

Multi-actor interaction and coordination in the development of a territorial innovation project: some insights from the Cilento Bio-district in Italy

Elena Favilli^a, Tim Hycent Ndah^{b, d}, Yulia Barabanova^c

^a University of Pisa - Department of Agriculture, Food and Environment, efavilli@gmail.com

^b University of Hohenheim, hycenthtim.ndah@uni-hohenheim.de

^c IFOAM EU, yulia.barabanova@ifoam-eu.org

^d Leibniz Centre for Agricultural Landscape Research (ZALF), Müncheberg

Abstract: *Of recent, system perspective for the study of innovations considers an innovation as a context-dependent and complex process, involving various actors that interact along the process, starting from the point of inception to realisation and embedding in a given setting. Specifically, within the context of agriculture and rural development, innovations occur thanks to interaction and cooperation among different actors, working together to realise a common idea either in a given sector, territory or region. But it is also acknowledged that often the functioning of these interactions within a given innovation system depends on strong coordination mechanisms and on the presence of a motivated public intervention. This paper aims at analysing the strengths and the limitations of a multi-actor interaction for the development of an innovation (organic farming) at a territorial level, characterised by an innovative way of cooperating among organic farmers, advisors, NGOs, tourist operators, citizens and public authorities. The study relies on the activities performed within EU funded Horizon 2020 project, AgriSpin (www.agrispin.eu), specifically for the case of Cilento Bio-district in Campania region, Italy. The methodology is centred on the “cross-visit method” developed within the AgriSpin Project, based on direct observation, interviews with relevant actors and analysis of grey literature. In this paper, we will present main insights from the Cross visit on this multi-actor interaction around organic farming innovation organised at a territorial level by specifically highlighting a) the co-operation mechanisms among the different actors involved in the process of Bio-district development and consolidation, b) the coordination of the different innovation support services involved and, c) the implication for the innovation system governance in terms of public policies.*

Keywords: *Cooperation, Coordination, Governace, Multi-actor intaraction, innovation system, AgriSpin project*

1. Introduction

It is widely acknowledged that innovations, particularly in agriculture and rural development, more and more occur when multiple actors interact with each other towards a common goal, by sharing knowledge, experiences and practices. Considering this, it is appropriate to adopt a system perspective to study innovation in agriculture, as well the processes behind the realisation of such innovation (World Bank, 2006).

The innovation systems approach provides a heuristic frame for integrating insights from various theories which seek to understand innovation processes (Hekkert et al., 2007; Edquist, 1997); particularly relevant is that an innovation is considered as a context-dependent and complex process, involving various actors that interact along the process, starting from the point of inception to realisation and embedding in a given setting as highlighted in Wielinga and Patee (2016), building on Rogers (2003).

But it is also acknowledged that the functioning of these interactions within a given innovation system depends on strong coordination mechanisms and on the presence of motivated public intervention.

These aspects are particularly relevant when studying and analysing the development of an innovation at territorial level, where private and public sectors have to cooperate in order to co-govern the innovation process. In summary, a good governance of a territorial innovation implies

cohesion between the various sectors and actors involved (public, private, voluntary, and community) and relies on the development of structures and processes which support collaboration. Inclusive participation is implicit in such structures and processes (Stewart, 2008).

An example of a territorial (social and organisational) innovation is the Bio-district. A bio-district is defined as “a geographical zone where farmers, citizens, tourist operators, associations and public actors sign an agreement (memorandum of understanding) for the sustainable management of local resources, based on organic principles and practices, aiming at the fulfilment of the economic and socio-cultural potential of the territory” (Basile and Cuoco, 2012).

This definition is essentially based on the combination of the “district culture and tradition” with a precise focus on organic agriculture and its significant potential for sustainable territorial development (Pugliese and Antonelli, 2015).

A Bio-district development entails a bottom-up involvement of multiple actors operating in the specific territory, from local communities, to farmers, public authorities and other economic operators. The collaboration among these multiple actors may be more efficient with a strong support system underpinning and facilitating all the phases of the innovation process.

This paper is grounded on the results of Agrispin, an EU funded H2020 project aimed at studying and identifying innovation support practices in agriculture. Main methodological approach of the project centred on the organisation of cross-visits to multi-actor innovation experiences across selected countries and regions of Europe.

Among the innovation cases analysed within the Agrispin project, the experience of the Cilento Bio-district was selected as an example of multi-actor interaction for the development of an innovation at territorial level around organic farming. Cilento Bio-district is situated in Campania Region in southern Italy, and it is the first bio-district experience carried out in Italy. This constituted a starting point and reference case for many experiences that have emerged in the last year, not only in Italy but also abroad: in 2016, in Italy there were 12 Bio-districts formally established and other are in progress, several experiences were born in Europe (i.e. France, Germany) and an international network was established (INNER, International Network of Eco-regions).

Following this background, in this paper, we will present main insights from the cross visit on this multi-actor interaction around organic farming innovation, by specifically highlighting a) the co-operation mechanisms among the different actors involved in the innovation development and consolidation, b) the coordination of the different innovation support services involved and, c) the implication for the innovation system governance in terms of public policies.

The paper is structured as follows: after this introduction, chapter 2 reports the methodology; chapter 3 describes the framework we used for the analysis of our results; chapter 4 the results presented according to the analytical framework and their discussion. Finally, chapter 5 reports the conclusions.

2. Methodology

2.1 Location of the Case study: the Cilento bio-district

Bio-district Cilento is an area of 3.196 km². It is not a homogeneous landscape. Its highly diversified geographical traits determine important socioeconomic disparities existing among local communities. This area suffers from serious territorial imbalances which still remain essentially unsolved. Cilento area is morphologically heterogeneous, as it has coastlands, highly popular among seaside tourists, and mountains distant few kilometres from the seaside.

Apart from its striking morphological heterogeneity, the Cilento area is also profoundly complex in terms of cultural, social and economic relations. It is a deeply entropized area, where a very dense network of socio-cultural and economic relations exists and families are aggregated in small or very small communities. This geographical proximity has favoured synergies and complementarities among economic activities and pushed self-organisation and social innovation (Pugliese et al., 2015).

Cilento is also much known for its agricultural products, still processed by old methods, and for its food heritage, essentially based on ancient family recipes and traditions. Interestingly, the concept of “slow” is inherently part of the “Cilento lifestyle” (Pugliese et al., 2015).

Nowadays, the production of quality foods still represents an important feature of the Cilento's diversified farming systems where organic farming practices are quite widely diffused, even though not always officially certified. More precisely, in the area there are approximately 450 organic farms (23% of total organic producers in Campania region in 2013), 2300 hectares (approx. 8% of the total regional organic land area in the same year) (Pugliese and Antonelli, 2015).

In this land, farmers, citizens and public administrations made a pact for the sustainable management of local resources and this characterizes the Bio-district as a social innovation in governance. Initial activities focused on creating a network of organic farms, producers association, municipalities, caterers, eco-tourism operators and consumers through short supply chain initiatives. In few years, the Bio-district has attracted a large number of local actors, and the activities went from the exclusive creation of a market for organic product to the preservation of local traditions and to the support to rural development.



Figure 1. Geographical location of the Bio-district Cilento (source: Pugliese et al., 2015)

2.2 Data collection

The methodology for data gathering mainly relies on the cross-visit method developed within the Agrispin project (Wielinga and Parea 2016b). The method which was designed to gain a deep understanding of innovation processes, included innovation support providers, researchers, extension officers and policy makers, in a number of innovation case studies analysed in Agrispin. A Cross Visit typically lasted 3 – 4 days and involved a mixed team of between 7 and 10 project partner members drawn from science and practice. The aim of each Cross Visit was to study innovation support services (ISS) in 4 to 5 innovation cases proposed by one host organisation and validated by the projects' Steering Committee (Ndah et al. 2016). A total of 13 Cross Visits in 12 European countries were undertaken with the Bio-district case being one of them.

The cross-visit consisted of 6 steps, distributed along 4 days as highlighted below" (Wielinga and Parea, 2016b).

Step 1 – Kick off. During the first day of the visit, the host organised a preliminary meeting during which the organisation was presented alongside the characteristics of the innovation system of its region/country. In addition, rules for analysing innovation cases were settled.

Step 2 – The field visit. During a field visit, the team studied a particular innovation in a farm or farm related enterprise/organisation. Key actors, such as the farmer or farm family, the support agent and other persons who play a particular role in this innovation are being interviewed.

Step 3 – Reflection on the case. After a visit, the team took time to share observations and to reflect on them: the Spiral of Innovations was introduced as a tool for the analysis. Commonly, in

an innovation process, three phases are being distinguished: the initiative phase, the development phase and the dissemination phase. The Spiral adds four more stages that are often overlooked: inspiration, planning, realisation and embedding. The result of this session, was a poster that visualises the observations and the discussion. This poster represented an input for the symposium at the end of the cross visit (step 6) and for the Learning Histories to be written by the host partner after the cross visit.

Step 4 – Social activity. Somewhere during the cross visit, time was provided to meet each other in a social setting. This is important for building good relations that might continue after the AgriSpin project. There have been good examples, such as cooking together (Netherlands), farm games (Belgium), cultural evenings such as a tropical night (Guadeloupe), gastronomy (Tuscany), interactive drawing (Denmark) and cultural dances dinner (Transylvania).

Step 5 – Preparation of the feedback. Half a day or an evening was used for preparing the symposium at the end of the cross visit. Here, the team formulate pearls, puzzles and proposals, based on what has been observed and discussed. The reflection started individually on cards, after which the harvest was clustered and analysed. Central questions for the reflection were: what did the host organisation do for enabling farmers and other entrepreneurs to innovate? What can be learned from it? What is still unclear or questionable? What ideas are there for improvements? The result is summarised on a poster with three columns: pearls, puzzles and proposals.

Step 6 – The symposium. At the end of every cross visit, the host organises a symposium of half a day, for which key actors and decision makers in the regional AKIS are invited. This is a feedback session where the team and the invited participants exchange observations and opinions.

The cross-visit to the Cilento Bio-district, was organized by IFOAM EU (AgriSpin partner) and hosted by the International Network of Eco-regions (INNER), according to the methodological guidelines provided by Agrispin. Its main goal was to explore the Bio-district Cilento in-depth through interviews with the actors engaged in its development and consolidation. They consisted of: an organic farm (Anna dei Saporì), a buffalo farm (Tenuta Vannulo) and the Study Center for Mediterranean Diet. Interviews performed to these key actors have allowed to understand their level of involvement within the Bio-district and to retrace the different phases of process of Bio-district consolidation from their own perspective.

This interaction between the visiting team and main actors of Bio-district, consisting in interviews with key actors and discussion during the final symposium, allowed for gathering data in order to develop an analysis of the multi-actor interaction from a multi-actor governance perspective.

3. Analytical framework

In order to analyse the results from the cross-visit, we adopted an approach grounded on the idea that territorial innovation projects requires coordination and cooperation in all stages of the process itself. Because these kind of innovations entail also a strong public commitment, the issue of the governance of the system is thus crucial. By adapting some concepts from multi-actor governance literature (see e.g. De Vries, 2000; Hooghe and Marks, 2003; McGinnis, 2005; Stewart, 2008; Pahl-Wostl, 2009; Koopmans et al., 2017), we analyse the coordination and cooperation mechanisms according to different level of interaction among the territorial actors involved in the innovation process.

The development of a social innovation in a multi-actor governance perspectives entails private/public coordination, that starts from the alignment of the common problems, follows with the identification of shared strategies to address those problems and results in the realisation of collective, coordinated actions with the strong involvement of the public sector.

For our purposes, we identified three increasing phases of interaction and coordination, in which private and public actors interact in order to generate specific outputs (Brunori, 2017).

We call the first phase of coordination “*co-production*”. At this level, multiple actors interact in order to define a common narrative and start to identify common problems and common goals. The underlying conditions allowing this are a strong motivation of the actors to start to share ideas (Alford 2013) and the presence of actor(s)/organisation(s) who is committed to foster the interaction.

The second phase of coordination is the *co-management*. In this phase, the cooperation is widen to other actors/organisations in the territory, who start to organise concrete projects in order to

develop the common narrative(s). Here, the support of institutional/public actors is crucial (Koopmans et al., 2017).

The upper phase of coordination, is *co-governance*, which takes the form by establishing strategic partnerships between public, private, social and third sector actors. In this phase, shared decision making processes have to be activated, in order to guarantee the coherence between the ideas and the practice, as well as the commitment of all the actors involved (Koopmans et al., 2017).

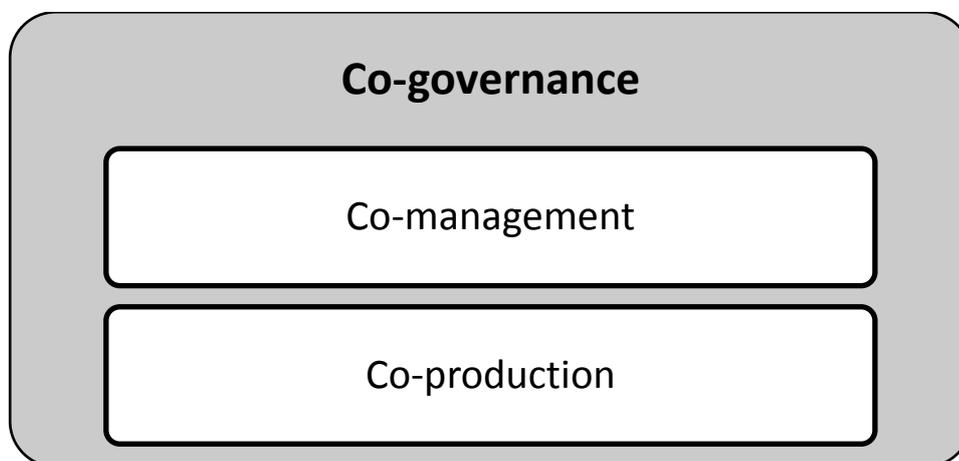


Figure 2. Levels of territorial coordination

4. Results

The elements/main events which characterise the three phases of territorial coordination in the Bio-district Cilento case are provided below.

4.1 Co-production

A strong bottom-up request pushed the creation of Cilento Bio-district, in the middle of the 2000s. Local organic farmers asked for help in marketing and promoting their production. Taking such request into consideration, the responsible officers of the agriculture department of 10 municipalities decided to hold a number of public meetings to debate the issue and to find some solutions.

These public events took place between 2004 and 2007 and AIAB Campania (Italian Association for Organic Farming, the regional branch of the national association) had a very important role in their organisation. These kind of “discussion fora” involved various local stakeholders – citizens, environmental, social and cultural associations, farmers, enterprises, local authorities and research and education institutes – and were aimed at identifying needs and potentialities of the Cilento territory, and to share ideas about perspectives for the sustainable development of the area. The idea behind this approach was to create and reinforce links that would benefit everyone involved. The output of these fora was an agreement to develop a common narrative around organic farming and sustainability for the valorisation of the whole Cilento territory, by working out a strategy for the development of organic food and farming, and working in the direction of constituting a Bio-district.

4.2 Co-management

To implement this approach, AIAB had to work intensively on bringing the representatives of various Cilento organisations and communities on the same page. The process of deliberation and co-creation through the public fora took quite a long time. The first actors who started to concretely get on board and show a formal commitment were the National Park of Cilento, Regional Authorities, AIAB, the National Union of Mountain Municipalities and the “Città del Bio” Association. Later on, other actors (e.g. schools, universities, an archeological organisation and beach administrations, etc) got involved. AIAB in this phase played the role of community interface, connecting various actors who had a little or no history of cooperation and supported the Bio-district concept development with communication, promotion, logistics, fund-raising and coordination.

The initial efforts made to test and promote the “bio-district” concept finally led a core group of actors - namely AIAB, Campania Regional Authority, Salerno Province (agricultural dept), National Union of Mountain Municipalities, the Cilento and Valle di Diano National Park Authority and Città del Bio Association - to sign in 2009, an official Memorandum of Understanding for the creation of the “Bio-distretto of Cilento and Valle di Diano National Park”.

The rationale behind the document entailed the establishment of the Bio-district not only as a tool for promotion and growth for those local enterprises and territorial actors which were interested in organic agriculture, but also, in a broader perspective, as a first crucial move towards a long-needed exercise of shared decision making and joint strategic action for a sustainable and inclusive management of Cilento’s valuable resources and potential.

4.3 Co-governance

As the initiatives and the activities grew, the need of some kind of official coordination and planning became evident. Therefore, in 2011 the non-profit “Cilento Bio-district” association was formally established, and included some core founding actors.

The setting up of a permanent network and the continued exchange among all actors is a basic principle of the Bio-district and, after 10 years of effort in this direction, quite an important achievement of the core group, making sure in these years decision were taken through a participatory process and therefore shared in an perspective of co-governance.

The Association mainly focuses on communication and promotion, as well as on planning and fundraising. It has been established to play a fundamental catalysing role in the development of the project.

The members of the Association represent the interests of the different stakeholders living and working in the area, whose specific needs are gathered, discussed and taken into consideration in the drafting of the Bio-district development strategies. As a result, an “Integrated Territorial Development Plan” was finalised to be proposed to the Regional Authority. On the basis of available funds, negotiations will be made and priorities set for future action, the implementation of which will be delegated to municipalities.

In order to concretely improve life conditions of residents, Bio-distretto *municipalities* are currently working at creating a joint management system for some public services like transport, waste management and green public procurement.

Also in this phase, AIAB continued to play the bridging role between the institutional core group and the “field”, where activities are carried out and new ideas and initiatives continues to emerge.

4.1 Discussion of results

In the previous chapter we provided a description of the main interaction mechanisms among Bio-district actors, occurred in the three phases of coordination. The analysis done by AgriSpin partners during and after the cross-visit provided evidences of these processes (Paree and Wielinga, 2016).

Co-production

[...Bottom up discussion and sharing of common problem and definition of a common strategy (narrative) to promote Cilento territory. Organisation of discussion fora, to which participated organic farmers, consumers, municipalities and other interested actors...]

One of the pearls highlighted at the symposium has been the acknowledgement that the bottom-up approach allowed and fostered a complex collaboration of actors not linked in normal practice. The “organic view” narrative emerged as a goal to propose as alternative to the global model.

Interviews with two farms among the initiators of the Bio-district development, who participated at the discussion fora have shown that two different business models (one oriented to high technology and quality production, the other to promotion of alternative local cuisin) of organic farms can collaborate if oriented towards a common goal.

These evidences confirm the presence of a strong motivation of the actors to start to share ideas and identify common goal, as highlighted in the analytical framework as fundamental aspect of the first phase of territorial coordination (Alford, 2013).

Co-management

[...broad cooperation and involvement of other actors (tourism enterprises, parks, centre for mediterranean diet etc). Direct collaboration in common activities started...]

The group discussion with the local actors during the symposium has allowed rebuilding the story of the process, also its consolidation and the beginning of concrete alliances. After the discussion fora, some actors started to get on board, by concretely direct activate collaborations.

The visit at “Anna dei sapori” agritourism, to which was present the mayor of Castelnuovo Cilento, has shown a first evidence of co-management: around the common principle of “organic”, Anna dei Sapori and Archeotrekking (a tourist association) have started to jointly shape the tourism offer in the area together, bringing eco-tourists directly to organic farms around the area.

Co-governance

[...formal establishment of the biodistrict. Definition of common rules, common project through an inclusive private-public partnership...]

From Interviews with selected key actors and from the interaction during the final symposium, emerged several projects developed by the Bio-district, supported by a shared decision-making process and private-public partnership.

Common guideline for projects have been developed within an “Integrated Territorial Development Plan”, which was presented to the Regional Authority. On the basis of available funds, negotiations would be made and priorities set for future action, the implementation of which will be delegated to municipalities. The Plan could be funded through different operational programs and through different axes, within one operational program. Besides various sector interventions, a number of horizontal actions are also functionally planned, essentially targeting human capital enhancement, local mobility and transport, services to local population and enterprises, technological transfer and ICT diffusion. An example of horizontal action is provided by the formal commitment to develop green public procurement practices in the area, with the involvement of school canteens and childrens’ parents in the organisation of Bio-district activities.

This confirms the presence of shared decision making processes, activated in order to guarantee the coherence between the ideas and the practice, as well as the commitment of all the actors involved, as highlighted in the analytical frame (Koopmans et al., 2017).

Results have shown that the development of a territorial innovation in a multi-actor governance perspective, allows for a better adaptation to local, and changing circumstances, increases the possibilities of capturing added value, empowers local people and supports territorial development reconnecting agriculture and rural development (Bryson et al., 2006; Benz and Eberlein, 1999; Herzberg, 2005; McGinnis, 2005; Meynen and Doornbos, 2004; Wiskerke et al., 2003).

5. Conclusions

This paper has presented some insights from the Agrispin cross-visit to the Cilento Bio-district and provided some reflections on the mechanisms of coordination among the territorial actors in different phases of the process of Bio-district development.

Results have highlighted that the development and consolidation of a territorial innovation entails strong commitment of both the private and public actors. The alignment around a common narrative, i.e. organic principles and sustainability, represents the first step of the multi-actor interaction, to which follow the planning and the realization of shared actions around the common narrative developed.

In each phase, different kinds of support are needed, facilitation as well as funding. In the case of Cilento-biodistrict the regional branch of AIAB played the key role as a catalyst in each moment of the Bio-district development and formal establishment. As it is important, this can represent a weakness: what could happen if the main catalyst of the initiatives (i.e. strong leadership) stop to be engaged is acknowledged as one of the main weak points of the multi-actor governance of a territorial innovation, and it was one of the main aspect underlined and discussed during the cross-visit.

Concluding, the development of a territorial innovation represents contemporarily a challenge and an opportunity for policy-makers to develop governance mechanisms that are able to support

territorial innovation processes: from one side, how to ensure that the interests of a variety of actors remain consistent with a common vision is a challenge for policy makers; on the other, it is also an opportunity, to activate policies that are more responsive to the real needs of the territories. According to what we explored within the Agrispin project, territorial innovation projects like Biodistricts – especially the experience of Cilento - provide good insights and may be inspiring for the development of new policy strategies at higher political levels.

6. References

- Alford, J. (2013). The Multiple Facets of Co-Production: Building on the work of Elinor Ostrom. *Public Management Review*. Volume 16, Issue 3.
- Basile S., Cuoco E. (2012): Territorial Biodistricts to boost organic production. IDEASS Italia http://www.ideassonline.org/public/pdf/BrochureBiodistretti_EN.pdf.
- Benz, A., Eberlein, B. (1999). The Europeanization of regional policies: patterns of multi-level governance. *Journal of European Public Policy* 6, 329-348. <http://dx.doi.org/10.1080/135017699343748>.
- Brunori, G. (2017). *Scenari di innovazione a supporto del turismo sostenibile: sviluppo di un modello di governance inclusivo*. Presentation held at the Meeting of PROMETEA Project in Santa Fiora, Italy, December 2017.
- De Vries, M.S. (2000). The rise and fall of decentralization: a comparative analysis of arguments and practices in European countries. *European Journal of Political Research*. 38, 193-224. <http://dx.doi.org/10.1111/1475-6765.00532>.
- Edquist C. (1997). Systems of innovation approaches – Their emergence and characteristics. In book: *Systems of Innovation: Growth, Competitiveness and Employment*, Chapter: 1, Publisher: Edward Elgar, Editors: Charles Edquist, Maureen McKelvey, pp.3-37.
- Edquist C. (Ed.) (1997), *Systems of Innovation. Technologies, Institutions and Organizations*. Routledge, London/New York, pp. 1-35. Reprinted 2005.
- Hekkert M., Suurs R.A.A., Negro S. , Kuhlmann S. , Smits R. (2007). Functions of innovation systems: A new approach for analysing technological change. *Technological Forecasting and Social Change*. 74 (4), pp. 413-432.
- Herzberg, R. (2005). Self-governance, polycentrism, and federalism: recurring themes in Vincent Ostrom's scholarly oeuvre. *Journal of Economic Behavior and Organisation*. 57, 173-188. <http://dx.doi.org/10.1016/j.jebo.2004.06.015>.
- Hooghe, L., Marks, G. (2003). Unraveling the central state, but how? Types of Multilevel Governance. *American Political Science Review*. 97, 233-243. <http://dx.doi.org/10.1017/S0003055403000649>.
- Koopmans, M.E., Rogge E., Mettepenningen E., Knickel K., Šūmane S (2017). The role of multi-actor governance in aligning farm modernization and sustainable rural development. *Journal of Rural Studies*. <http://dx.doi.org/10.1016/j.jrurstud.2017.03.012>.
- McGinnis, M.D. (2005). Costs and challenges of polycentric governance. Analysing problems of polycentric governance in the growing EU. Humboldt University, Berlin.
- Meynen, W., Doornbos, M. (2004). Decentralising natural resource management: a recipe for sustainability and equity. *European Journal of Development Research*. 16, 235-254.
- Stewart M. (2008). Collaboration in multi-actor governance. In Michael Haus, Hubert Heinelt, Murray Stewart, *Urban Governance and Democracy: Leadership and Community Involvement*. London: Routledge, pp. 149-167.
- Ndah, H. T., Knierim, A., Koutsouris, A., Mathé, S., Temple, L., Triomphe, B., Wielinga, E. (2016) Report on a methodological guide for documentation and selection of innovation cases: Insights into the proto framework, innovation portfolio scheme and innovation selection guide in AgriSPIN, University of Hohenheim. Germany.

- Pahl-Wostl, C. (2009). A conceptual framework for analysing adaptive capacity and multi-level learning processes in resources governance regime. *Global Environmental Change*. 19, 354-365.
- Paree P., Wielinga E. (2016a). Final report Work Package 2 – Cross Visits. Deliverable 2.1. Agrispin Project.
- Pugliese, P., Antonelli, A. (2015): I biodistretti in Italia, note introduttive. In: Pugliese, P. Antonelli A., L'agricoltura biologica in chiave territoriale. Rapporto finale sull'esperienza dei biodistretti in Italia. Project DIMECOBIO.
- Pugliese P., Antonelli A., Basile S. (2015). Full case study report: Bio-distretto Cilento. Healthy Growth Consortium. Available at <http://orgprints.org/29252>.
- Rogers, E. M. (2003) Diffusion of innovations, New York, Free Press, USA.
- Wielinga E., Paree P. (2016b). An improved methodological approach. Deliverable 2.4. Agrispin Project.
- Wiskerke, J.S.C., Bock, B.B., Stuiver, M.m Renting H. (2003). Environmental co-operatives as a new mode of rural governance. *NJAS – Wageningen Journal of Life Science*. 51, 9-25.
- World Bank (2006) Enhancing Agricultural Innovation: How to Go Beyond the Strengthening of Research Systems. Washington DC, USA.