

# Defining scenarios for local agricultural systems development through participatory approach: a case study in the Province of Grosseto (Tuscany, Italy)

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**Abstract:** Mediterranean agricultural systems are showing management and environmental uncertainties, locally highlighted by recent reform of the common agricultural policy (CAP). This has stimulated local authorities in charge of territorial management to define a new framework for agricultural production. This is also the context for the Province of Grosseto where research has been carried out to characterize the local agricultural systems. The research has been developed by integrating qualitative and quantitative analysis in a circular learning process between researchers and stakeholders. The four-step methodology has resulted in the organization of thematic focus groups, whose discussions among the stakeholders have provided a platform to enhance the local capability to cope with the changes in the whole agricultural system.

**Keywords:** farming systems, SWOT analysis, focus groups, circular learning

## Introduction

In recent decades farming systems, mainly in the Mediterranean, have undergone different kinds of transformation , either as extensification of marginal areas – sometimes until abandonment – or as intensification of agricultural activities, mainly in highly productive regions (Caraveli, 2000). These transformations have shown a complex territorial distribution, highlighting vulnerabilities both on the management side (e.g. reduced farm competitiveness caused by land tenure fragmentation) and on resources (e.g. erosion risk and water scarcity), as the recent CAP reform has identified. In this context, there is a demand for new development models and strategies from people in charge of the territorial management. There is a need to make farming systems capable to meet requirements for competitiveness and production quality and to fulfill environmental targets.

This paper aims to stress the role the research can play as facilitator of the decisional process of local stakeholders. We describe here a methodology to acquire and synthesize the local knowledge through a participatory approach. As a working hypothesis we have assumed that this approach is suitable to enhance the interaction among local stakeholders (Chambers, 1994) and thus to improve the agricultural system adaptation to changes. A case study has been developed in the Province of Grosseto (Southern Tuscany, Italy) which shows all the above-mentioned vulnerabilities and where an expertise inquiry has been solicited by the local public administration.

## Materials and Methods

The methodology has integrated quantitative and qualitative methods and has taken into account both the temporal and spatial dimensions of farming systems; steps are detailed in the following list.

**STEP 1.** We have used the most recent agricultural censuses (1982, 1990, 2000) to typify and place local agricultural systems (Galli et al, 2007) and to detect main changes in a time span concerned by deep changes in the CAP.

**STEP 2.** We have carried out 45 semi-structured interviews to collect both the institutional and the productive point of view. Questions have stressed mainly spatial and temporal aspects of the changes perceived as crucial by interviewed stakeholders, which have been: (a) local agricultural policy-makers; (b) some economic stakeholders (i.e. farmers' cooperatives, associations of producers, territorial marketing consortia). Each stakeholder has been identified for the type of farming system of reference, the territory of competence, and the role. Territorial data have been detected to provide the

spatial dimensions of change and innovation processes for each sector. Information on the role the stakeholders play has helped to frame the network of stakeholders' relationships, hence making explicit the economic, commercial and power links among all the involved subjects.

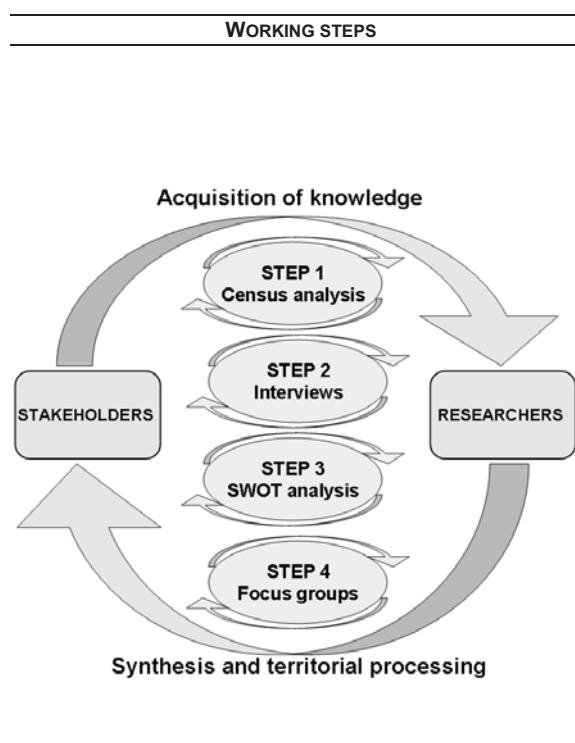
**STEP 3.** Results of interviews have been used in a SWOT analysis, focused on the stakeholders' viewpoint on each farming system. Results have been also used to perform an "occurrence analysis", which counts how many times a given factor (i.e. socio-economical, political, technical) has been quoted in the survey. Such analysis of the interviews have helped as well to identify and characterize the key productive sectors of the agricultural system as a function of strategic interest, territorial and environmental relevance and availability of production structures.

**STEP 4.** As a means of feedback to the local stakeholders we have organized several focus groups. The organizing criterion was the issues of each type of farming system, sometimes related to the territorial location; this is the reason why we have split into two the cereal and livestock farming systems, while we have organized just one focus group for the other ones. Each focus group was composed by two discussion times: (1) presentation of the results of the SWOT analysis, to achieve a validation by participants; (2) identification and discussion of reliable hypothesis and strategies to cope with changes. The 63 participants have been some of the stakeholders previously surveyed and farmers selected by the Province as representative of each farming system.

## Results and discussion

Results of each working step are presented in table 1.

Table 1. Scheme of the circular learning process methodology and results of each working step.

WORKING STEPS	RESULTS
 <p>The diagram illustrates a circular learning process. At the top, it says 'Acquisition of knowledge'. At the bottom, it says 'Synthesis and territorial processing'. On the left, there is a box labeled 'STAKEHOLDERS'. On the right, there is a box labeled 'RESEARCHERS'. Inside the circle, there are four ovals representing steps: 'STEP 1 Census analysis', 'STEP 2 Interviews', 'STEP 3 SWOT analysis', and 'STEP 4 Focus groups'. Arrows show a clockwise flow from Step 1 to Step 2, from Step 2 to Step 3, from Step 3 to Step 4, and from Step 4 back to Step 1. There are also arrows pointing from the 'STAKEHOLDERS' box to the first three steps, and from the 'RESEARCHERS' box to the last three steps.</p>	<p>STEP 1: we have identified 6 farming systems. Among them the cereal and livestock ones are widespread; horticulture and industrial crops are concentrated on the coastal plain. Amid permanent crops intensive viticulture has been recently intensified while olive crops are mainly located in disadvantaged areas.</p> <p>STEP 2: broad information collected during the interviews (farming system, extensions typology, associate number – in the case of cooperatives and farmers associations) have been used to develop a geodatabase about interviewed subjects and their localization and pertinence on the territory. This has helped to enrich the results of census analysis on the spatial aspects of main changes.</p> <p>STEP 3: the analysis has shown that some vulnerability factors are common throughout the farming systems, such as: fragmentation, both of land tenure (farm dimension and subdivision) and of organization of production (product collecting and stocking, transformation and marketing structures); lack of coordination in the productive system; cooperatives not always able to promote and support technical innovation and production planning answering to farmers needs, even if they might offer a proxy assistance because they are widespread on the territory. The strong local identity has been indicated as a relevant opportunity to promote territorial marketing.</p> <p>STEP 4: Participants in focus groups have validated the results of the SWOT analysis; furthermore they have pointed out some new issues (e.g. the redundant bureaucracy required for all procedures). In the second phase, the participants have regained ownership of the results by discussing about some scenarios defining several reliable strategies. The debates have helped in the great part of focus group to achieve a convergence on individual stakeholders' point of view.</p>

## Conclusions

The methodology has been focused on feedback mechanisms among the research phases and among the subjects involved in the learning process. The elaboration at the territorial level has allowed to formalize the knowledge acquired from the stakeholders and to bring it back to the stakeholders. In

this regard the focus groups have been crucial in the linkages among acquisition of knowledge by the researchers and its restitution to stakeholders as synthesis at a territorial level. The enhancement of the interaction among researchers and local stakeholders and the strengthening of an active role of stakeholders in the learning process has shown to improve dialogue among different forms of hard and soft learning while giving an operative support to the territorial management at the whole agricultural system level.

## References

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