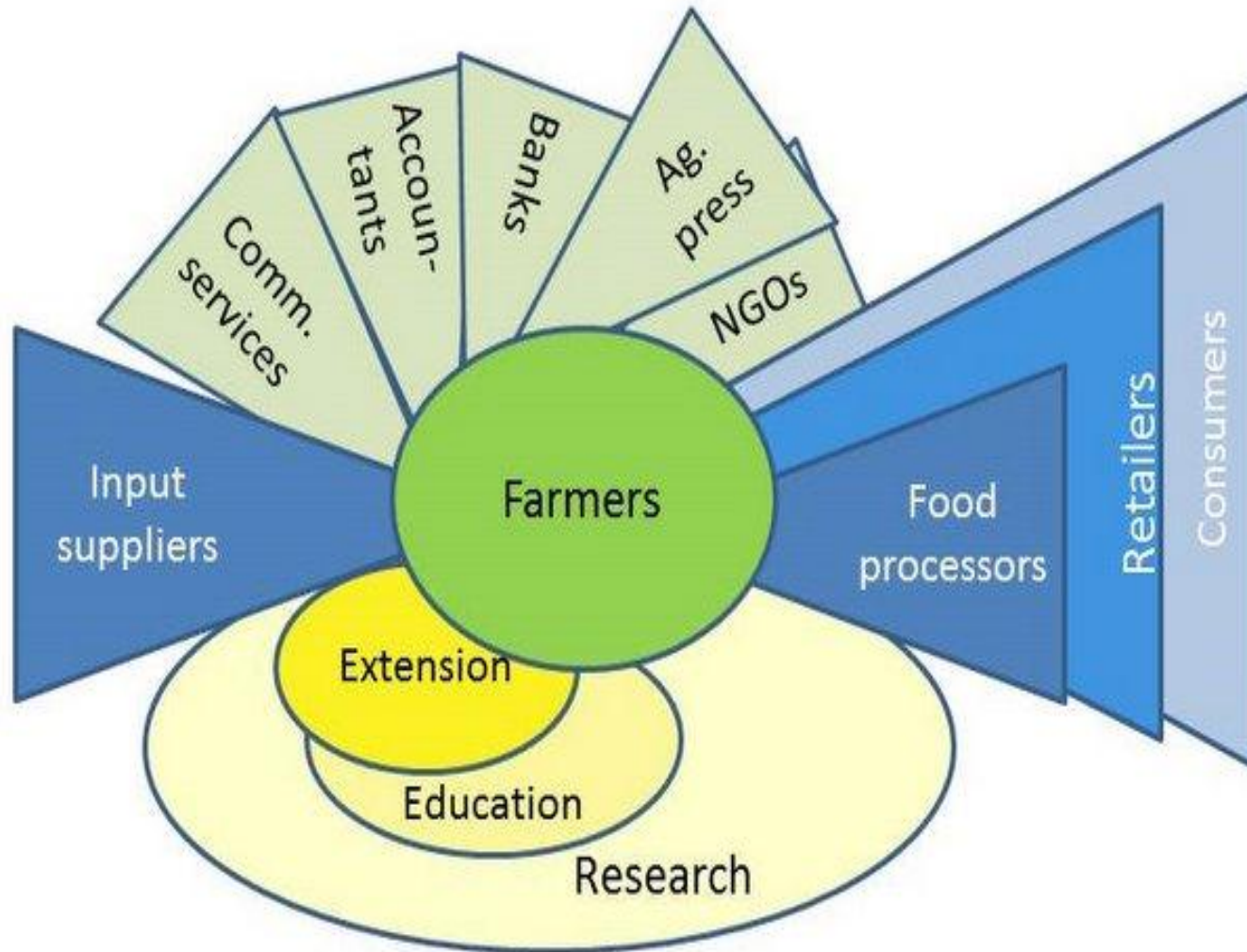
INNOVATION BY INTERACTION IN NETWORKS

- Innovation as a process has strong learning aspects: learn how to do new things, bottom-up.
  - Alternative: force (or pay for) quality standards, mandates
- Thematically-focused learning networks of different actors can help.
- Generating learning and innovation through interactions between the involved actors.

- Members can include farmers, extension workers, food industry, researchers, government and ngo representatives and other stakeholders.

Different objectives, methods, and public roles

Science

- Science driven knowledge development
- Basic research
- Linear model
- Cross overs sectors
  Society sets agenda
  PUBLIC TASK

Market driven R&D

- Science for competitiveness or social issues
- Business sets agenda, helps to steer, uses results
- PRIVATE-PUBLIC PARTNERSHIPS

Innovation in partnership

- Prototypes // Localisation
- Change business models / finance
- Food chain is co-creator
- (De-)regulation, procurement etc.
- LEARNING AND INNOVATION NETWORKS
- INFORMATION BROKERS

Role of EU policy

Science

- Countries are too small, large spill overs: pool funds
- Compete and collaborate with US, China, Brazil etc.
- Help re-organisation process in Europe (infrastructures)

Market driven R&D

- Collaborate with business in Food Chain in PPP
- Manage spill overs between EU regions

Innovation in partnership

- AKIS are REGIONAL
- Innovation , not dissemination
- Organise international exchange for spill-overs (farmers, extension)
- Empower innovation groups in CAP
- Don't forget monitoring (learning)

EIP-AGRI's Key Entities: Operational Groups (OG)

- Built around concrete innovation projects

- A combination of different competencies (practical and scientific), chosen in view of implementing concrete project objectives

- Action- and result-oriented groups aiming to benefit from interaction for <u>co-creation and cross-fertilisation</u> (interactive innovation)

- An OG may have various sources of funding:

Horizon 2020   **National Funds**   **Rural Develop-ment**   **ERDF**   **Private Funds**

Agriculture and Rural Development

Key Acting Entities Within the EIP

- Operational Groups -

"Operational Groups" are no stakeholder networks, no stakeholder boards, no thematic coordination groups, nor discussion groups

An OG = actors <u>working together</u> in a project targeted at innovation and producing concrete results

Thematic networks under Horizon 2020

- Projects **involving all concerned stakeholders** (researchers, farmers, advisors, enterprises, education, NGOs, administration, regulatory bodies…): no pure research networks

- Stocktaking, mapping and **state-of-the-art of existing scientific knowledge & best practices**: what do we have/what do we miss to make used

- **Projects must develop end-user material** to facilitate the discussion on, sharing and dissemination of knowledge in an easy accessible way: **input for education and a research database for end-users** (long term availability of results in a common format)

Multi-actor projects in Horizon 2020 Work Programme 2014-2015

- "multi-actor" is more than a strong dissemination requirement or what a broad stakeholders' board can deliver

- "*all along the project*" *: **a clear role for the different actors** in the work plan, from the participation in the planning of work and experiments, their execution up until the dissemination of results and the possible demonstration phase.

- Project proposals should illustrate sufficient quantity and quality of **knowledge exchange activities**

This should generate **innovative solutions that are more likely to be applied** thanks to the cross-fertilisation* of ideas between actors, the co-creation and the generation of co-ownership for eventual results.

(*legal base in Specific Programme)

NATIONAL AND REGIONAL GOVERNMENTS CAN STIMULATE INNOVATION

by implementing the EIP through multi-actor operational groups that work in a participatory way.

This should be translated in an instrument portfolio that:

• Gives incentives for research, development and innovation;

• Stimulates knowledge exchange, adoption of innovation, technical application in the production process;

• Supports the activities of facilitators, innovation brokers and tutoring paths for farmers to implement innovations;

• Value the input and knowledge of farmers;

• Supports operational groups also to develop cross-border interactions;

• Invests in AKIS-subsystems that have been underdeveloped in the specific national or regional situation.

Special attention is needed to incentivize research to be responsive to the needs of innovation processes

	Policy	Institution
Incentives "pull"	P1: New evaluation criteria for funding of research proposals	I10: Include societal impact into the overall evaluation of a researcher's performance
	P2: Include practitioners/experts on selection committees for project funding	I7: Training courses for academics at all levels
	P3: New evaluation criteria for performance of institutions	
	P5: Funding for research-practice partnerships	
Enablers "push"	P4: Sabbaticals for short-term visits of researchers outside academics	I8: Creation of centres for Integration and Implementation Sciences
	P6: Data base for high quality non-academic publications	I9: Data base on institutions, methods, tools, publications, trainings in interactive research

MORE CAN BE DONE THAN RESEARCH.....

- The difference between innovation and research means that governments have more instruments than research to promote innovation.
  - Extension and education, fiscal measures, credit guarantees, innovative procurement, inducements such as prizes and other incentives can help too.
- This implies that in addition to a science and research policy it makes sense to have an innovation policy.
- Cross-border collaboration in innovation should be improved.

EU MARKET FOR RESEARCH AND INNOVATION..

- Cross-border collaboration in research could benefit from harmonisation of rules and procedures for commissioning research, to help to create to a more integrated 'market' for research.

- That does not mean that national or regional authorities should give up their strategy and agenda setting processes, but they could adopt such procedures that research institutes could easier match national and international funds.

MULTI-ACTOR INNOVATION BENEFITS FROM ICT

Software type	Tools evaluated	Successful examples
Knowledge portals (KP)	Search engines: Google, Yahoo Slide and document sharing: Slideshare Video and photo sharing: YouTube, Flickr	VOA3R, eXtension, Chil
E-document management systems (E-MS)	Digital libraries: Groen Kennisnet in NL, Organic Eprints	Organic Eprints, Agriwebinar
Data Warehouse (DW)	Eurostat, FADN	FADN
Groupware (GW)	Wikipedia, Yammer, Crowdsourcing	British Farming Forum, Lego Cuusoo, Climate CoLab, P&G Connect+Develop, Betacup Challenge
Community of practice (CoP)	ResearchGate, Erfaland	Disease surveillance and warning systems, IDRAMAP
Social communities of interest (SCI)	Facebook, LinkedIn, Google+, Ning, Quora	AgTalk+, E-Agriculture, Jeunes-agricultuers, E-agriculture, Rede Inovar
Individual communities of interest (ICI)	Wordpress, Twitter, Blogs	AG Chat

Thanks for your attention

SEE THE WEBSITE OF THE SCAR:
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