Innovations in European Rural Landscapes

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The InnoLand approach – experimental research and action in Europe’s rural regions

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Abstract

The chapter presents the methodological approach that is general to all case studies presented in the book. First of all, the conceptual background and the guiding principles such as inter- and transdisciplinarity, stakeholder involvement and exchange and learning, are presented and discussed. In the next section, a common understanding of research as a process is elaborated and a phasing concept is presented and operationalised. Finally, conclusions on the expected outcomes both for the scientific communities as well as for political and practice stakeholders are drawn and discussed.

1 Rural regions need integrative research and action approaches

It is the central concern of the InnoLand network to support and accompany development strategies of rural regions in Europe that undergo specific external challenges in both the socio-economic sphere, such as demographic changes, migration or urban sprawl, and within the productive land use systems such as intensification or extensification processes. Large-scale, regional research as it is conceived here, means tackling the problems and development needs of the European rural areas in an interrelated manner that addresses economic, social and environmental issues in the sense of sustainable development at a landscape level. Innovations for land
use systems both technical as well as institutional have to be designed, implemented and evaluated in order to attain rural regions prepared for competition and sustainable ways of landscape use.

From the side of scientific actors, supportive action can come from integrated research that addresses rural regions with interdisciplinary and problem-oriented approaches (DFG 2005). However, this core issue shall not be investigated from a scientific perspective only. On the contrary, research with the aim to contribute to a sustainable development of rural regions has to deal with land use issues in exchange with practitioners, regional stakeholders and political decision-makers. It has to be an integrative action-oriented research (AR) in its proper sense, focusing practical problems, realising a systemic conceptual approach that successfully involves multiple perspectives (Stringer 1996; Reason and Bradbury 2008). At least, it must be a common decision on the research design and the implementation strategy.

Such a science–practice cooperation approach is different from classical research projects in at least three conditions:

- The objectives and the expected outcomes of the regional InnoLand projects have to be relevant similarly in scientific and practical terms.
- The approach chosen has to be integrative what means comprehensible and acceptable for practitioners and political stakeholders as well as acknowledged in the scientific community and appropriate to provide relevant scientific results and
- The process of cooperative research and action has to match organisationally both with regional decision-making and governance processes as well as with the scientific agendas.

More on the objectives and expected outcomes of the regional InnoLand projects will be presented in the frame of each of the case studies in the following chapters. Here below in the next section, we elaborate on the guiding principles and concepts that are at the foundation of the common InnoLand approach and which can be adjusted by the partners, respectively.

## 2 Guiding principles and concepts for the common approach

From sustainable development research we learned that inter- and transdisciplinarity are constitutive elements for the scientific support of regional change projects (Brand 2000; Mogalle 2001; Müller et al. 2002). Stakeholder
involvement and actor participation in deliberative and decision making processes are another crucial component that requires conceptual clarity (Hickey and Mohan 2004; Oels 2007). Finally, the organisation and realisation of such regional scale and multi-actor change processes demand also for specific personal qualities such as an open learning and exchange attitude.

2.1 Inter- and transdisciplinarity

Interdisciplinarity is commonly understood as academic work that brings together usually unrelated scientific disciplines and transgresses the large fields of humanities and natural sciences for the sake of a complex situational understanding (Tress et al. 2007). Integrative research projects necessarily unite scientists from different disciplines in order to jointly work on practice problems. Mittelstraß (1987:154ff) stresses that this cooperation is not only about overcoming classical boundaries but rather about the reorganisation of scientific questions and knowledge. A first challenge for successful cooperation is hence to overcome disciplinary boundaries and to develop a common research design on an interdisciplinary basis. Situational diagnosis from a narrow perspective does not yield fruitful results. The complex regional reality consisting of physical, socio-cultural, economic and political determinants has to be reduced to the determining factors that shape the rural regions’ development potentials. This is what we will call the descriptive baseline for each InnoLand region. On this basis, assumptions about the impacts of possible innovations in sustainable land use will be elaborated.

Secondly, in the ongoing process of interdisciplinary cooperation, it is essential to continuously develop and confirm a common understanding of the subject on the basis of a common language (Tress et al. 2007). Comparative analysis of transdisciplinary research projects revealed considerable differences in the expectations and objectives of the involved actors. However, these differences were not as drastic between the “science” and the “practice” actors as expected but much more distinct between natural and social scientists or between university employed and privately funded researchers (Loibl 2005). Obviously, in both dimensions – the disciplinary scale as well as the organisational affiliation – professional orientation leads to specific ways of expressing and actualising one-self.

Further on, transdisciplinarity means cooperation of scientists from various disciplines with non-scientists, which can comprise politicians, stakeholders and/or practitioners in the proper sense representing dominantly own interests, within a research project (Nagel et al. 2004). In the last decades, transdisciplinarity has been intrinsically linked to sustainability
management research because it is seen as a necessary condition for the initiation of intended societal change processes. The quality of transdisciplinary research is therefore a result of both the capacity to translate practical problems into scientifically relevant questions and the capacity to develop practically relevant solutions (Brand 2000: 15).

Recently, several journals have dedicated special issues to transdisciplinarity (TA 2005; GAIA 2007). Congruently, a general deficit of philosophy of science has been noted: inter- and transdisciplinarity researchers are just about to establish the epistemological bases (Zierhofer and Burger 2007), to organise the scientific body (Grunwald and Schmidt 2005) and to institutionalise a differentiated scientific debate (Kueffer et al. 2007). Explicitly, Grunwald and Schmidt (2005: 5) start with a general lamentation that although “a lot has been said about inter- and transdisciplinarity, some has been practiced, little is reflected and understood” (Translation of the author, emphasis in the original text). Further on, they state that despite decades of research in specifically created organisations, “no routines and no methodological canonisation” have been developed. One reason they advance is the nature of the research problem: usually transdisciplinary research addresses problems with a high concreteness and contextuality and therefore inevitably requires the establishment of common grounds each time anew.

Here, the cross-European regional InnoLand approach attempts to exemplarily practice and reflect transdisciplinarity by the elaboration, implementation and evaluation of a coherent and concerted methodological approach that allows for systematic reflection on the impacts of the applied principles. This does not mean to overcome the disciplinary borders only. This does much more mean, to let the neighbouring discipline(s) participate in the different methodological approaches, and not only to merge these different methods, but much more to develop them to a common tool to solve the rural landscapes’ problems.

2.2 Stakeholder involvement

Participation of stakeholders in research and action projects can be realised in manifold ways. Arnstein (1969) was one of the first to differentiate and to assess various manners of participation that was practiced in community development, e.g. Two decades later, Pretty et al. (1995) adjusted this “ladder of participation” in order to characterise the interaction between (scientific) experts and practitioners (Table 1). Both schemes have in common that there is an ascending degree of practitioners’ involvement in decision making, control of resources and responsibility for results. The authors clearly express the conviction that ‘real’ participation only begins if the
involved actors have a share in decision-making and can exert influence e.g. on the project’s objective and the application of resources (stage 5–6; Table 1).

**Table 1.** A typology of participation (Pretty et al. 1995: 61).

<table>
<thead>
<tr>
<th>Typology</th>
<th>Characteristics of each type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Passive Participation</td>
<td>People participate by being told what is going to happen or has already happened. (Unilateral announcement by project management; information belongs to external professionals)</td>
</tr>
<tr>
<td>2. Participation in Information giving</td>
<td>People participate by answering questions posed by externals professionals. (People have no opportunity to influence proceedings; findings are neither shared nor checked)</td>
</tr>
<tr>
<td>3. Participation by Consultation</td>
<td>People participate by being consulted, and external people listen to views. (External professionals may modify their assumptions; no share in decision-making, no obligation to integrate people's views)</td>
</tr>
<tr>
<td>4. Participation for Material Incentives</td>
<td>People participate by providing resources, for example labour, in return for food, cash or other material incentives. (It is common to see this called participation, yet people have no stake in prolonging activities when the incentives end)</td>
</tr>
<tr>
<td>5. Functional Participation</td>
<td>People participate to meet predetermined objectives related to a project, which can involve externally initiated social organisation. (These institutions tend to be dependent on external initiators, but may become self-dependent)</td>
</tr>
<tr>
<td>6. Interactive Participation</td>
<td>People participate in joint analysis, which leads to action plans and the formation of new institutions or the strengthening of existing ones. (Groups take control over local decisions; people have a stake in maintaining structures or practices)</td>
</tr>
<tr>
<td>7. Self-Mobilisation</td>
<td>People participate by taking initiatives independent of external institutions to change systems. (Self-initiated mobilisation, collective action which may or may not challenge existing inequitable distributions of wealth and power)</td>
</tr>
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</table>

Goals and objectives of participation as discussed in the literature can be regrouped in three overriding categories:

1. Emancipatory objectives in the sense that participating individuals through own action become aware of one’s capacities and power,
2. Political aims so that through citizens’ participation parliamentary democratic decision making can become more complete with respect to socio-cultural diversity, and
3 Instrumental reasons as that through direct participation human resources (e.g. working force, social capital etc.) can be more easily mobilised for an envisaged task (cf. Hickey and Mohan 2004).

While “instrumental” participation is obviously not compatible with the conditions of transdisciplinary research and action, and mostly rejected by change management theorists and practitioners (Reason and Bradbury 2008; Cooke 2004; Pretty et al. 1995), emancipatory and politically rooted participation has the potential to substantially back up individual and social learning and transformation (Gaventa 2004; Zilleßen 2003). Hence, one determinative factor to judge the quality of participation is to analyse how access to and distribution of power is handled. Here, it is decisive whether or not pre-existing power structures are accepted and reproduced within the context of a new project or questioned and opened for change by the way of e.g. transparency in decision making procedures, a redistribution of voice rights and others.

When making stakeholder involvement work, a special attention has to be paid to the science-policy and the science-practice interfaces, where information exchange and decision making takes place. Making such cooperation effective among actors from different organisational backgrounds requires a cautious handling of procedures and time schedules, clear planning as well as flexibility and adaptability. Truffer (2007) coins the term “interface management” which describes the challenge to handle and provide the available knowledge in a way that any actor gets access to and power about the information s/he needs in a given moment of the project’s course. Truffer stresses that such a pro-active and flexible interface management is one essential ingredient for the success of transdisciplinary research.

Summarising the findings for application in the regional InnoLand approach, it is of highest priority to clarify the objectives of participation and why actors others than scientists should be involved in the research and action process. Since there are already several decades of practical experiences with participatory methods, which have too frequently been used as a fig leave (Rauch 1996; Cooke and Kothari 2001), it has to be emphasised that the application of participatory methods has to follow well-defined objectives, which have to be described in details and last but not least accepted by the stakeholders for every case study in this book, separately.

2.3 Mutual exchange and learning

The InnoLand approach clearly supports the programmatic “turn to action” as a general paradigmatic orientation after decades of a prevailing “turn to
language” in science (Reason and Bradbury 2008). Of course, the concept does not deny the necessity of antecedent phases of analysis and reflection when preparing action. However, knowledge as a tangible result of research is no longer an uncontested product which can be easily gained by the way of classical methodologies. The concept of knowledge has substantially been extended by the help of a sociology of knowledge (e.g. Berger and Luckmann 1997; Wehling 2002; Weingart 2003). Positivistic thinking has been analysed here and criticised for its mere material and reductionist approach, and with reference to the biology based auto-poiesis concept from Maturana and Varela, information and knowledge were conceived as dependent on the perceiver’s viewpoint and hence subjectively and socially constructed (e.g. Röling 2002). Again, critics deplore a complete neglect of the natural world within the community of social constructivism (Wehling 2006). Hence, a “postconstructivistic” perspective should be adopted which conceives knowledge as the result of “practices of generating, attributing and justifying knowledge” instead of assuming that there is “pure” knowledge either in an objective or in a subjective sense of meaning (Wehling 2006:86–87, own emphasis). In this rationale, knowledge exists in relation with one or several “knowers” who successfully apply it both in discourses as well as in action. In addition to this, the existence and significance of non-knowledge, especially of “unknown unknowns”, increases the challenges of knowledge handling because it extends “the accountability of the sciences beyond what is explicitly known or not known, thus encompassing the material configurations in which scientific practices are enacted” (Wehling 2006:95, emphasis in the original).

Similarly, action researchers insistently plead to adopt a multi-perspective extended epistemology that integrates positivism “in arguing that there is a ‘real’ reality” and constructivism “in acknowledging that as soon as we attempt to articulate this we enter a world of human language and cultural expression” (Reason and Bradbury 2008:7).

Such a differentiated conception of knowledge has wide-ranging implications within an action-oriented research approach: human-being related knowledge can not simply be handed over from one actor to the other and consequently, the classical “knowledge transfer” becomes a kind of “practicing knowledge together”. In other words, learning has to take place, interactive learning, that is not restricted to the acquisition of appropriate data and techniques but that comprises second order learning. Second order learning means that awareness about one’s knowledge and doing is complemented by reflexive processes about the reasons why one is doing something and how it could be done in a different way, as a basis for the exchange with others (The SLIM project 2004). As represented in Fig. 1, the collective transformation of a situation happens as a consequence of
changes in understanding and in practices that result from interaction and exchange of perceptions, opinions and experiences within a group of actors.

Fig. 1. Transformation as result of concerted learning and action (The SLIM Project 2004:19).

With regard to the transdisciplinary InnoLand approach, it becomes obvious that the success of such “transformative development” depends on the alternately integration of manifold understandings and sets of practices. In every case, facilitating actors will be needed who are in charge to make the interdisciplinary and actor-specific differences transparent, who question professional habits of understanding and communication and who actively mediate between diverging perspectives. Nevertheless, the willingness to review one’s preconceived assumptions and to be open for learning is a necessary requirement for all people involved.

As the preceding paragraph showed, an integrative regional research approach involves multiple actors and integrates a broad range of perspectives and viewpoints. It will be impossible to fix a clear “beginning” of the project and an “end”, and there will be no uncontested “state of knowledge” which can be improved but rather a constant accommodation of interpretation and opinions. As a consequence, the project should be understood rather as a regional process in which science is intervening and obtaining feedback than as a science driven event. As a backbone and orientation line for such a process, the next section outlines the common procedural scheme for the InnoLand case studies.
3 The joint procedural scheme

Given the challenging situation that the InnoLand projects consists of interdisciplinary teams in interaction with regional groups of actors who are themselves integrated into complex institutional and political structures, a common ground for the working process has to be established. This common ground is proposed here in terms of a joint procedural scheme which comprises the following phases: diagnosis, dialogue and joint action, and reflection and evaluation (Fig. 2).

**Fig. 2.** The InnoLand joint procedural scheme.

**Diagnosis:** A situation analysis of each InnoLand region is elaborated, uniting multiple disciplinary perspectives, which constitutes the descriptive baseline. In parallel, stock is taken of the scientifically available innovations and solutions responding to pressing regional challenges. Research and action hypotheses are formulated which can integrate the different scientific aspects of the regional study. The analytical approach to the InnoLand regions can be structured by four major components which are aspects of the “landscape” in its broadest sense: (i) policy, (ii) institutional, (iii) regional and (iv) physical space and place.

**The policy landscape**
The policy framework for Europe’s rural regions is determined by the Common Agricultural Policy (CAP) and the regional programmes that realise the Structural and Cohesion policies. With regard to the CAP, two key developments of European rural policy are in evidence now, and
which will grow in significance over this programming period and the next (i.e. 2007–2013 and 2014–2021): (a) an increase in the proportion of support coming from Pillar 2 (strengthening the development of rural areas) with proportionally less support coming from Pillar 1 (direct payments), and (b) an overall decrease in the amount of support monies available for rural areas. In parallel, social and structural funds for infrastructural and educational measures will increase. Also of consideration are those policies affecting rural areas, although not specifically designed for rural areas; these are national policies in health, transport, education etc. It is important to “map” these as they form a vital part of the rural-within-regional contexts studied and allow to take a “territorial” rather than “sectoral” approach to the analysis (see, for example, OECD 2008).

The institutional landscape
Current policies as well as societal phenomena reveal a shift from government (top-down) towards governance (bottom-up and horizontally implemented). This means that people, agencies and institutions can and will be increasingly responsible for shaping their own futures in their locations. Examples are seen in regional government through the partial devolution of community-level planning, and through the mainstreaming e.g. of LEADER within the Rural Development Regulation (RDR [Council Regulation 1698/2005]) for the first time. This raises a range of questions about capacity to adapt at local levels that is capacity within place-based communities and within communities of practice. It also raises the (less well-researched) issues of capacity within institutions, including regional government, to absorb the increased participation of communities on the ground.

The regional landscape
As part of this "devolution" and move towards subsidiarity, regional agents and regional administrations are increasingly responsible for budgets, writing and implementing development agendas, and forming new partnerships to deliver new priorities. Many new partnerships are with a range of agencies from public sector, private sector and research/education (so-called Triple Helix) or even including the citizen as “third sector” or voluntary sector (the so called Quadruple Helix). Here, it is the function of the regions as "territorial bodies" (OECD 2008), to provide a corporate identity and thus, bring together actors from many sectors, such as agriculture, forestry, tourism, health, transport, into a territorial strategy. Appropriately fulfilling this function will constitute a new challenge in many regions.

The physical level
Finally, physical landscapes have a number of functions (Wiggering et al. 2003), with some landscapes having more functions than others. External
drivers (such as e.g. climate change, demographic pressures and counter-urbanisation) act as pressures on vulnerable landscapes, and there can be tension between different functions as the drivers change with time. In the main focus of the InnoLand regions there are the resource management problems related to intensification or extensification of land use.

**Dialogue and joint action:** On the basis of the situation analysis, concerned stakeholders, entrepreneurs and civil society actor groups (representing the Quadruple Helix) are identified and contacted. A dialogue is initiated with the objective to contrast scientific and practical perspectives, to enhance anticipatory goal setting and innovation testing and to improve the concerted innovation generation and implementation of science and practice. In parallel, political and institutional framework conditions of these regional development efforts are reflected and the interdependencies between local/regional action and rural development politics will be used. This process rightly takes an investment of time and effort on the part of all parties, and leads to the “co-construction” of the research problem and of the appropriate journey to take through that problem or set of problems or challenges.

**Reflection and evaluation:** The dialogue and action process will be documented and evaluated on the basis of an ongoing reflection process that takes place in a group of different actors from the fields of science, policy and practice. Successful and failed change processes will be analysed and assessed. Expected outputs are a better knowledge on regional rural innovation processes, the identification of rural regions assets and specific adaptive capacities, conceptual bases to increase the investment effects of interventions and a toolkit for assessing locations and most appropriate interventions. This will help the InnoLand regions to increase the effectiveness of the political funding (through targeting) and to achieve their wider rural development objectives, particularly important with the proportional enlargement of Pillar 2. Secondly, cross-regional substantial information bases for the bottom-up development and refinement of rural policies will be elaborated that can support future ex-ante policy assessment (e.g. SENSOR, www.sensor-ip.org). It may also be possible therefore to develop diagnostic tools in relation to the likely implications of policy implementation within regions.
4 Expectations and conclusions on the conceptual approach

As outlined in the previous sections, the common InnoLand approach that will be implemented in a set of different European regions is characterised by

- a regional land use – landscape sustainability management orientation,
- the parallel application of common principles and guidelines,
- a common procedural understanding of the scientific actors and by
- repetitive efforts to realise an integrative stakeholder involvement in a science–policy–practice dialogue.

First of all, it is expected that for every region the enhanced science – practice cooperation on regional land use challenges will significantly improve the region’s competitive capacities in the realm of the EU’s Lisbon strategy. Detailed information on the kind of challenges and problems faced and the innovation that shall be implemented and tested regionally is given within the case study chapters. However, cross regional conclusions on this level will be limited: Although all regions deal with natural resource and landscape management questions, the topics are so different that it will be difficult to draw general conclusions on this regard.

However, the exploration of regionally conflicting land use functions and the implementation of sustainable ways to abate “landscape tensions” while maintaining their diversity will reveal similar patterns that are repeated.

Also, there will be similar practical outcomes on the procedural level: all regions will equally establish and work in a cluster of heterogeneous partners, with a scientific, an administrative or an entrepreneurial orientation, but united by a common objective. This up to now rather unconventional form of cooperation in rural areas will create synergies and increase regional options for development. And, the InnoLand approach will allow for a comparative structuring, monitoring and appraisal of these parallel cooperation processes. Especially the development of evaluation criteria that are meaningful to researchers and to those other partners from public, private and third sectors will be a major output likely to set the basis for generally applicable procedures and thus, substantially contributing to future regional cooperation within the EU. At the same time, such indicators which are appropriate to characterise rural change and development processes will be of political relevance when designing and implementing structural policies.
Methodologically, there will be the adaptation and the refinement of tools already existing, and the design and development of new tools of which some might be very informal heuristics in the beginning, e.g. those used by planners, development officers etc. Additionally, the scientific appraisal of the respective capacity-building within the multiple regional partnerships will be another output which will strengthen the community of inter- and transdisciplinary research.

On these conceptual bases, the InnoLand approach aims at demonstrating that an experimental research and action programme applied within a set of European rural regions provides the backbone for successful addressing severe land use challenges at a landscape level.

References


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