



EUROPEAN POLICY BRIEF



Assessing the Multiple Impacts of the Common Agricultural Policies (CAP) on Rural Economies

This policy brief reports results and policy implications from the project CAP-IRE, coordinated by University of Bologna including partners from 8 countries

Final

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INTRODUCTION

Policy context

European rural areas are undergoing major changes. The Common Agricultural Policy (CAP) is the main expenditure chapter of the EU with about 44 billion euro per year. It both directly and indirectly affects the vitality of rural households and the economy of rural areas as a whole.

The CAP, first established in 1957, undergoes regular reforms, of which the most recent were in 2000 and 2003, followed by the Health Check in 2008. Discussions are now focused on the upcoming reform which should shape the CAP for the period after 2013.

Following a consultation carried out by the Commission, a Communication about the CAP post 2013 (COM 672/2010) has been released in November 2010. Three broad policy options are offered, without being mutually exclusive: (1) further gradual changes to the current policy framework; (2) a major overhauls of the policy in order to ensure that it becomes more sustainable, and the balance between different policy objectives; and (3) a CAP with a strong focus on environmental and climate change objectives, while moving away gradually from income support and most market measures.

A number of studies exist on the subject of the CAP and its effects in rural areas. These studies consider the problem at different scales, ranging from the farm level to the world economy. However, most of them focus on specific issues related to the CAP (e.g. changes in crop mixes and profits, environmental effects) or consider only specific policy components (e.g. first pillar payments).

The challenge of the CAP-IRE project is to provide an overview of the inter-linkages between the different components of the CAP and the mechanisms through which they have an effect on rural economies. The project's strategy is to focus on the specific interplay

between the CAP, farms and farm-households as the key node through which to understand the connections between policy and the wider rural context.

The project is based on a mixed method approach. The main results are based on the outcome of about 2400 interviews of farm households and a wide thematic analysis.

KEY OBSERVATIONS

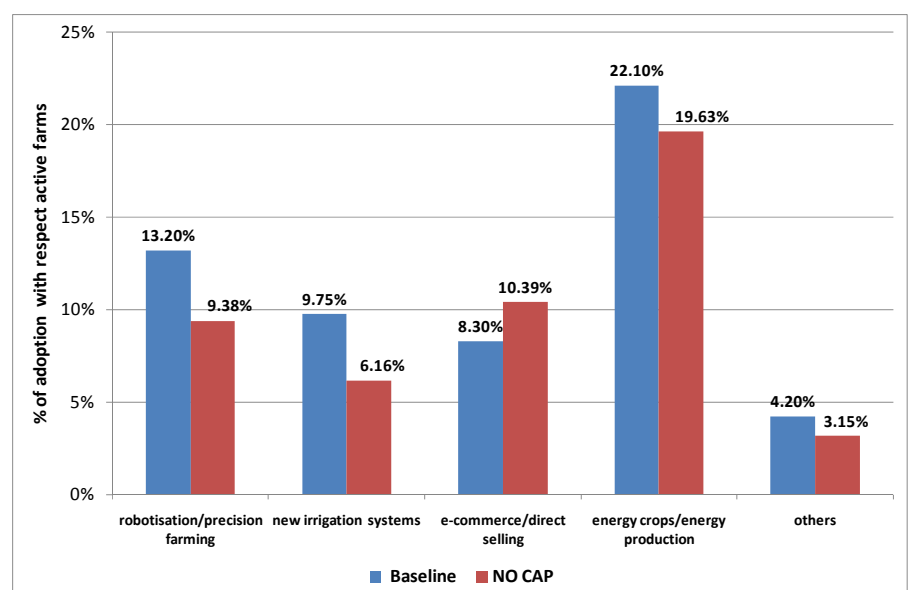
HOW DOES THE CAP AFFECT TRAJECTORIES OF CHANGE IN RURAL AREAS?

Does the CAP contribute to farm structural change and innovation?

Under the baseline scenario (present CAP), the general tendency of structural change into a higher concentration of productive factors in fewer farms is expected to continue, due mainly to exits. CAP scenarios strongly affect such tendency. Results show that with CAP abolishment a reduction in the use of land and capital factors is expected, respectively, by 24% and 30% of the active farmers. Such effect is concentrated mainly in farms that would grow in the baseline scenario. Labour used on-farm is less affected by CAP abolishment (reduction of 18%) and this value is more connected with the expected opportunity of the farm households to engage in off-farm employment.

The removal of the CAP would negatively affect the number of farms adopting innovations in the next ten years. In about half of the interviewed farm households, this is due to the fact that the CAP removal causes farmers to exit agricultural activities. However, even when restricting attention to those staying in farming without the CAP, the NO-CAP scenario significantly modifies the pattern of technology adoption (Figure 1).

Figure 1 - Percentage of expected adoption under Baseline (present CAP) and NO-CAP scenario (subsample of those continuing farming in the baseline).



Source: the CAP-IRE survey.

Uncertainty on the future of the CAP has the effect of hindering early

adoption of innovation, even when such innovation is potentially profitable for the farms. Such effects could be mitigated by increasing “certainty” of access to specific measures which are aimed to reduce risk exposure, e.g. through innovation co-founding.

How does the CAP contribute to rural and local economies?

Standard economic indicators (such as the contribution to GDP and employment) do not account fully for the significant role and interconnections of agriculture in the rural economy. In some regions changes in the CAP scenarios would have a relatively minor effect on the overall regional economy and would remain focused on rural areas. However, such effects may be very relevant in those rural areas with a higher share of income from agriculture.

Connections with input suppliers and product processors/traders are changing in nature (e.g. use of the internet for purchasing production means) and so is also geographic range over which transactions take place (e.g. less local input purchasing due to the spatial concentration of upstream agribusinesses). The analysis suggests that what is considered to be “local” in an agri-business context varies according to commodity type and region (Table 1).

Table 1 - Percentage of transactions occurring within the distance to nearest town of minimum population 3,000 residents.

Source of inputs:	Podlaskie (PL)	Centre Region (FR1)	Midi-Pyrénées (FR2)	North East Scotland (UK)
Fertilizer	88	79	76	19
Chemicals	89	n/a	n/a	30
Seed	87	n/a	n/a	35
Feed	91	n/a	n/a	30
Machinery	88	56	41	56
Fuel	89	n/a	n/a	43
Services	89	n/a	n/a	54
Location of main purchaser	79	59	34	26

Source: the CAP-IRE survey.

After having controlled for differences in the economic structure of localities, the extent to which farm household transactions are local is more dependent on the strength of cultural attachment of the farmer to the local area (as declared by the interviewees by using a quantitative scale) than to characteristics of the farm or other farmer characteristics.

Upstream firms (e.g. agriculture input producers) and downstream firms (e.g. food processors) industries are acutely aware of their vulnerability to a change in the CAP. The results suggest that the impact of a policy which leads to a decline in demand for inputs from upstream businesses or a decline in output sales to downstream businesses would be spatially very heterogeneous across regions (e.g. very concentrated in North East Scotland and more widespread in Podlaskie).

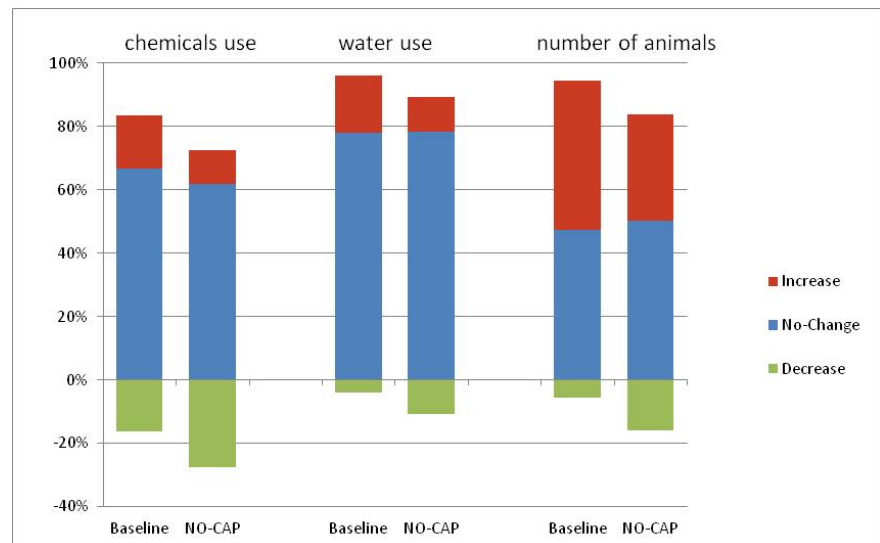
Is the CAP good or bad for the environment?

Farms are reducing their input use over time and are increasingly concerned about how resource scarcity (e.g. water) would affect

production. Farms are also increasingly engaged in policies concerning environmental protection and improvement (e.g. agri-environmental schemes).

Removal of the CAP would induce a relevant reduction in input uses and intensity of livestock production (to which important pressures on the environment are associated, such as nitrogen) (Figure 2). However, it would also result in the abandonment of positive actions aimed at public goods that are connected with the payments to farmers (e.g. landscape maintenance).

Figure 2 – Change in input use under Baseline (present CAP) and NO-CAP scenario.



Source: the CAP-IRE survey.

Heterogeneous behaviour of farmers between the New Member States (EU12) and the others (EU15) emerges, as EU12 countries tend to increase resource inputs in both scenarios and especially in the baseline (present CAP scenario), whilst EU15 members are less influenced by changes in the CAP support.

The present CAP seems to maintain some diversity of crops, but it may also be an obstacle to the diffusion of new options, such as uptake of energy crops, which hints that there is a challenge to find a fair balance between different policy objectives.

Farmers supported by agri-environmental schemes or pursuing organic production declare a different pattern of reaction under the CAP removal scenario. They state a greater intention to decrease use of inputs than the average rate.

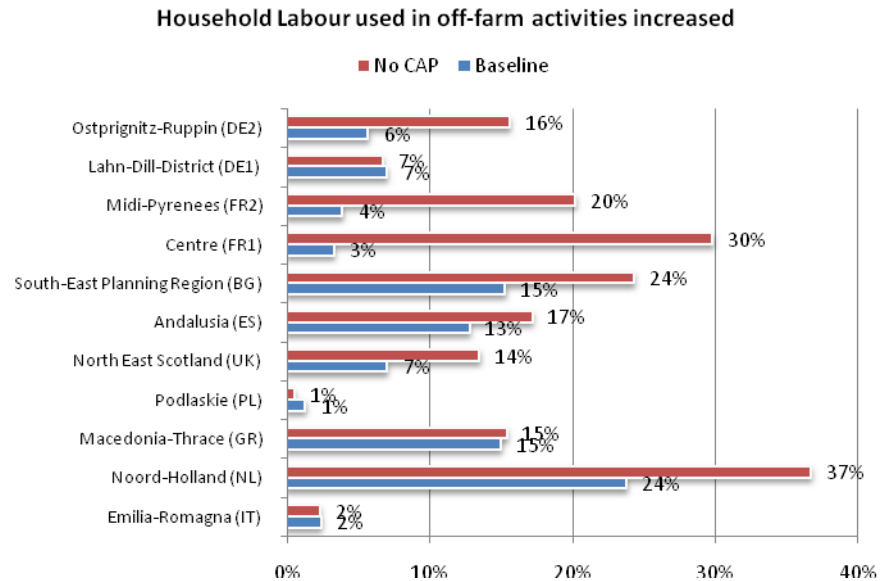
Is the CAP a driver for rural employment?

European rural regions are very heterogeneous in terms of social features and sustainability. Farm exits also imply a reduction in labour used in agriculture.

Changes in CAP scenarios involve minor changes in labour use (only 2-5% of farms affected), except when the situation is full exit from farming activity. This holds for all types of labour (household on-farm, household off-farm, hired). Farmers in most case study areas are no longer only active in the production of raw materials for

agro-businesses but rather they are more and more involved in other activities such as agro-tourism, environmental protection, etc. (Figure 3). The same results are expected for organic farmers who will continue farming in both CAP-IRE Scenarios. They would decrease their on-farm activities and specifically household labour used in the farm (Table 2).

Figure 3 – Household labour used in off-farm activities under baseline and NO-CAP scenario.



Source: the CAP-IRE survey.

Table 2. Household labour used in the farm

	Organic farmers continue farming in the BASELINE Scenario		Organic farmers continue farming in the NO CAP Scenario	
	BASELINE	NO CAP	BASELINE	NO CAP
Increase	32.9%	32.2%	37.8%	34.7%
No change	53.6%	39.0%	54.1%	42.9%
Decrease	7.2%	14.4%	3.1%	13.3%
Other	0.5%	0.8%	1.0%	1.0%
Do not know	4.8%	9.3%	4.1%	8.2%
Do not answer	1.0%	4.2%	0.0%	0.0%

Source: the CAP-IRE survey.

However, the effects of the CAP changes can be important for specific categories, e.g. reduction of 8% in the labour use of seasonal workers is envisaged in NO-CAP scenario. In addition, the results confirm the relevance of labour connections with specific crops, driven by different policy scenarios. Specifically, any policy scenarios different from the baseline (not just the abolition of the CAP but also an environmental and a subsidiarity scenario) have negative effects on part time workers, females and non-family workers in most of the case study areas.

How does governance adapt to new challenges?

Social and business networks are changing in rural areas. Farms and households are progressively disconnecting from each other; it is becoming more common that a single household as a unit does not own or govern a farm. Often there are more than one legal owner(s). New forms of coordination in accessing resources (land) and interplay with traders and processors are becoming more important. Different governance structures concerning the organisational form of the farm household, governing labour and land, as well as other inputs and outputs, and the participation in networks affect the resilience of farms. Concerning the use of land it holds that farmers who lease a larger part of their farm are more likely to quit business.

Networks such as business partners, advisory systems, associations, informal connections are important for farmers in their decision to continue their agricultural household when confronted with different policy options. Business relations also change as a result of the changing CAP and increased risk due to more volatile prices. Improved use of production contracts between farmers and the processing industry and other integration options along the production chain seem to be relevant strategies to deal with uncertainty in the economic context.

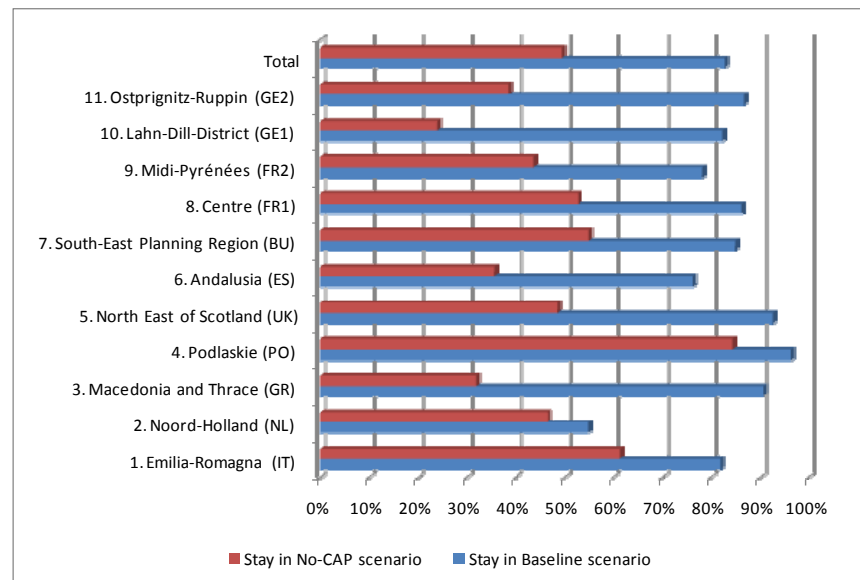
Overall outcomes and cross cutting issues: farm exits as a pivot variable for rural development

Heterogeneity of farms (in terms of size, organisation, technology) and farm households (in terms of number of members, employment, dependency on farming income) seem to be growing both across and within each region.

Exits from agriculture continue at a high pace. On average 20% of farms are expected to exit in the next 10 years even if the CAP follows a baseline scenario. However, land abandonment is significant only in disadvantaged areas.

Removing the CAP would sharply increase the exit rate. About 30% additional farm households would stop farming if the CAP was totally removed. However, the effect is very heterogeneous and also depends on external factors (such as unemployment rates in the area) (figure 4).

Figure 4 - Farmers stating they would continue farming in the next 10 years (% of respondents).



Source: the CAP-IRE survey.

On the contrary, changes in household locations in the coming years concern a minority of cases and are only slightly affected by the CAP.

The rural agricultural systems are widely and increasingly affected by external scenarios (prices, etc.). After 2003, the CAP lost most of its role as an “interface” with the world outside the EU. Altogether, however, it still provides income support and affects production choices of individual farm households.

Alternative visions of the future of farming in the EU and related policy will continue to deeply shape farming activities.

POLICY IMPLICATIONS

Messages for European policy-makers

a) Need and relevance of agricultural policies:

while the overall economic contribution of farm-households in rural areas depends on the weight of agriculture in each area and the local connections, the CAP continues to play a major role in affecting agriculture and agricultural production, and the farming population.

b) Re-specifying policy objectives and role:

- more attention may be given to measures targeted at innovation and support of entrepreneurship, additionally to income support;
- strengthening the connection between productive agriculture and the environmental/social dimension of agriculture: the growing attention to competitiveness requires potentially a reallocation of environmental concerns on farms and potential specialisation of areas/farm typologies in producing environmental public goods; the key question is to identify those situations in which environmental protection is actually synergic with competitive sustainable production;
- taking into account the non-agriculture related contributions that farm-household members make to local economies through, for example, off-farm employment and on-farm diversification activities.

c) Accounting for regional or farm differences:

- further integrating differentiated regional and farm needs with respect to agriculture, i.e. measures addressing farm abandonment through income support may require more focus in specific areas and household features; more targeted measures with respect to land abandonment in less favoured areas is required;
- considering differences in social indicators among rural areas, including labour allocation in farming and off-farm activities; long-term unemployment and low education levels in some rural areas;
- taking into account differences in governance structures of farm households, governing input and output, the role of networks, and the institutional environment of regions when designing policies;
- considering the importance of farm household governance, including input and output governance, for the resilience of farm households to disturbances such as the financial crisis;
- recognising the spatial concentration of agriculture-related businesses in some (but not all) rural areas and the associated vulnerability of some rural towns should there be a decline in farm production.

d) Addressing key variables in policy design:

- time frame, policy predictability and coordination over different policy objectives remain key issues in policy effectiveness;
- there is a need to take into account the flows of goods and services and their spatial dimensions, including the key nodes (firms, locations) through which such goods and services are exchanged, in targeting policy measures, particularly those related to investment and innovation;
- need for further targeting of environmental, rural development and socially focused measures. There is a need for better accounting of self-selection issues in policy design, i.e. taking into account that not all farmers/farms are the same and they would participate differently to the same policy; higher attention should be paid to the connection between environmental behaviour and other variables (e.g. farmers' age);
- the role of farm governance structures should be more explicitly taken into account. A relevant policy aim could be to stimulate diversity in regional economies to make farm households more resilient to shocks.

e) Improving policy evaluation:

- a significant number of farmers state the intention to abandon farming if CAP is abolished. The dramatic structural changes that would arise from the abandonment require improved tools for *ex ante* policy analyses;
- CAP effects change radically depending on other forces, such as an increase in productivity or changes in the world markets, which require specific attention to context of scenarios.

f) Further scientific evidence is needed on the following:

- the project has shown once again how difficult it is to understand the links between farms and rural areas, in particular due to the lack of available data regarding the economic environment of farms, and the difficulties in modelling such links, even when data is collected through surveys. Accordingly, the study of the interplay between farms, farm-households and rural areas through their multiple social and economic connections remains a key issue in supporting evidence-based policy for agriculture and rural areas.
- The process of farm exit is a complex issue which needs to be understood beyond the mere reduction in the number of farms, and requires a more focused analysis. Is land re-allocation a virtuous or vicious process?
- What are the complex modes of farm governance, including ownership, and the role of entrepreneurship connected to farming? How can we improve the resilience of farm households and rural areas to changes in the social and business environment?

- the results suggest that there is a case for extending the existing FADN (Farm Accountancy Data Network, the EU-wide network collecting accounting information on farming) survey by adding additional questions on farm household purchasing and sales decisions, similar to those included in the USDA ARMS (the Agricultural Resource Management Survey carried out regularly in the USA).
 - there is a need for a better understanding of the interplay between the different components of the CAP with respect to the environment, e.g. the positive effect of the CAP in supporting environmentally friendly practices vs. the negative effect of stimulating the use of polluting inputs; the unit reduction of pollution vs. production increases due to support; the interaction between cross-compliance (environmental requirements to which CAP payments are conditioned since 2005) and agri-environmental schemes.
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RESEARCH PARAMETERS

Objectives

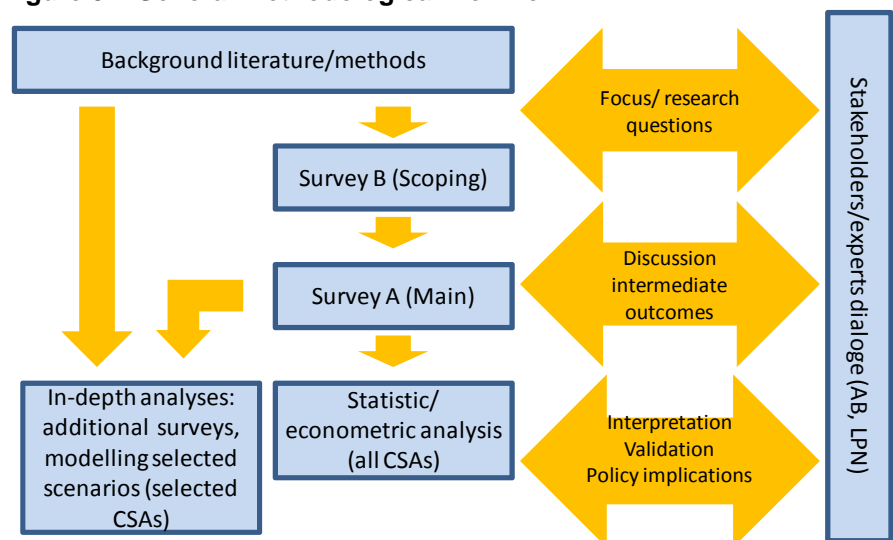
The objective of CAP-IRE is to develop concepts and tools to support future CAP design, based on an improved understanding of the long-term socio-economic mechanisms of change in rural areas.

The reaction of farm households to CAP reforms is analysed under the lens of six thematic, and one cross-thematic, viewpoints: 1) farm structural adjustment, investment and innovation; 2) chain interactions between agriculture and related economic sectors; 3) environmental sustainability; 4) social sustainability; 5) interactions between rural communities and the rest of the world; 6) farm and rural governance issues; 7) the interplay between the previous aspects.

Methodological approach

CAP-IRE has a strong empirical approach. The project strategy was to rely on a consistent combination of secondary data on rural areas, original surveys, econometric and programming modelling of policy scenarios and stakeholder/expert involvement (figure 5).

Figure 5 – General methodological workflow



The geographical coverage includes 11 case study areas (CSA) in 9 EU countries.

Surveys and data sources

A preliminary survey (“Survey B”), was carried out on a farm-household sample of 55 units, with an in-depth face-to-face questionnaire aimed at screening relevant issues and testing questions for the main survey.

The main survey (“Survey A”) contained questions concerning farm/household characteristics, patterns of change in a baseline scenario (present CAP) and reactions to an extreme “NO-CAP scenario”. The main features of survey A are summarised in table 3.

Table 3 – Survey A – Sample features

CSA	Number of interviews (farm-households)	Way	Response rate
1. Emilia-Romagna (Italy)	300	Telephone	62%
2. Noord-Holland (Netherlands)	300	Postal	21%
3. Macedonia and Thrace (Greece)	300	Telephone / Face to face	55%
4. Podlaskie (Poland)	249	Face to face	95%
5. North East of Scotland (UK)	168	Telephone	68%
6. Andalusia (Spain)	201	Face-to-face	75%
7. South-East Planning Region (Bulgaria)	273	Face-to-face	92%
8. Centre (France)	140	Face-to-face	35%
9. Midi-Pyrénées (France)	155	Face-to-face	31%
10. Lahn-Dill-District (Germany)	117	Postal	20%
11/1 Ostprignitz-Ruppin / North-East Brandenburg (Germany)	160	Postal	14.6%
Total	2363		

The sample was selected by random methods from the list of beneficiaries of CAP payments in each case study area, with appropriate stratification according to the features of each area.

Analysis of survey information and in-depth analysis

The project methods include:

1. Descriptive statistics on survey A.
2. Statistical and econometric analyses to explain the determinants of the current direction of change and the impact of the CAP concerning:
 - Farm size and structure
 - Innovation
 - Chain connections
 - Labour use
 - Input use
 - Networking and governance structures.
3. In-depth analyses focusing on specific case study areas, and scenarios simulation, including:
 - Real option models simulating technology adoption:
 - Emilia Romagna (IT), Midi-Pyrénées (France), Podlaskie (Poland), Noord-Holland (Netherlands), South-East Planning Region (Bulgaria)
 - Spatial tracking analysis to explore the linkages between farm households and their immediate local economy:
 - North East Scotland (United Kingdom), Podlaskie (Poland), Centre (FR) and Midi Pyrénées (FR)
 - SAM-based analysis to capture linkages between farm households and the regional economy:
 - North East Scotland (United Kingdom)

- Indicator-based analysis (Driving forces-Pressures-State-Impact-Responses - DPSIR):
 - Andalusia (Spain)
- Scenario analysis based on multi-criteria decision making in order to assess the impacts of different policies on social indicators:
 - Macedonia and Thrace (Greece), Andalusia (Spain), South East Planning Region (Bulgaria).
- New institutional economics to represent connections between different households and different issues:
 - North East Scotland (United Kingdom), Noord-Holland (Netherlands), South-East Planning Region (Bulgaria), and Centre (France).

Stakeholders involvement

The project has been based on a strong dialogue with stakeholders by means of an Advisory Board (14 members) and a Local Participatory Network in each case study area (involving about 100 participants altogether). These stakeholders played a key role in shaping research questions, interpreting the results and deriving policy implications.

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Further reading	Research papers and reports are available at http://www.cap-ire.eu
Related websites	http://cordis.europa.eu/fp7/ssh/home_en.html http://ec.europa.eu/agriculture/index_en.htm
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