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Executive Summary

This report presents the main results of the first working phase of the RAPIDO project, which consists of the collection and analysis of best practice examples of innovation in rural areas (Work Package 1). The aim of the work package is to gain insight into factors that contribute to success as well as into those factors that may cause challenges for innovation. The report includes a brief description of the technical aspects and procedures used to compile the database, followed by the results and conclusions. Findings from this phase of the RAPIDO project will be applied in subsequent phases of the project.

The database includes 67 best practice examples that were collected from the project partners as well as from public databases. The data collection and structure was determined through discussion with all project partners during the first project meeting in March 2007.

The 67 best practice examples represent 17 of the 27 EU Member States. The projects cover all relevant economic sectors of rural areas with a stress on agriculture and forestry. Generally projects show a high level of integration between different sectors. They include heterogeneous types of innovation, ranging from product and process innovations to new services and creation of knowledge. The size of projects is also heterogeneous, but most occur at the single enterprise and regional scales.

Both a quantitative and qualitative analysis of the 67 best practice examples was then conducted. The quantitative analysis explored the case studies with respect to the frequency of innovation types, actors, geographical coverage, territorial range and channels of diffusion. Although not all factors were well distributed and described across case studies, some information regarding factors for success can be drawn from this analysis. For example, more than one sector is most often the focus of the innovation and in most examples the strong role of the local community is explicitly indicated as an important factor for long-term benefits of innovation.

Following the quantitative analysis, a matrix was developed based on a qualitative assessment of the case studies. The criteria used for the matrix was based on the proposals made by the project partners in the descriptions of projects and integrated with criteria from public databases. Indicators for sustainability of innovation initiatives (success factors) have been individuated, using the background of the scientific and policy discussion on sustainability indicators. The resulting set of 26 indicators (see table 5, figure 9) was used to identify trends with respect to the project's environmental, economic and social sustainability. Further specification and quantification of indicators will be made in further phases of the

project when using the framework to assess single projects or compare among projects. No aggregated indices of sustainability are proposed, as weighting of criteria cannot be resolved without further information on local contexts, policy and stakeholder preferences.

Indicators used to determine *economic sustainability* include information on local and regional economies, new markets and job creation or stabilisation. An interesting, though uncommon observation pointed to the fact if an initiative is a precursor to technological innovation it may gain an economic advantage.

Indicators used to determine *environmental sustainability* include information on environmental impacts resulting from production (e.g. biologic agriculture, energy production from renewable sources).

Indicators on the *social sustainability* of innovation include three areas: whether the innovation is integrated into local networks, whether living conditions are improved (including labour market) and whether new knowledge is created as a result of the innovation.

The database of innovation initiatives offers a good overview of specific projects of innovation in rural areas that describe the relevant factors of success for innovation in multiple sectors and countries. Overall, it is clear from the database that European policy plays a major role in innovation; EU programs fund approximately 45% of the projects. However, it is also important to know that approximately 25% of the projects have been initiated independently from any specific EU, national or regional policy.

The database will serve as the basis for subsequent analysis throughout the project and can be consulted not only by policy makers, but also by community stakeholders, in order to learn from experience. The information presented allows projects to be selected for in-depth analysis, which will be completed in Work Packages 2, 3 and 4, and 5.

The evaluation matrix the evaluation matrix may be able i) to assist policy decision-makers with respect to single projects, as it highlights trends with respect to sustainability goals, ii) to indicate directions of sustainable development in the European rural areas on a more general level and iii) to measure the success of projects.

Both the evaluation matrix as well as indicators of success were discussed with the project partners during the project meeting in November 2007 in order to adapt the matrix according to the following work phases.

1 Introduction: Objectives of Work Package 1

Work Package 1 (WP 1) aims to **collect and analyse best practice examples of innovation in rural areas from around the European Union**. A collection of good examples is a useful tool to learn from prior experience and will provide a foundation for review and analysis of subsequent RAPIDO Work Packages. Specifically, these examples will help to identify the most relevant factors for success, as well as barriers that should be taken into account for future action. The collection and analysis of best practice examples was developed through three separate tasks, described below:

1. **Case study selection.** The case studies were identified by the project partners and include show-case projects from previous research projects. Subsequently, the most interesting and representative examples of sustainable innovation were chosen for further analysis.

2. **Evaluation matrix.** An evaluation matrix was developed to organise information and analyse the case studies. The matrix includes fields with information that will be useful for subsequent comparative analysis in this WP as well as in WP2 (Review of key areas for innovation), WP3 (Sectors where innovation would help create employment), WP 4 (Review of environmental technology initiatives) and WP 5 (Review of processes and actors to foster innovation and efficient methods to transfer knowledge on innovation).

3. **Criteria for success.** Using the evaluation matrix, criteria for success in innovation on the basis the principles of sustainability have been identified (“individuated”). Confronting successful projects following the single areas of the evaluation matrix, common factors can be individuated as success factors.

The following deliverables are based on this work:

- a) Best practices data base on case studies for innovation development and transfer in rural areas (**Deliverable 1.1**).
- b) Evaluation matrix to assess future initiatives and projects in the area of innovation (**Deliverable 1.2**)

Both deliverables are strongly interconnected and therefore are presented together in this report. The best practice database has been compiled according to the criteria identified in the evaluation matrix. This method results in comparable data and the matrix will also serve as the tool for subsequent analysis. The overall objective of the construction of a database and an evaluation matrix is to distinguish key actions and sectors involved in rural innovation

across a broad spectrum.¹ Knowledge of where innovation exists may help to facilitate innovative actions in the EU's agricultural sector and rural areas in general.

The success of innovation does not depend solely on the character of the innovation itself, but perhaps even more on the conditions where it is introduced and whether the social acceptance necessary for facilitating innovation and knowledge transfer exists. Therefore, the analysis of ongoing or finished projects for the support of innovation in rural areas and in agriculture focuses on the social and institutional framework for introduction of innovation and the support of processes of knowledge transfer in terms of policy frameworks.

The evaluation of the cases collected is aimed at identifying factors for success and factors that have proved to be major constraints for an innovation to be successful. This preliminary evaluation is made using qualitative indicators defined using the criteria given in the descriptions of the single case studies. Further insights on success factors will be obtained by the in-depth analysis to be developed during the subsequent RAPIDO Work Packages 2, 3, 4 and 5.

2 Technical aspects

The initial collection of information on case studies was based on the network created by project members across the Member States. This allowed access to good information on interesting projects to be used as case studies. Following this initial collection, case studies were obtained from public databases and best practice collections, mainly in order to cover Member States and thematic area not yet represented. Data was collected using a scheme to obtain relatively homogeneous data, therefore, the great variety of kinds of innovation considered did not allow for very detailed schemes. In total, cursory information was collected for 67 case studies. Ultimately, 21 case studies were selected for in-depth analysis and associated relevant data was collected for this sub-group.

2.1 Construction of evaluation matrix

The evaluation matrix and the form of data collection were discussed and coordinated with the project partners during the Kick off meeting in March 2007 and subsequent email exchanges. The work on the data scheme was conducted prior to data collection, in order to

¹ These innovative actions should support the consolidation of European agriculture as an economically competitive and environmentally sustainable activity, according to the principles of the Lisbon Strategy. In other words, agriculture, forestry and fisheries should be enabled to give a contribution to the transformation of rural areas and agricultural activities into a fundamental element of a sustainable and competitive society.

assure that the data collected from the case studies covered all relevant issues. Therefore, the description of case studies includes characteristics directly related to evaluation criteria, including:

- the areas and sectors the innovation took place in,
- the object of innovation, in order to obtain information on whether the innovative action has modified production processes, introduced new products, services or labels, or modified supply chains
- the actors who are behaving in an innovative way,
- the territorial range of the project,
- criteria for assessment on economic, social and environmental sustainability of the action.

Further information was collected about the following: the context (in order to obtain information on the type of rural area); policies that supported the project, and whether any subsidies or incentives were applied.

Table 1: Form for collection and analysis of case studies.

Case Study title:	
Country:	
Short description	
Study can be used for in depth analysis	<i>(Yes/no) this indication is used for the identification of potential objects for in-depth studies within the subsequent work of WP3, WP4 and WP5.</i>
Areas and sectors	<ul style="list-style-type: none"> • Agriculture (biomass production, renewable energy, field ranger tours, events on farms, • Forestry (forest management, processing, certification, event camping, wildlife watching, forest ranger tours.) • Food Industry (development of regional brands, local co-operation; farmers-food industry-restaurants/hotels, traditional products ...) • Tourism (agro tourism – on farm vacation, tourism focused on special customer groups...) • Environmental education (ranger tours, nature experiences for schools/educational institutions, bird watching) • Environmental Technology (water purification, efficient energy use, water/wind/solar technologies, etc • Social Services (childcare, geriatric care, domestic services, Medicare, in house care...) • Nature Conservation (agro-environmental schemes, provision of landscaping services, stewardship schemes, set aside and LFA programmes • ICT (Information-Communication-Technology (Call-Centre, Online-Business, including online marketing) • Others (please specify)
Object of innovation	Process, product, service, marketing, labelling, supply chain
Policymakers:	Who has initiated the innovation?
Policies	Is it part of a broader policy measure?
Channels:	Which channels have been used for communication / information / participation?

Actors:	Who is actually producing / behaving in an innovative way (farmers, local service providers, administrators, consumers)
Incentives:	What are the economic/social incentives used to facilitate the innovation?
Sustainability:	What are sustainability aspects of the innovation? (Economic, social, environmental)
Territorial aspects:	What is the spatial dimension of the area interested by the innovation? (keywords: single farm, municipality, group of municipalities, region, nation, EU 27)
Geographical reference:	Characterization of the type of rural area (urbanized, declining, coastal, mountain etc. areas)
Links to documentation:	(emails for contacts, documentation available in internet, reports, documentation enclosed)

2.2 Data collection

In order to ensure a sufficient level of comparability between cases, descriptions of the 67 case studies were collected using the data form (Table 1) shown above. In addition to some general information and description of the case studies, information was collected on the character of innovation (e.g. the areas and sectors where innovation is applied, object of innovation, spatial dimension) as well as the political and social context that the innovation is placed in, the geographical reference and the strategies for implementation (actors, incentives, channels for communication).

The strategy used to collect examples of case studies was based initially on information solicited from each project partner who identified and described examples from their respective countries. Following this initial collection, additional case studies were collected from public databases with best practice examples or regional development initiatives, such as LEADER+, the EU-Agrinet (FP5, FP4) case studies, ETAP initiatives and portals of some regional development agencies. This extensive collection was compiled to assure that experiences of innovation from all relevant geographic and thematic areas regarding innovations in agriculture and rural areas can be documented.

As a result of the broad case study search, a significant number of innovative initiatives from agriculture and the rural areas in Europe has been collected. A selection of 67 case studies that both reflect different experiences of innovation, as well as varying rural contexts with different requirements for innovation and prospective success is documented in the database. Due to the channels of information used, the different complexity of projects considered, and despite the attempt to homogenize the collection of information, the project descriptions vary, ranging from some very precise descriptions to projects with rather

essential information. Although the level of information obtained was one of the criteria for the exclusion of case studies from the database, in some cases projects with minimal descriptions have been included. This is because either the theme addressed by the case study appeared to be extremely interesting or was not covered by other projects, or because secondary channels of information will be accessible in later phases of the research project so that exclusion from the database would result in a loss of important information to be used in later working packages.

2.3 Construction of database

The information collected has been compiled in a relational database with codified fields that can potentially be used as search keys. The database² was created in Microsoft Office ACCESS 2003, which allows for structuring of information and performing queries based on each indicator (e.g. type of innovation, Member State, type of rural area). In addition, data is easily accessible via a user-friendly interface (see Figure 1). The database will allow analysis required in subsequent work packages and can be updated after the conclusion of the RAPIDO project.

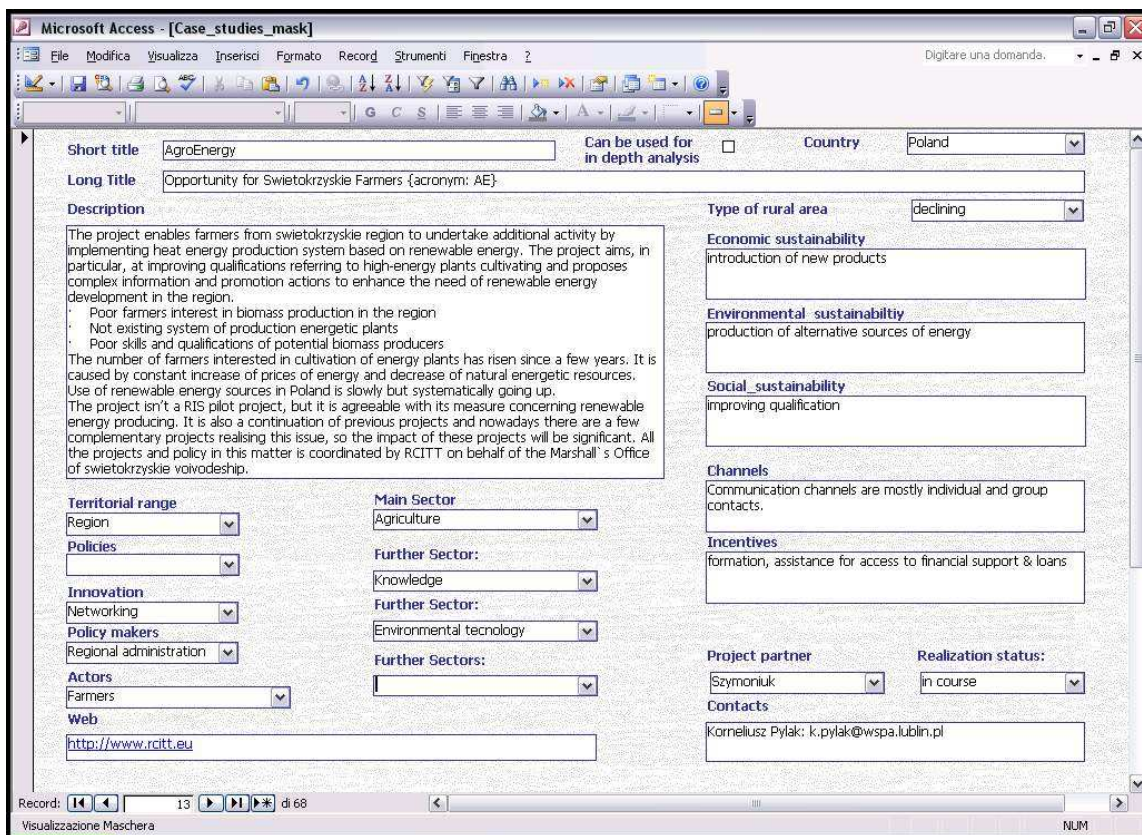


Figure 1: RAPIDO project case study database interface

² Best practise examples-database is attached to this report as pdf-file and Access-file.

3 Results

Case studies and the relative documentation were and inserted in the database. A first step of analysis consisted in verifying that case studies were relevant to RAPIDO in terms of territorial and thematic coverage. A second step of analysis consisted in the individuation, on the basis of the descriptions collected, of factors of success and criteria for the evaluation of sustainability of the projects.

3.1 Collected case studies – a statistical overview

The database comprises 67 examples of innovation in rural areas distributed among 17 European countries, covering most of the EU Member States. Furthermore two transboundary examples and one European project³ were considered (see Figure 2 for a map of Member States considered). One of the main aims during the collection of the case studies was to achieve broad territorial coverage on the one hand, and complete coverage of thematic aspects or sectors of innovation on the other.

³ The transboundary projects refer to an experiences from the LEADER+ programme of partnership between rural schools in Ireland and Spain (Acronym Schola) and to a feasibility study for an innovation network in the transboundary region between Austria, Croatia, Hungary and Slovenia (Acronym: Interwell). The European Project stems from the EuAgrinet (FP5) programme and involves Latvia, Lithuania, Sweden, Finland and Denmark (Acronym: Wood-en-man).



Figure 2: Countries described by case studies in the RAPIDO database

3.1.1 Sectors of innovation

Best practice examples for innovation in rural areas were collected according to sector to determine where innovation can be successful. There are multiple examples of case studies that represent a wide spectrum of sectors relevant for rural areas. Most of the single projects do not refer to one single sector, but to a number of different sectors, due to the fact that innovation often crosses different activities (e.g. farm tourism). Nevertheless, the indication of a principal sector is considered useful to provide a key for structuring the data. For this reason, if more than one sector was indicated, *the sector where the innovation started is considered the principal sector* (e.g. agriculture for a farm tourism initiative).

As shown in Figure 3 below agriculture is the most frequent principal sector, followed by food industry and tourism. This reflects the sectors that may have the most frequently occurring innovations in rural areas. Innovation in service sectors like Information and Communication

Technologies (ICT) and public and social services (i.e. knowledge creation initiatives) as well as environmental services (i.e. nature conservation and environmental education) demonstrates that the delivery of services for inhabitants of rural areas and of services of rural areas for the whole society is also important to consider.

Projects are connected to structural problems, such as unemployment, selective out-migration, and lack of infrastructure. It is important to note that the database is not a statistical sample, but does provide information on representative examples from the project partners' local context. Not all sectors where innovation in rural areas occurs are covered using this approach to data collection. For example, initiatives connected to extractive activities (e.g. stone industry, mining) or production of industrial goods (e.g. building materials, textiles) have not been included in this database.⁴

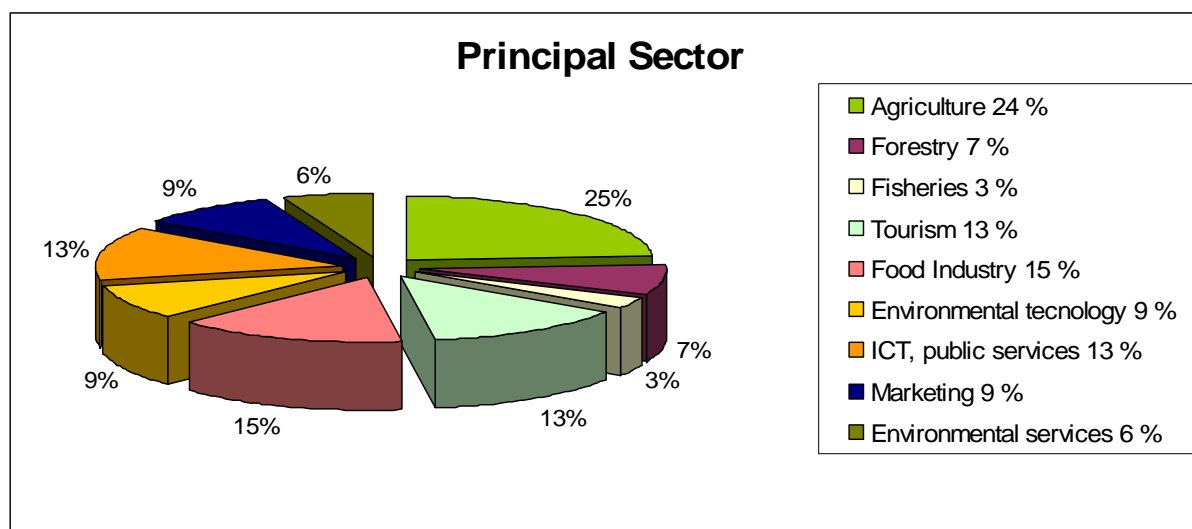


Figure 3: Principal Sector of innovation of projects in the database

To account for the innovative potential found in synergies between sectors within single initiatives, the further sectors that combine with the principal sector and were named in the case studies have also been evaluated (see Figure 4).

⁴ The European database of Leader+ best practice examples provides a broad overview on activities in rural areas: http://ec.europa.eu/agriculture/rur/leaderplus/gpdb_en.htm

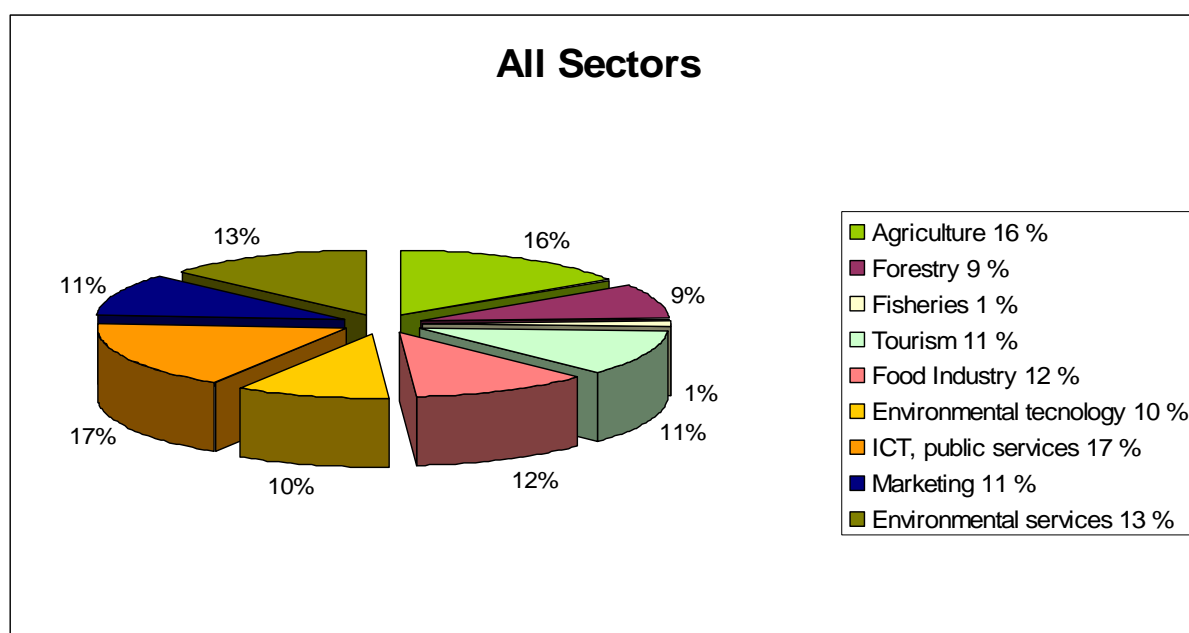


Figure 4: Overall Distribution of Sectors of projects in the database

When considering these further sectors, the subdivision is slightly more equivalent. This may be attributed to the attempt to collect data covering a broad range of sectors, but it also indicates that integration between different sectors is a characteristic of many successful innovation projects.

Information and Communication Technologies (ICT) is rather unlikely to appear as a principal sector of innovation; rather they are found as an important means of improving marketing, public services, etc. In fact, ICT is the principal sector in only three of the 67 projects.

A frequent combination of principal and further sectors is, for example, agriculture with food production, or agriculture and food production with tourism. When calculating the overall number of sectors in the principal and further sector the percentages change as shown in Figure 4.

3.1.2 Objects of Innovation

Figure 5 below shows the objects of innovation according to the description of the case studies. Services and processes appear to be the most frequent innovations among the case studies collected, accounting for 28% (services) and 27% (process innovation) each. In addition, marketing strategies, including innovations in the supply chain and labelling, account for approximately another 20%. An important single item is represented by networking, which is the object of 18% of the cases considered.

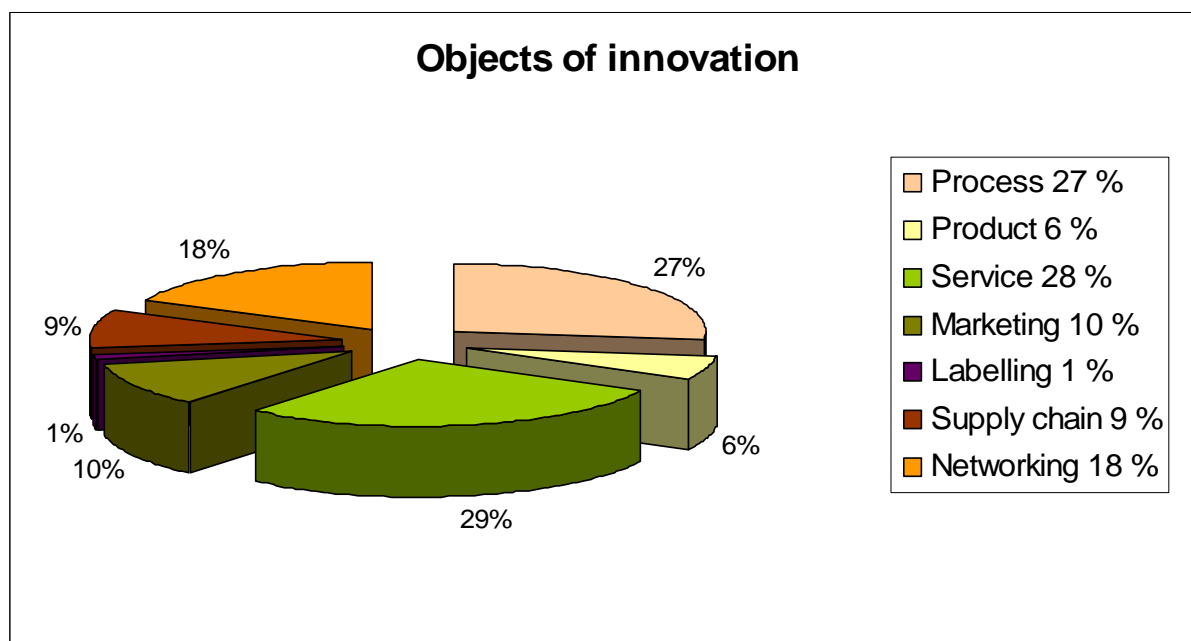


Figure 5: Objects of innovation

The sectors of innovation where ICT has been used in an innovative way cover all areas considered: agriculture, forestry, education and training, marketing, and environmental technologies in one case each, food industry and public services twice, and tourism in three cases.

3.1.3 Territorial range of projects

The size of projects ranges from single enterprise dimension to the regional or national level. The most frequently occurring projects are at the local and regional level, but single enterprises are also well represented in the database. National and European policies and concepts have been included in some cases (see also section 3.1.4) and appeared relevant for a contribution to the transformation of rural areas and agricultural activities into a fundamental element of a sustainable and competitive society.

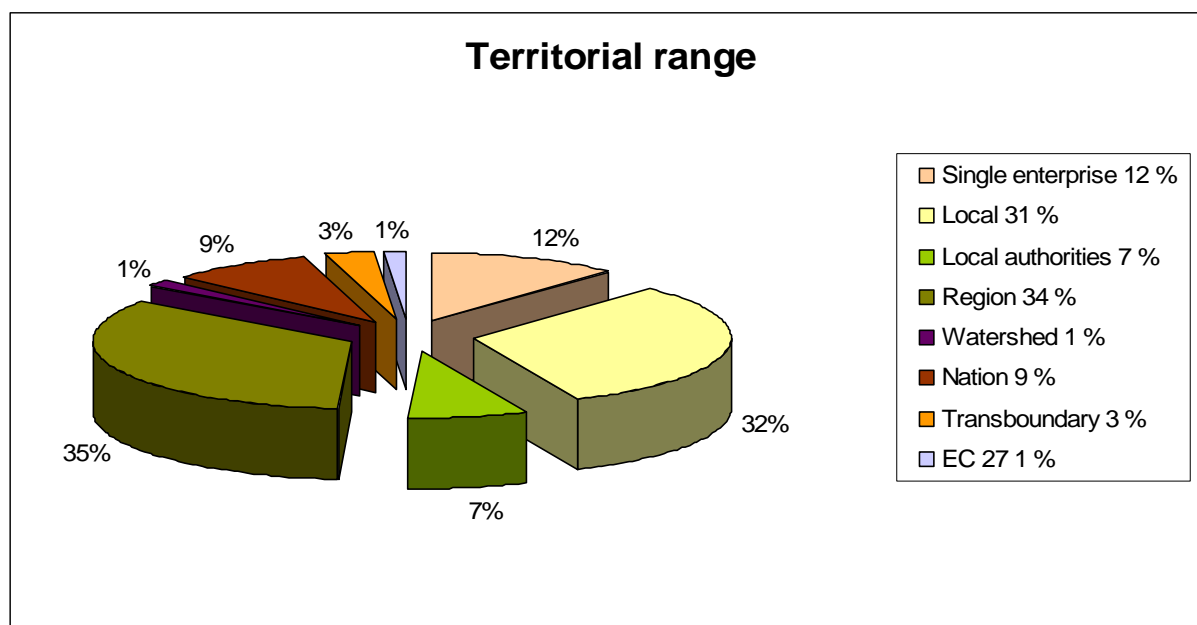


Figure 6: Territorial range of projects

3.1.4 Policies

A remarkable share of the projects originates from specific European programmes: LEADER+⁵ experiences account for 37% of the projects in the database. In addition, specific European programmes relevant for new Member States, such as SAPARD⁶ are frequently mentioned (four out of eight projects from new Member States have been financed by European programmes such as SAPARD). An additional number of examples are based on regional (11%) and national (9%) policies. Nevertheless, there are important shares of projects (28%) that do not refer to any specific policy (see Figure 7). Despite the presence of a consistent number of projects which cannot be directly attributed to the effects of public policies, the presence of policies appears as an advantage for the initial adoption of innovation.

⁵ Leader+ is one of four initiatives financed by EU structural funds and is designed to help rural actors consider the long-term potential of their local region. Encouraging the implementation of integrated, high-quality and original strategies for sustainable development, it has a strong focus on partnership and networks of exchange of experience.

⁶ SAPARD (Special Accession Programme for Agriculture and Rural Development) established in June 1999 by the Council of the European Union to help countries of Central and Eastern Europe deal with the problems of the structural adjustment in their agricultural sectors and rural areas, as well as in the implementation of the acquis communautaire concerning the Common Agricultural Policy (CAP) and related legislation. It supports measures to enhance efficiency and competitiveness in farming and the food industry and create employment and sustainable economic development in rural areas.

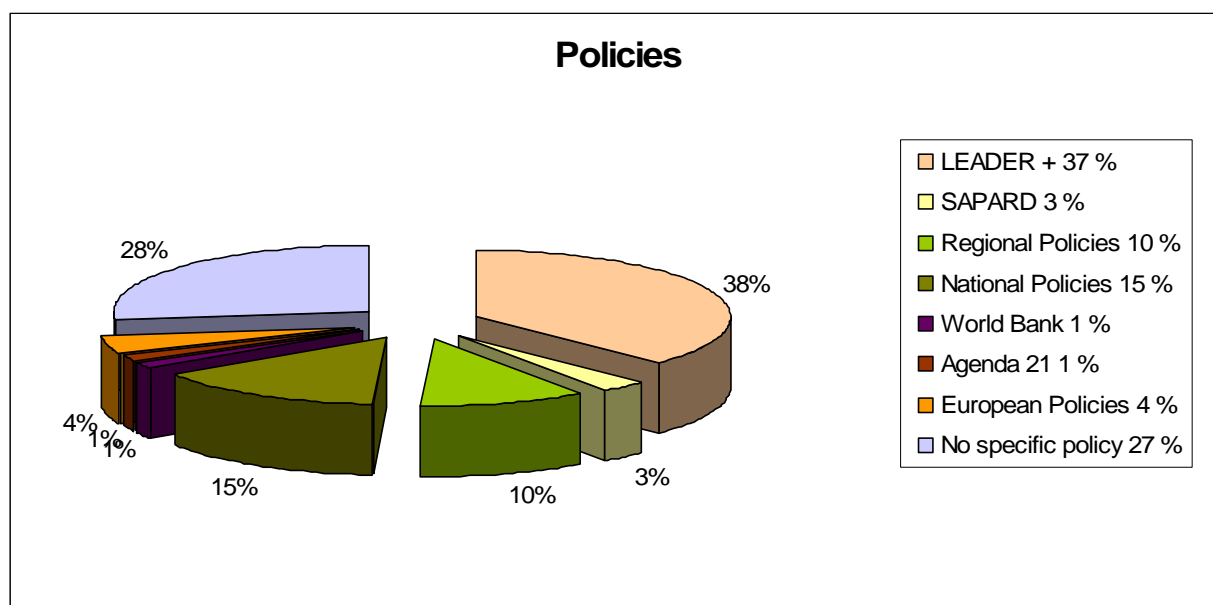


Figure 7: Supporting Policies of projects analysed

3.1.5 Actors

Among the actors, farmers and manufacturers (mainly related to the food sector or to other productions related to agriculture, forestry etc.), community stakeholders (NGOs, residents), and public bodies (local authorities, research agencies etc.) have been considered (see Figure 8). Private sector actors (comprising investors, service providers, tourism operators, etc.) appear either in the field of environmental technologies or in integrated projects that combine agricultural or tourist activities with environmental technologies or environmental education. On the base of the description of case studies it is not possible to identify clear criteria for conditions of success in terms of characterization of actors, thus further investigation will be necessary on this aspect.

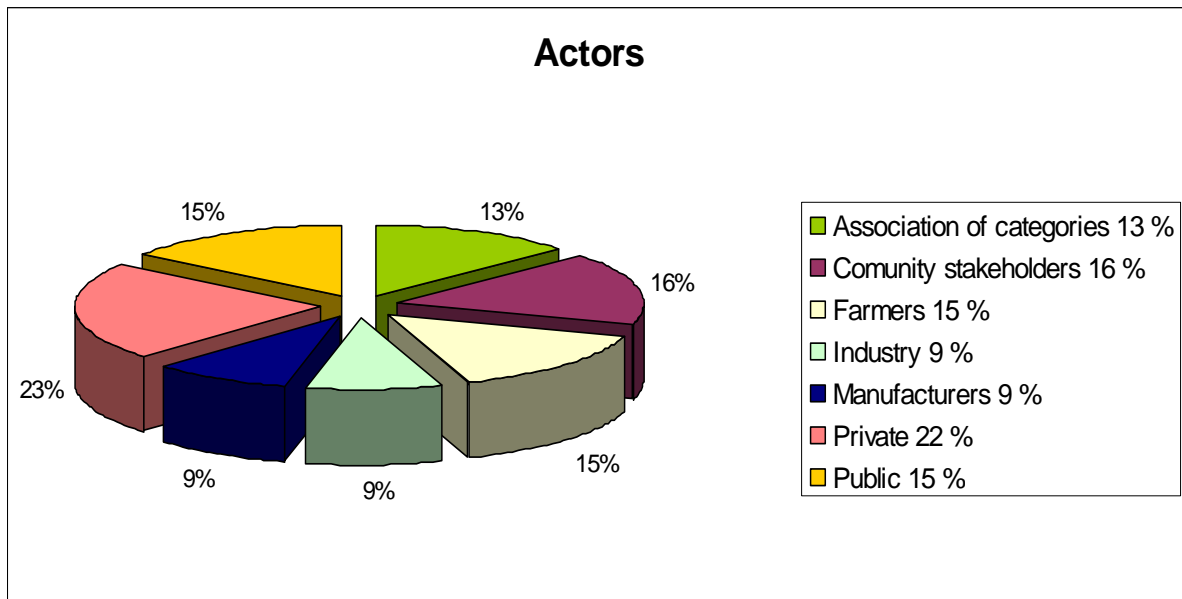


Figure 8: Actors involved in Innovation

3.1.6 Channels of diffusion

Two major channels of innovation can be distinguished for being relevant for the diffusion of innovation, including 1) European actions well anchored at a local level, such as LEADER+ and 2) the involvement of local communities. The involvement of local communities may guarantee the necessary background for innovation in terms not only of social consensus, but also in terms of functional synergy critical mass, networking etc.

As regards the case of process or product innovation in single enterprises, promising channels for implementation appear to be less evident: acceptance and implementation of innovation seem to be strongly conditioned by individual and personal factors; in depth analysis of single case studies to be developed in WP 2, 3, 4 and 5 will be useful in these cases. In addition, local networks and the impacts of public policies appear to be a positive factor in the selected case studies.

3.2 Evaluation Matrix

3.2.1 Indicators for Sustainable Development – an overview

Sustainable development has officially become a policy aim within the European Communities, since the Gothenburg Council of July 2001 adopted the Sustainable Development Strategy. The decision, introduced with a reference to the principles defined by

the Brundtland Commission in 1987, cited: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission, 1987) (EC 2001). Also the Lisbon Strategy for the economic and social development of the European Communities is explicitly based on the three-pillar principle of sustainability, which considers economic and social development jointly with the necessity of conservation of natural resources. Like all policies for development of the European communities, the development of Europe's rural areas is based on the principles enounced in these two strategies, focussing, for the period 2007-2013 on three areas corresponding to the three thematic areas of sustainability: improving competitiveness for farming and forestry; environment and countryside; improving quality of life and diversification of the rural economy.

When measuring or evaluating sustainability, indicators are considered one of the most important instruments. They are used to inform decision making, as they facilitate communication about complex systems or realities, measure progress towards sustainability and assist monitoring of development and policy impacts on territorial different scales. The capacity of indicators to translate reality, physical and social science knowledge into manageable units of information makes them powerful tools for the measurement of sustainability, where data from different policy areas has to be confronted and where communication to stakeholders from different scientific backgrounds is of fundamental importance. Sustainability indicators generally should be simple (limited in number and method of calculation) and directionally clear, indicating items and trends that are obviously relevant in terms of sustainable policies (Valentin, 2000).

Indicators are widely used for the measurement of sustainability, and different sets of indicators for measurement of sustainability have been developed and are available, as for instance the set of indicators which measures the development within the European communities (Eurostat, 2005) or the Report on Rural Development in The European Union (European Commission, 2006) which is based on a set of indicators defined according to the strategic aims of the EC Rural Development Policy.

However, the role and importance of indicators in policy processes goes beyond the preparation of scientific data for information and monitoring. The choice of what is measured is based on values, and the choice of indicators represents an implicit expression of preferences (UNCSD, 2001) and leads to a specific definition of what sustainability means or should mean in the specific situation, concretizing (and moulding) policy decisions (Valentin, 2000).

When attempting to generate simple aggregated values, a further problem related to preferences arises, as the importance of each indicator with respect to the remaining ones has to be established, translating into weights the specific and eventually very personal idea of what a sustainable situation would be. In addition, establishing a weighting system at an international level that can be applied to every country complicates the process further due to the fact that every country has different priorities and faces a different set of problems (UNCSO; 2001).

For these reasons most authors underline the importance of participation in the formulation of sets or frameworks of indicators (see for instance Valentin, 2000, cit. with reference to Agenda 21 processes). Neither quantitative nor qualitative indicators can easily be synthesised into single indices of sustainability, as the relevance of the each single indicator with respect to the others is determined by values which may differ from one social group to another or from actors from one policy field to the other.

An advantage of the framework approach to indicators of sustainable development is that each of the many aspects of sustainable development can be specifically reported on in its own terms, and trends for the separate aspects can be identified.

3.2.2 Indicators of success

The evaluation matrix was developed using a framework approach in order to handle the great heterogeneity of projects and local contexts considered. In defining the scheme for the collection of data and the definition of the matrix, success is defined through economic, social and environmental terms relevant for innovation in rural areas (following the approach of the Lisbon Strategy). This set of indicators was compared with and elaborated according to criteria used in the description of the case studies and to public databases (European Commission, 2006, Eurostat web site) in order to achieve a more complete dataset. Subsequently this set of indicators was discussed and integrated in a discussion with all project partners and invited experts during the RAPIDO Meeting in Venice in November 2007.

It is important to note that not all case studies contained information related to indicators and that, due to the heterogeneity of case studies considered; the type of indicators used is quite varied, so that only single areas are covered for each project. Furthermore, no information on the local development context has been collected at this stage of the work. Thus, the assessment has to be made exclusively at the level of single project, using the qualitative

version indicators for putting into evidence interactions between single areas of sustainability and issues.

Selected case studies will be examined within their local context in future work packages (mainly WP 3 on the creation of employment, WP 4 with regards to environmental technologies and WP 5 with regards to institutional assets, leading to a further detail in the set of indicators proposed). Prior to the application of the matrix to the in-depth studies, a discussion of this set of indicators among the members of the project and experts is necessary.

At the present stage, the evaluation matrix comprises a set of 26 main indicators describing economic, environmental and social sustainability. Some of these indicators can be desegregated into more specific aspects, which are partly qualitative and partly adapt for quantification (see Table 5 and Figure 9).

3.2.3 Indicators of economic sustainability

Economic sustainability was addressed mainly in terms of development of local or regional economies and creation of new markets, new jobs and of new (or stabilisation) of existing economic initiatives. A further indicator of success points to the fact that an initiative may have gained economic advantages from being a precursor of technologic innovation in their sector on both local and international levels.

However, it is important to note that in some cases of publicly funded initiatives it has been explicitly stated that they cannot assure economic sustainability beyond the period of public financing. In these cases, as for instance in the case of the Finish MediaWagon⁷ initiative , which are predominantly related to environmental or social services, economic sustainability may have to be sought through public subsidies to the costs of production or service delivery. In the evaluation matrix, these cases marked with “no” in the column dedicated to financial autonomy (see Figure 9). Table 2 shows the economic sustainability category, associated indicator and the description of the indicator that will be used for evaluation of the economic sustainability of projects.

⁷ See case study-database N°59

Table 2: Identified Indicators for economic sustainability

Economic Sustainability	Indicator	Character of Indicator
Jobs created	Number of permanent jobs created/ added value	Rate (added value/jobs) Rate (Cost/job created) or yes/no
	Quality of jobs	(av. productivity) or yes /no
	Investment per job	(€/jobs) or yes /no
Financial autonomy	Working without subsidies	Yes/no permanent /temporary
Pioneer	The initiative has advantages on the market deriving from innovation	Yes/no
Networking	Creation of local business/social partnerships	Yes/no
Impacts on local economy	Creation of new initiatives in relation to the regional economy	% increase of no of jobs

3.2.4 Indicators of environmental sustainability

Within the project database, agriculture is one of the most frequent production sector,⁸ thus most indicators measuring environmental sustainability are derived from criteria relevant for environmentally friendly production methods or cultivation technologies. Criteria are often specific to the use of natural resources, such as water, biodiversity by primary production, or to flood protection. Indicators are also related to productive activities including waste production, emissions and the production and consumption of energy from renewable resources. The production and use of energy with reduced emissions is the object of several initiatives taken into consideration. Indicators to be used for evaluation of the environmental sustainability of projects can be categorised as follows (shown in Table 3), distinguishing between new initiatives and increase of efficiency of existing in projects.

Table 3: Indicators for environmental sustainability

Environmental Sustainability	Indicator	Character of indicator
Increasing efficiency of existing productions	Improvements in nutrient balance (nitrogen, phosphorous)	t/unit of value or yes/no
	Reduction of pollutants discharge (nitrates, pesticides/per unit produced)	t/unit of value or yes/no
	Traffic generated/per unit of value produced	person or good per km/value added or yes/no
	Reduction of greenhouse gas emissions per unit produced	t/unit of value or yes/no

⁸ Further sector besides agriculture (16%), which are most frequently named within the database are ICT, public and social services (17%), environmental services (13%) and food industry (12%) (see figure 4).

Environmental Sustainability	Indicator	Character of indicator
	Decrease of area under production for unit produced (t/ha)	(t/ha)
	Decrease of irrigation (water used for unit of added value produced)	m ³ /unit of value or yes/no
Decoupling Economic growth from negative environmental impacts/use of resources	Resource use and waste produced (t/unit)	t/unit of value or yes/no
	Release of pollutants (nitrates, pesticides)	t/unit of value or yes/no
	Greenhouse gas emissions	t/unit of value or yes/no
	Production of renewable energy (% of regional consumption)	(% of regional consumption or yes/no
	Increasing/maintaining Biodiversity	(yes/no)
	Organic crop production and yields from areas under biologic farming (t/ha)	(t/ha)
Environmental education	Initiative for environmental education	No of persons
	Number of beneficiaries participating in training courses	No of persons

3.2.5 Indicators of social sustainability

The social sustainability of projects is frequently described in terms of creation of knowledge as a basis of the development of local communities, job creation and in some cases as favouring the return of migrants, improving the social structure in declining rural areas as tendencies of abandonment and negative social selection because of labour out-migration, frequent in rural areas, are inverted. Furthermore, several projects underline the fact that initiatives are integrated or strive to be integrated into local society (e.g. some tourism projects). The involvement of local communities appears to be a factor of success, if projects succeed in creating of synergies among actors in favour of innovative projects.

Some projects clearly work to create a critical mass necessary for production of innovative cultivation materials or for integration between different phases of production. A further indicator of social sustainability is the creation of knowledge in local communities (e.g. qualification for women in rural areas, in the Dutch project rural women's future or in the Romanian Knowledge economy project⁹). This strategy aims to create conditions for innovative actions, but may have no direct measurable impact on the local development in number, for instance, of new jobs created. A preliminary set of indicators for social sustainability is shown in Table 4 below.

⁹ See case study-database N°61 and N°20

Table 4: Indicators for social sustainability

Social Sustainability	Indicator	Character of Indicator
Integration into local (rural) context	Local actors involved	Qualitative or not relevant
	Creation of new local networks	
Jobs created for residents	<ul style="list-style-type: none"> • No of jobs created • Quality of jobs (for women, elderly) • Added value (social wealth) 	Quantitative or not relevant
Education /Knowledge	Number of qualifications (% of persons with third and second level degrees)	Quantitative/yes/no
Impact on social structure	Jobs attracting new inhabitants	Yes/no

3.3 Building the Evaluation Matrix

Based on a first examination of the case studies presented, the values for these indicators contained in the documentation of case studies have been listed in a matrix.¹⁰ These indicators have been developed according to the Lisbon and the Gothenburg Strategy, which contain the most relevant criteria for the assessment of successful development within the European communities. In addition, positive trends in terms of economic, social or environmental terms have been considered as criteria of success, presuming that positive developments in these fields will contribute to develop 'Europe towards a competitive, knowledge-based society'. Once the matrix has been agreed among the RAPIDO project members, a complete indication of values for each indicator will be compiled. More specific measures of success will be identified through the results of the questionnaire (WP2) and in-depth investigation into selected case studies.

In order to facilitate the usability of the matrix, only positive affirmations have been noted for the case studies. In other words, if the value of a criteria is no, or if no indication has been available, the respective field has been left blank, whereas an affirmative answer has been signed with "X". In cases where the necessity of public funding has explicitly been pointed out, a "no" in the column dedicated to financial autonomy indicates this specific condition. The introductory part of the matrix dedicated to aspects of project organization has been left blank up to now due to lack of information. Figure 9 gives an overview on the table created with the information on the case studies collected.

¹⁰ It has to be considered that not all case studies contained indications for indicators and that, due to the heterogeneity of case studies taken into account; the type of indicators used is quite divergent, so that only single areas are covered for each project. Furthermore, no information on the local development context has been available at this stage of the work; assessment has to be made exclusively at the level of single project, using the qualitative version indicators for putting into evidence interactions between single areas of sustainability and issues. For later elaboration, most indicators can also be adapted to quantification, using regional analysis for the evaluation of impacts.

Table 5: Evaluation Matrix for the assessment of initiatives and projects in the area of rural innovation

Project organization:			
	Area	Indicator	Character of Indicator
	Policies/financial Incentives	Is innovation supported by a broader policy measure?	Yes/no
		Are there economic/social incentives used to facilitate the innovation?	Yes/no
	Channels:	Role of local networks for communication and project building	Yes/no
		Role of broader information campaign for project building	Yes/no
	Actors:	Number of actors involved	quantitative
		Existence of networks	Yes /no
N° of Indicator	Sustainability:		
	Economic Sustainability	Indicator	Character of Indicator
1	Jobs created	Number of permanent jobs created/ added value	Rate (added value/jobs) Rate (Cost/job created) or yes /no
2		Quality of jobs	(av. productivity) or yes/no
3		Investment per job	(€/jobs) or yes /no
4	Financial autonomy	Working without subsidies	Yes/no permanent /temporary
5	Pioneer	The initiative has advantages on the market deriving from innovation	Yes/no
6	Networking	Creation of local business/social partnerships	Yes/no
7	Impacts on local economy	Creation of new initiatives in relation to the regional economy	% increase of no of jobs
	Environmental Sustainability	Indicator	Character of Indicator
8	Increasing efficiency of existing productions	Improvements in nutrient balance (nitrogen, phosphorous)	t/unit of value or yes/no
9		Reduction of pollutants discharge (nitrates, pesticides/per unit produced)	t/unit of value or yes/no
10		Traffic generated/per unit of value produced	person or good per km/value added or yes/no
11		Reduction of greenhouse gas emissions per unit produced	t/unit of value or yes/no
12		Decrease of area under production for unit produces (t/ha)	(t/ha)
13		Decrease of irrigation (water used for unit of added value produced)	m3/unit of value or yes/no

14	Decoupling Economic growth from negative environmental impacts/use of resources	Resource use and waste produced (t/unit)	t/unit of value or yes/no
15		Release of pollutants (nitrates, pesticides)	t/unit of value or yes/no
16		Greenhouse gas emissions	t/unit of value or yes/no
17		Production of renewable energy (% of regional consumption)	(% of regional consumption or yes/no
18		Increasing/maintaining Biodiversity	(yes/no)
19		Organic crop production and yields from areas under biologic farming (t/ha)	(t/ha)
20	Environmental education	Initiative for environmental Education	No of persons
21		Number of beneficiaries participating in training courses	No of persons
Social Sustainability		Indicator	Character of indicator
22	Integration into local (rural) context	Local actors involved	Qualitative or not relevant
23		Creation of new local networks	Qualitative or not relevant
24	Jobs created for residents	<ul style="list-style-type: none"> • No of jobs created • Quality of jobs (for women, elderly) • Added value (social wealth) 	Quantitative or not relevant
25	Education /Knowledge	Number of qualifications (% of persons with third and second level degrees)	Quantitative/yes/no
26	Impact on social structure	Jobs attracting new inhabitants	Yes/no

3.4 Outcomes

The initial application of this evaluation matrix to the selection of case studies suggests a set of common criteria:

- The integration of innovative initiatives in the local context and the ability to create consensus in creating the initiative within the community lead to success for different types of projects that depend on local synergies or networks.
- The creation of knowledge cannot be directly linked to success, as it is not an outcome itself, rather it may increase the innovative capacity of a local community.
- Channels of diffusion and implementation of innovation shown from the analysis suggest a strong connection between success and capacity of social networking. This is especially true for projects that integrate innovation initiatives into different levels of social relations of a community (economic as well as social or political ones).

3.4.1 Next steps

The evaluation matrix will be discussed with the project partners during the project meeting in November 2007, in order to make eventual adaptations according to the needs of analysis of the following work phases.

4 Conclusion

The database of innovation initiatives offers a good overview of specific projects of innovation in rural areas that describe the relevant factors of success for innovation in multiple sectors and countries. The database will serve as the basis for subsequent analysis throughout the project. The information presented allows projects to be selected for in-depth analysis, which will be developed under WP 2, 3 and 4, and 5.

The 67 best practice examples represent 17 of the 27 EU Member States. The projects cover all relevant economic sectors of rural areas with a stress on agriculture and forestry. Generally projects show a high level of integration between different sectors. They include heterogeneous types of innovation, ranging from product and process innovations to new services and creation of knowledge. The size of projects is also heterogeneous, but most occur at the single enterprise and regional scales.

Indicators to measure economic, environmental and social sustainability, according to the Lisbon Strategy and Gothenburg Council have been identified and compiled in an evaluation matrix. This matrix, basing on information gathered and literature on indicators has been used to identify broad trends and factors that may contribute to success or failures.¹¹ In future work packages, selected projects will be evaluated in-depth according to this matrix. Next steps include fine-tuning this matrix so that it can be applied at this detailed level.

The database itself allows easily accessible searches and queries on different aspects of innovative actions, which contains information on relevant indicators for the characterization of innovative action. It can thus be consulted not only by policy makers, but also by community stakeholders, in order to learn from experience.

Similarly, the evaluation matrix may be able i) to assist policy decision-makers with respect to single projects, as it highlights trends with respect to sustainability goals, ii) to indicate directions of sustainable development in the European rural areas on a more general level and iii) in particular to measure the success of projects.

Thus far, it is clear from the database that participation from the local community is one of the most important factors for success. In addition, it is important to integrate more than one sector in an innovative initiative. Also, European policy plays a major role in innovation; EU programs fund approximately 45% of the projects. However, it is also important to note that approximately 25% of the projects have been initiated independently from any specific EU, national or regional policy. Future research in the RAPIDO project will build on these broad trends to further identify factors for success and develop future policy options related to innovation in rural areas.

¹¹ It must be considered that not all case studies provided the necessary information for the definition of criteria for their assessment.

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