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Social Innovation in Marginalised Rural Areas

Call: H2020-ISIB-2015-2

Innovative, Sustainable and Inclusive Bioeconomy

Work Programme: Topic ISIB-03-2015. Unlocking the growth potential of rural areas through enhanced governance and social innovation

Demonstrator D.4.2

List of Frameworks, Approaches, Methods and Tools Identified to Assess SI Implications at Different Levels

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Social innovation, Cross-sectoral topics, General frameworks, approaches, methods and tools

#	Framework	Reference – Link	Description - Notes
1	Ex post evaluation of 2007-2013 RDPs	European Communities (2014). Capturing the Success of your RDP: Guidelines for the ex-post Evaluations of 2007-2013 RDPs . Brussels: European Evaluation Network for Rural Development and European Commission.	The ex post evaluation is a summative evaluation of a Rural Development Programme. It is a policy learning tool, which enables to use the evaluation results to improve the design, quality and implementation of the policy in the future. At EU level, the policy derives from Council Regulation (EC) No 1698/2005 and is structured through a hierarchy of objectives, rooted in the overall objectives set up by Community strategic guidelines for rural development, backed by more specific objectives linked to axes and sub-axes, and continuing to operational objectives at measure level as laid down in Council Regulation (EC) No 1698/2005. It includes a description of the intervention logic and how it should be assessed, provides evaluation questions and judgment criteria, explains the purpose and role of indicators, and lists a set of quantitative, qualitative and mixed methods approaches.
2	Framework to assess local governance (2012)	Secco, L., Da Re, R., Pettenella, D. M. and Gatto, P. (2013). Why and how to measure forest governance at local level: A set of indicators . <i>Forest Policy and Economics</i> , 49, 57–71.	The paper derives from the PhD thesis of Riccardo Da Re: "Governance of natural resources and development of local economies in rural areas: the Social Networks Analysis and other instruments for good governance indicators". It develops a methodology for evaluation of good local governance of natural resources in rural areas. It focuses on the division of the good governance concept in key dimensions and sub-dimensions, and proposes a simple and expeditious set of indicators to be applied at local level to assess good governance of natural resources. Among the instruments used during the study, special attention is given to social network analysis, used to study the networks generated by the assessed organisations and create new indicators to assess local good governance.
3	A Guide for Project M&E: Managing for Impact in Rural Development	Guijt, I. and M. Woodhill. 2002. A Guide for Project M&E: Managing for Impact in Rural Development . Rome: IFAD.	The aim of IFAD and its partnerships is to enable the rural poor to overcome poverty. This puts social mobilisation and participation of the poor upfront in conceiving and implementing development initiatives. The overriding goal of the guide is to improve the impact of IFAD-funded projects through the introduction of effective M&E systems. It focuses on a learning approach to management that uses achievements and challenges to improve decision-making and accountability.
4	CrESSI (Creating Economic Space for Social Innovation)	CrESSI resources can be found online: http://siresearch.eu/social-innovation/project/cressi-creating-economic-space-social-innovation	The ongoing CrESSI project explore the economic underpinnings of social innovation with a particular focus on how policy and practice can enhance the lives of the most marginalised and disempowered citizens in society. Overall, the project takes an institutionalist view of the key issues exploring the drivers and structures that lead to marginalisation and disempowerment. This research also aims to set out how



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			interventions drawing on social innovation can address major economic, social and power imbalances and inequalities. The project began in February 2014 and will conclude in February 2018. Specifically, WP1 and WP3 are published deliverables on the definition of SI and the methodology to assess impacts.
5	TEPSIE (The Theoretical, Empirical and Policy Foundations for Social Innovation in Europe)	TEPSIE resources can be found online: http://www.tepsie.eu/	The TEPSIE project explores the barriers to innovation, as well as the structures and resources that are required to support social innovation at the European level. The aim is to identify what works in terms of measuring and scaling innovation, engaging citizens and using online networks to maximum effect in order to assist policy makers, researchers and practitioners working in the field of social innovation. The three-year project started on the 1st January 2012 and ends on 1st January 2015.
6	Third Sector Impact (TSI)	TSI resources can be found online: http://thirdsectorimpact.eu/documentation-category/working-papers/	The third sector, consisting of civil society associations and foundations, volunteers, and other citizen organisations and activities, offers unique renewable and sustainable resources for social and economic problem-solving, democracy, and civic engagement in Europe. We need a clearer understanding of the third sector – its scope and scale, existing and potential impacts, and barriers to full third sector contribution to the continent's common welfare. TSI is a comparative European research project addressing these areas. It includes a stakeholder engagement process to capture the insights of practitioners.
7	Social Innovation: Driving Force of Social Change (SI-DRIVE)	SI-DRIVE online resources can be found online: https://www.si-drive.eu/ See: Butzin, A., Howaldt, J., Domanski, D., Kaletka, C. and Weber, M. (2014). Conclusions. In: J. Howaldt, A. Butzin, D. Domanski and C. Kaletka. <i>Theoretical approaches to social innovation – a critical literature review</i> . A deliverable of the project SI-DRIVE. (pp. 151-165) Dortmund: Sozialforschungsstelle. Howaldt, J., Kaleta, C. and Schroder, A. (2016). Mapping the world of social innovation, key results of a comparative analysis of 1.005 social innovation at a glance . SI-DRIVE, H2020, Grant agreement 612870.	SI-DRIVE has four objectives: i) to determine the nature, characteristics and impacts of social innovation as key elements of a new paradigm of innovation; ii) to map, analyse and promote social innovations in Europe and world regions to better understand and enable social innovations and their capacity for changing societies; iii) to identify and assess success factors of SI in seven particular policy areas, supporting reciprocal empowerment in various countries and social groups to engage in SI for development, working towards Europe 2020 targets and sustainable development; iv) to undertake future-oriented policy-driven research, analyse barriers and drivers for SI and develop tools and instruments for policy interventions.



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8	TRANSIT (TRANSformative Social Innovation Theory)	<p>The TRANSIT resources can be found online: http://www.transitsocialinnovation.eu/</p> <p>See:</p> <p>Haxeltine, A., Kemp, R., Dumitru, A., Aveline, F., Pel, B. and Wittmayer, B. (2015). A first prototype of TSI theory. TRANSIT Deliverable 3.2, EU SSH.2013.3.2-1 Grant agreement no: 613168.</p> <p>Pennink, C. and Zuijderwijk, L. (2015). Governance tools for transformative social innovation: 2nd training tool. TRANSIT Deliverable 6.4, EU SSH.2013.3.2-1 Grant agreement no: 613168.</p> <p>Weaver, P. and Marks, M.B. (2017). Social innovation resourcing strategies and transformation pathways: a first cut typology. TRANSIT working paper #11, EU SSH.2013.3.2-1 Grant agreement no: 613168.</p> <p>Wittmayer, J.M., Avelino, F., Dorland, J., Pel, B. and Jorgensen, M.S. (2015) Methodological guidelines Batch 2. TRANSIT Deliverable 4.3, EU SSH.2013.3.2-1 Grant agreement no: 613168.</p>	<p>TRANSIT aims to develop a theory of transformative social innovation useful for academics and policy makers as well as practitioners. This will be achieved by studying how networks of social entrepreneurs and families of social innovation projects contribute to systemic societal change. Examples of case-studies include Living Knowledge science shops, time banks, Makerspaces and FabLabs, Transition Towns, eco-villages and energy cooperatives. A main research question is how people are (dis)empowered in contributing to systemic change in the context of a rapidly changing world that faces 'game changing' developments such as e.g. economic crises, climate change and the ICT-revolution.</p>
9	BENISI - scaling social innovation	<p>The BENISI resources can be found online: http://www.benisi.eu/</p>	<p>BENISI seeks to build a Europe-wide network of networks of incubators for social innovation. This network will proactively select at least 300 social innovations that are identified with high potential for scaling successfully, and ensure the delivery of necessary support services to those social innovations. Networks are already structured in a collaborative mode; they are more able to spread knowledge and practice horizontally when trying to develop a Europe-wide programme that seeks to balance local action with continent-wide strategy and vision.</p>
10	Social Capital and Local Development: from Theory to Empirics	<p>Pisani, E., Franceschetti, G., Secco, L. and Christoforou, A. (Eds.) (2017). Social Capital and Local Development: from Theory to Empirics. London: Palgrave Macmillan.</p>	<p>This book proposes an original and unique method for understanding and measuring social capital and its contribution to development at the local and regional level. It applies this method and offers results from a study of Italian Local Action Groups that operate in the EU-funded LEADER programme, which is an approach to rural development that relies heavily on social capital.</p>



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11	Qualitative Comparative Analysis (QCA)	Herrera, M. E. B. (2016). Social innovation for bridging societal divides: Process or leader? A qualitative comparative analysis . <i>Journal of Business Research</i> , 69(11), 5241–5247.	This research focuses on the process of social innovation for Bridging Societal Divides (BSD) and postulates that social innovation for BSD requires a co-creative, systemic approach. This research examines two process variables: Stakeholder engagement, which reflects the extent of co-creation and collaboration, and formalization, which addresses the systemic nature of BSD. Although the focus of the research is on process variables, the study also postulates that leader characteristics affect the success of BSD.
12	Rural social innovation concept	Bock, B.B. (2016). Rural marginalisation and the role of social innovation, a turn towards nexogenous development and rural reconnection . <i>Sociologia Ruralis</i> , 56(4), 552–573.	The article discusses three examples of rural social innovation, which are used to distil specific features of social innovation and compare them with other concepts and approaches to rural development, namely exogenous and neo-endogenous development. It underlines the importance of reconnection and socio-political connectivity of marginal rural areas.
13	Internal and External Factor Evaluation Matrix	Katonáné Kovács, J., Varga, E. and Nemes, G. (2016). Understanding the process of social innovation in rural regions . <i>Studies in Agricultural Economics</i> , 118(1), 22–29.	The objective of the paper is to examine the role of SI in rural development. The hypothesis behind this research was that a better understanding of how social innovation takes place in practice could increase its presence and efficiency in rural development. To explore these issues, the authors analyse four different cases of social innovation situated in rural Hungary.
14	Literature review on the evolution of the concept of social innovation	Ayob, N., Teasdale, S. and Fagan, K. (2016). How social innovation 'came to be': tracing the evolution of a contested concept . <i>Journal of Social Policy</i> , 1–19.	Rather than focusing on the evaluation of SI, the article applies a systematic literature review approach based on bibliometric analysis. Bibliometric analysis can be defined as the application of mathematical and statistical methods to books and other media of communication. These methods were traditionally used in libraries to describe patterns of publications within a given field or discipline.
15	A schematic conceptual model of the social innovation process	Cajaiba-Santana, G. (2014). Social innovation: Moving the field forward. A conceptual framework . <i>Technological Forecasting and Social Change</i> , 82, 42–51.	To date, research on social innovation has been polarized between agentic and structuralist approaches. Building on institutional and structuration theories, this article proposes bringing these two approaches together and presents a new conceptual framework to investigate social innovation as a driver of social change
16	A provisional framework	Dawson, P. and Daniel, L. (2010). Understanding social innovation: a provisional framework . <i>International Journal of Technology Management</i> , 51(1), 9–21.	The authors examine the relationship between social, business and technical dimensions and develop a provisional framework for making sense of social innovation.
17	Instrumental and non-instrumental	Dietrich, M., Znotka, M., Guthor, H. and Hilfinger, F. (2016). Instrumental and Non-instrumental Factors of Social Innovation Adoption . <i>VOLUNTAS: International Journal of</i>	The authors investigate social innovation adoption on market-based innovations adoptions and extend instrumental factors of adoption intention by including non-instrumental factors to improve the explanatory power of conventional adoption



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	factors of social innovation adoption	<i>Voluntary and Nonprofit Organisations</i> , 27(4), 1950–1978.	models. These non-instrumental factors are symbolic, emotional, and motivational.
18	Locating social innovation in theory and practice	Grimm, R., Fox, C., Baines, S. and Albertson, K. (2013). Social innovation, an answer to contemporary societal challenges? Locating the concept in theory and practice . <i>Innovation: The European Journal of Social Science Research</i> , 26(4), 436–455.	The authors argue that if social innovation is to be a useful concept for policy-makers then it must tell us something about what adjustments are needed to develop an effective political economy that is social innovation ready. Moreover, what is needed is more theoretical and empirical work to help social innovation to develop into an effective policy tool.
19	Social Network Analysis (SNA)	Banerjee, A., Chandrasekhar, A., Duflo, E. and Jackson, M. O. (2013). Diffusion of microfinance . <i>Science</i> , 341, 6144. Borgatti, S.P., Everett, M.G., Johnson, J.C. (2013). Analyzing Social Networks . London: SAGE Publications.	Social network analysis is about understanding how the relationships between agents of a system influence or impact specific outcomes of that system. In relation to social innovation, social network analysis can help understand how the links (what they are and what are their characteristics) between agents (actors or institutions) encourage or hinder social innovation in its different phases. Social network analysis has its roots in graph theory and is used in a variety of domains (e.g., ecology, policy analysis, economics).
20	Actor/agent based models also called companion modelling	Etienne, M. (2013). Companion Modelling: A Participatory Approach to Support Sustainable Development . The Netherlands: Springer.	Agent based models such as companion modelling can be seen as tools that can support and encourage social innovation. What can be measured is to what extent this type of tools helps social innovation develop. A question is to what extent can these tools help people share a common vision.
21	Social capital and innovation: A comparative analysis of regional policies	Murphy, L., Huggins, R. and Thompson, P. (2015). Social capital and innovation: a comparative analysis of regional policies . <i>Environment and Planning C: Politics and Space</i> , 34(6), 1025–1057.	This paper analyses how different forms of social capital are associated with different types of innovation across regional policy interventions. Taking the case of a continuum of three policy interventions incorporating both 'hard'/traditional and 'soft'/non-traditional innovation measures, the analysis finds that differing regional innovation programmes are connected to different forms of social capital generation. Significant associations are found between the types of innovation generated and differing forms of social capital. The elements of social capital associated with the benefits of social networks are positively related to softer forms of innovation. However, there is also evidence that the positive influence of social networks varies in strength across policy interventions, suggesting a strong contextual and environmental influence on this relationship. It concludes that social capital should not be considered a panacea for increasing innovative activity within regional policy programmes.
22	Evaluating	Flanagan, A. E. and Tanner, J. C. (2016). A Framework for	The paper outlines the economic and psychosocial theories that led to an array of



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	Behaviour Change in International Development Operations: A New Framework	Evaluating Behavior Change in International Development Operations . IEG Working Paper 2016/No. 2, WB-IFC-MIGA.	frameworks for helping policy makers design behaviourally conscious interventions. After establishing criteria for an evaluative behaviour change framework suitable for World Bank projects and finding that none of the existing frameworks fits that set of criteria, this paper proposes a new framework, CrI2SP, which categorizes elements of World Bank projects, and introduces an evaluative framework for capturing the degree to which behavioural considerations have been integrated into World Bank projects.
23	NAIADE (Novel Approach to Imprecise Assessment and Decision Environments)	De Marchi, B., Funtowicz, S. O., Lo Cascio, S. and G. Munda, (2000). Combining participative and institutional approaches with multicriteria evaluation. An empirical study for water issues in Troina, Sicily . <i>Ecological Economics</i> , 34, 267–82.	NAIADE is a discrete multicriteria method developed by G. Munda (1995) in cooperation between the Autonomous University of Barcelona and the Joint Research Centre of the EC. The research design and process consisted of the following steps: (i) a multicriteria evaluation used as a learning tool to understand the main structure of the problem at hand and to explore its qualitative dimensions; (ii) analysis of the structure of power interests and stakeholders (ranging from local to regional social actors) by means of an institutional analysis; (ii) field research involving in-depth interviews with key actors and a survey of local residents.
24	Multi-criteria mapping (MCM)	Stirling, A. and Mayer, S. (2001). A Novel Approach to the Appraisal of Technological Risk: A Multi-criteria Mapping Study of a Genetically Modified Crop . <i>Environment and Planning C: Government and Policy</i> , 19(4), 529–55. Stirling A. (1997). Multicriteria mapping: mitigating the problems of environmental evaluation? In: J. Foster (ed.) <i>Valuating nature: economics, ethics and environment</i> . London: Routledge.	Drawing on a variety of perspectives in the UK debate, a range of agricultural strategies for the production of oilseed rape, including both GM and non-GM options, were explored in this MCM pilot exercise.
25	Social-ecological system (SES) framework	Ostrom, E. (2009). A general framework for analyzing sustainability of social-ecological systems . <i>Science</i> , 325, 419–422. Ostrom, E. (2011). Background on the institutional analysis and development framework . <i>Policy Studies Journal</i> 39(1), 7–27. McGinnis, M. D. and Ostrom, E. (2012). Social-ecological system framework: initial changes and continuing challenges . <i>Ecology and Society</i> , 19 (2), 30. Ruiz-Ballesteros, E. and Brondizio, E. S. (2013). Building	The SES framework builds on the foundation of the IAD framework (Ostrom, 2007, 2009, 2011), and the two are very closely related. The SES framework enables to (i) share a common vocabulary for the construction and understanding of multiple theories in flexible approach and complementary rather than exclusively, (ii) capture various methods to determine changes in system perspective, and (iii) influencing processes and outcomes in specific empirical settings. SES thus provides a solution-based approach. It can be applied to various contexts. The SES framework uses set of various ecological and social variables that are needed for the analysis of an SES. These variables can be modified for each different action situation and problem.



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		Negotiated Agreement: The Emergence of Community-Based Tourism in Floreana (Galápagos Islands) , <i>Human Organisation</i> , 72 (4).	
26	Assessment of food security information system in Azerbaijan	Temel, T. and Kinlay, D. (2012). A Method for Assessing Food Security Information System . ECOREC Economic Research and Consulting. Munich Personal RePEc Archive.	The paper illustrates how to set up an operational food security information system, identify its leverage components and pathways of information flow, and qualitatively measure its performance in terms of utility obtained from the information. Both a workshop and a questionnaire are designed as means of gathering the data required for the measurement of the performance. The workshop identifies priority information flow patterns and the associated utilities, while the questionnaire gathers the data for the estimation of the organisational learning and information dissemination capacities. Finally, the evaluation of the system integrates the traditional structure-conduct-performance approach into the method developed.
27	Contextual Interaction Theory (CIT)	De Boer, C. and Bressers, H. (2011). Complex and Dynamic Implementation Processes, Analyzing the Renaturalization of the Dutch Regge River . Enschede: University of Twente. De Boer, C. L. (2012). Contextual Water Management: A Study of Governance and Implementation Processes in Local Stream Restoration Projects . Ph.D. Thesis, University of Twente.	CIT provides a general conceptual lens for understanding implementation of particular plans or policies and addresses the way in which the key characteristics of actors, such as motivation, cognition and resources influence successful implementation. CIT is used to provide a way to understand the internal processes that occur once the governance actors have decided to move forward to the implementation of the chosen policy. It provides an analytical framework to assess whether a policy transfer contributes to or damages conditions for successful water management.
28	Participatory Action Research (PAR)	McIntyre, A. (2008). Participatory Action Research . Series: Qualitative Research Methods (Volume 52). London: SAGE Publications.	PAR approaches are a useful toolbox of techniques for engaging with stakeholders and sharing information so as to encourage social learning and co-construction of knowledge. PAR seeks to help stakeholders implement their goals by focusing particularly on conflicts and power imbalances within the community of relevant actors. It integrates three main aspects: participation (life in society and democracy), action (engagement with experience and history), and research (soundness in thought and growth of knowledge).
29	OECD social, environmental and economic indicators	OECD DAC. (2013). Evaluating Development Co-Operation Summary of Key Norms and Standards . OECD DAC Network on Development Evaluation. OECD and Eurostat (2005). Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data . Third Edition. Paris: OECD Publishing.	The mission of the Organisation for Economic Co-operation and Development (OECD) is to promote policies that improve the economic and social well-being of people around the world. They work with governments to understand what drives economic, social and environmental change. They measure productivity and global flows of trade and investment, analyse and compare data to predict future trends, set international standards on a wide range of issues, from agriculture and tax to the safety of



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		<p>OECD (1999). Improving Evaluation Practices: Best Practice Guidelines for Evaluation and Background Paper. Paris: OECD Publishing.</p> <p>OECD (1991). Principles for Evaluation of Development Assistance. Development Assistance Committee of the OECD. Paris: OECD Publishing.</p> <p>OECD (2010) [1991]. Glossary of Key Terms in Evaluation and Results Based Management. DAC Working Party on Aid Evaluation of the OECD. Paris: OECD.</p> <p>OECD (2011a). Evaluating Development Co-operation. Summary of key norms and standards. Second Edition. Paris: OECD Publishing.</p> <p>OECD (2011b). OECD Regional typology. Directorate for Public Governance and Territorial Development.</p> <p>OECD (2013a). Evaluating Development Activities. 12 Lessons from the OECD DAC.</p> <p>OECD (2013b). The DAC Network on Development Evaluation – 30 years of strengthening learning in development 1983-2013.</p> <p>OECD (2017). OECD.Stat. OECD.</p>	<p>chemicals.</p> <p>The OECD has developed international standards for evaluation practice and a number of key resources are listed in the references.</p>
30	How social capital is leveraged in social innovations under resource constraints?	<p>Bhatt, P. and Altinay, L. (2013). How social capital is leveraged in social innovations under resource constraints? Management Decision, 51 (9), 1772–1792.</p>	<p>This paper explores how social capital is leveraged in social innovations to overcome resource constraints. The paper reports on the findings from an exploratory study on the social innovation process within Indian social entrepreneurial ventures (SEVs) developed in a resource constrained environment.</p>
31	Impact evaluation practice in	<p>Khandher, S. R., Koolwal, G. B. and Samad, H. A. (2010). Handbook on Impact Evaluation. Quantitative Methods and Practices. Washington D.C.: The International Bank for Reconstruction and Development/The World Bank.</p> <p>Kuset, J. Z. and Rist, R. C. (2004). Ten steps to a results-based monitoring and evaluation system: a handbook for</p>	<p>Gertler et al. offer an accessible introduction to the topic of impact evaluation and its practice in development. The three parts in this handbook provide a nontechnical introduction to impact evaluations, discussing what to evaluate and why in part 1, how to evaluate in part 2, and how to implement an evaluation in part 3. These elements are the basic tools needed to successfully carry out an impact evaluation.</p>



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		<p>development practitioners. Washington, DC: The World Bank.</p> <p>Morra Imas, L. G. and Rist, R. C. (2009). <i>The Road to Results: Designing and Conducting Effective Development Evaluations</i>. Washington, DC: The World Bank.</p> <p>Gertler P. J., Martinez, S., Premand, P., Rawlings, L. B., Vermeersch, C. M. J. (2016). Impact Evaluation in Practice, 2nd edition. Washington, DC: The World Bank.</p>	
32	BEPA 2011	BEPA (2011). Empowering people, driving change: Social innovation in the European Union . Brussels: European Commission.	The report provides an exhaustive review of social innovation including, definition and characteristics, how the European Commission support social innovation, and barriers and challenges. It provides a set of recommendations for action at the EU level.
33	BEPA 2013	BEPA (2013). Guide to social innovation . Brussels: European Commission.	The Guide explains how public authorities can support social innovation, how social innovation can be upscaled into public policies and what are current examples of social innovation funded by the Structural Funds. It concludes with specific guidance on programming social innovation in the structural funds and provides ten practical steps for implementation.
34	Common Monitoring and Evaluation Framework	<p>European Commission (2014). European Regulation (EU) No 834/2014 of 22 July 2014. Laying down rules for the application of the common monitoring and evaluation framework of the common agricultural policy.</p> <p>European Network for Rural Development (ENRD) (2014). Common Monitoring and Evaluation Framework. European Evaluation Helpdesk for Rural Development.</p> <p>European Commission (EC) (2015). <i>Technical Handbook on the Monitoring and Evaluation Framework of the Common Agricultural Policy 2014 – 2020</i>. Brussels: Directorate-General for Agriculture and Rural Development.</p>	For the first time, the programming period (2014-2020) offers a Common Monitoring and Evaluation Framework (CMEF) to measure the performance of the whole CAP (both pillar I - direct payments to farmers and market measures and pillar II - rural development measures). Additionally, for rural development (pillar II) there is a Common Monitoring and Evaluation System (CMES), which is part of the CMEF and established in: 1) the common provisions regulation (Regulation (EU) No 1303/2013), which defines the common monitoring and evaluation elements for the European Structural and Investment Funds (ESIF); and 2) the rural development regulation (Regulation (EU) No 1305/2013), which addresses the specificities for rural development programmes.
35	Biggs et al. 2010	Biggs, R., Westley, F. R., Carpenter, S. R. (2010). Navigating the back loop: fostering social innovation and transformation in ecosystem management . <i>Ecology and Society</i> , 15(2), 9.	The authors explore ecosystem-management transformations using a social-innovation framework in three local-level case studies of transformation in freshwater management. They provide a pilot assessment of factors that may promote the emergence and adoption of integrated, collaborative ecosystem-management approaches, including ongoing environmental degradation, increasing environmental



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			awareness, and shifting societal values.
36	Biggs et al. 2012	Biggs, R., Schlüter, M., Biggs, D., Bohensky, E. L., BurnSilver, S., Cundill, G., Dakos, V., Daw, T. M., Evans, L. S., Kotschy, K., Leitch, A. M., Meek, C., Quinlan, A., Raudsepp-Earne, C., Robards, M. D., Schoon, M. L., Schultz, L. and West, P. C. (2012). Toward principles for enhancing the resilience of ecosystem services. <i>Annual Review of Environment and Resources</i> , 37, 421–448.	The authors identify seven generic policy-relevant principles for enhancing the resilience of desired ES in the face of disturbance and ongoing change in social-ecological systems (SES). These principles are (P1) maintain diversity and redundancy, (P2) manage connectivity, (P3) manage slow variables and feedbacks, (P4) foster an understanding of SES as complex adaptive systems (CAS), (P5) encourage learning and experimentation, (P6) broaden participation, and (P7) promote polycentric governance systems (p. 421).
37	Sustainable Development Goals	UN (2015). Sustainable Development Goals . United Nations.	The Sustainable Development Goals (SDGs), officially known as <i>Transforming our world: the 2030 Agenda for Sustainable Development</i> is a set of 17 "Global Goals" with 169 targets.
38	Project cycle management guidelines	European Commission (2004). Project Cycle Management Guidelines. Aid Delivery Methods . Volume 1. Brussels: EuropeAid Cooperation Office.	The Guidelines aim to support good management practices and effective decision making throughout the project management cycle – from programming, through to identification, formulation, implementation and evaluation. (p. 1)
39	Results-based monitoring system	GIZ (2013). <i>Guidelines on designing and using a results-based monitoring system (RBM system)</i> . Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. GIZ (2014) Guidelines on designing a gender-sensitive results-based monitoring (RBM) system . Bonn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.	The guidelines are based on the six process steps for designing and using a results-based monitoring system (RBM system). The six process steps refer to GIZ's Results-Based Monitoring System, Framework of Reference, which sets out clear principles and standards and thus defines the basic understanding of RBM. The six process steps draw on this understanding and make practical and methodological statements on how to put the RBM system into operation (GIZ 2013, p. 4).



Sub-task 4.2.1: economic aspects

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101	GRI Reporting Framework (Economic Framework, GRI200)	Global Sustainability Standards Board (2016). Consolidated Set of GRI Sustainability Reporting Standards . GRI.	In the context of the GRI Standards, the economic dimension of sustainability concerns an organisation's impacts on the economic conditions of its stakeholders, and on economic systems at local, national, and global levels. The Standards in the Economy Series (200) addresses the flow of capital among different stakeholders, and the main economic impacts of an organisation throughout society.
102	SIMPACT	Dhondt, S., Van De Ven, H., Ziauberyte, R., Van Der Torre, W., Cressey, P., Kaderabkova, A., Luna, Á., Moghadam Saman, S., Castro Spila, J. and Terstriep, J. (2016). Ex-Ante Impact Assessment & Value Network Analysis for SI . SIMPACT Working Paper. Gelsenkirchen: Institute for Work and Technology.	In this paper, a conceptual framework is presented for conducting an ex-ante impact assessment for social innovation. The building blocks for an ex-ante impact assessment are goal formulation; developing the relationships between inputs, outputs and outcomes; determining the role of stakeholders to achieve the objectives; calculating the impact; and deciding on the social innovation.
103	Social Return on Investment	Nicholls, J., Lawlor, E., Neitzert, E., and Goodspeed, T. (2012). A Guide to Social Return on Investment . In S. Cupitt S. Durie, J. Inglis, K. Leathem, T. Lumley and R. Piper. The SROI Network.	Social Return on Investment (SROI) is a framework for measuring and accounting for this much broader concept of value; it seeks to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental and economic costs and benefits.
104	IGD Impact Measurement Framework in agribusiness	Agribusiness. (2014). idgIMPACT Sector Framework . The Initiative for Global Development.	idgIMPACT is a practical, business-oriented approach to impact measurement. Designed with direct input from businesses, sector-specific measurement frameworks help companies map potential (or realized) impacts to key business drivers and performance metrics.
105	EDRgroup Economic impact analysis	Weisbrod, G. and Weisbrod, B. (1997). Measuring economic impacts of projects and programs . <i>Economic Development Research Group</i> , 10, 1–11.	This framework explains the fundamental options and trade-offs involved in selecting the right kind of techniques for assessing economic impacts, and explains how to match the appropriate methods to different kinds of applications or situations.
106	The Green Book	HM Treasury (2003). The Green Book: appraisal and evaluation in central government . London: UK Government.	The Green Book describes how the economic, financial, social and environmental assessments of a policy, programme or project should be combined.
107	IRIS (Impact Reporting and Investment Standards)	Global Impact Investing Network (GIIN) (2012). Impact Reporting and Investment Standards . New York.	Generic and sector-specific libraries of socio-economic "activity" and "output" indicators and metrics, with standard definitions. IRIS is the catalogue of generally accepted performance metrics that leading impact investors use to measure and manage social, environmental, and financial performance of their investments, to evaluate deals, and to grow the credibility of the impact investing industry. In addition to financial metrics, the catalogue offers metrics for measuring both the operational performance (i.e., "doing things well") and the product/service performance (i.e.,



#	Framework	Reference - Link	Description - Notes
			"doing good things") of investments spanning different parts of the business value chain. The catalogue can also be viewed through a sectorial lens, including both "cross-sector" metrics (i.e. those that may be relevant for organisations regardless of sector) and "sector-specific" metrics (i.e. those that may be relevant to organisations whose activities focus on a specific sector).
108	Making the most of it: Economic evaluation in the social welfare field	Sefton, T., Byford, S., McDaid, D. and Hills, J. (2002). Making the Most of It: Economic Evaluation in the Social Welfare Field . York: Joseph Rowntree Foundation.	A guide to the use of economic evaluation in social welfare economic evaluation, involving the systematic assessment of costs and outcomes.
109	Methodology for Impact Analysis and Assessment (MIAA)	Hornsby, A. (2012). The Good Analyst: Impact Measurement and Analysis in the Social-Purpose Universe . London: Investing for Good.	The methodology aims to look at social-purpose organisations throughout the sector, and analysing their impacts in a robust and consistent fashion. To do this, it draws on measurements made at the ground level, and accordingly is accompanied by a set of Guidelines for How to Measure and Report Social Impact .
110	Double Bottom Line Project Report: Assessing Social Impact in Double Bottom Line Ventures	Clark, C., Rosenzweig, W., Long, D. and Olsen, S. (2004). Double Bottom Line Project Report: Assessing Social Impact in Double Bottom Line Ventures . New York: Research Initiative on Social Entrepreneurship. Columbia Business School.	A collection of methods to evaluate Double Bottom Line (DBL) businesses (entrepreneurial ventures that strive to achieve measurable social and financial outcome).
111	Cost-Benefits Analysis	Long, D. A., Mallar, C. D. and Thornton, C. V. (1981). Evaluating the benefits and costs of the Job Corps. <i>Journal of Policy Analysis and Management</i> , 1(1), 55–76.	Benefit-cost analysis (also called "cost-benefit analysis") is a type of economic analysis in which the costs and social impacts of an investment are expressed in monetary terms and then assessed according to one or more of three measures: (i) net present value (the aggregate value of all costs, revenues, and social impacts, discounted to reflect the same accounting period; (ii) benefit-cost ratio (the discounted value of revenues and positive impacts divided by discounted value of costs and negative impacts); and (iii) internal rate of return (the net value of revenues plus impacts expressed as an annual percentage return on the total costs of the investment).
112	Theory of Change	Weiss, C. H. (1995). Nothing as practical as good theory: Exploring theory-based evaluation for comprehensive	This framework emphasizes the understanding by stakeholders of how exactly the enterprise will generate social impacts. It highlights the causal relationships between



#	Framework	Reference - Link	Description - Notes
		community initiatives for children and families. <i>New approaches to evaluating community initiatives: Concepts, methods, and contexts</i> , 1, 65–92.	actions, short-term outcomes, and long-term outcomes.
113	Farmers' Market Impact Toolkit	Vancity Community Foundation and the BC Association of Farmers Markets (2013). Farmers' Market Impact Toolkit .	The Farmers' Market Impact Toolkit makes it easier for farmers' markets to demonstrate the difference they make in their communities. By using guided measurement tools and templates, market managers can create a performance snapshot that tells a powerful story supported by numbers and facts.
114	Value Network Analysis (VNA)	Allee, V. (2008). Value network analysis and value conversion of tangible and intangible assets . <i>Journal of Intellectual Capital</i> , 9(1), 5–24.	VNA is a suitable tool for demonstrating and analysing (qualitatively) the role of stakeholders in terms of values they exchange with other stakeholders in the social innovation network (see Figure 1). VNA is most useful for social innovators, and can be beneficial for policy makers and social investors. It can be applied to the micro-, meso- and macro- level. VNA provides a tool for analysing roles and tangible value creation, but it also allows the impact assessment process to be enriched by inclusion of the intangible value creations and exchanges - which are a common characteristic within social innovations - in the evaluation. An optimal evaluation benefits from a comprehensive and integrated visualization of all kinds of relationships which can arise among the involved actors and stakeholders.
115	Socio-Economic Assessment Toolbox (SEAT)	Anglo American (2012). SEAT Toolbox . London (UK).	The tool provides input and output information (outcomes and impact) through internal and external data collection based on a series of surveys which focus on: the profiling of local areas through demographics, social and wellbeing indicators, and their socio-political context; stakeholder communication and needs (relations, channels of engagement); and evaluation of potential risks (financial, occupational, environmental, social/community based, etc.). The framework is free and publicly available and requires 4-6 months to ???
116	Measurement Impact Framework (MIF)	Measuring Impact Working Group (2008). Measuring Impact Framework Methodology . World Business Council for Sustainable Development and International Finance Corporation.	This framework allows businesses and corporations to define the scope of their assessments, identify socio-economic business indicators for impact measurement, assess their results, and set their priorities in the governance and management process of their companies, especially the relations and communication with stakeholders. It focuses on metrics considering: input, activity and output; outcomes and impact; and flexibility to be adapted for other purposes.
117	Local Multiplier 3	Sacks, J. (2002). The Money Trail: Measuring your impact on the local economy using LM3 . New Economics Foundation and The Countryside Agency.	LM3 was developed by NEF (the New Economics Foundation) as a simple and understandable way of measuring local economic impact. It is designed to help people to think about local money flows and how their organisation can practically improve its



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 677622



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			local economic impact, as well as influence the public sector to consider the impact of its procurement decisions. It was designed to be quick and relatively easy, and to highlight where an organisation can improve its impact.
118	Social Impact Measurement of Social Enterprises	GECEs Sub, group on Impact Measurement (2014). Proposed Approaches to Social Impact Measurement in European Commission legislation and in practice relating to: EuSEFs and the EaSI.	The sub-group has the mandate to develop a methodology for measuring the social impact of activities by social enterprises by the end of 2013. This methodology is most needed in two contexts: firstly, for of the development of European Social Entrepreneurship Funds (EuSEFs), where additional criteria may be needed for better coordinating how social fund managers decide whether they can invest in a particular enterprise and monitor and report the results of these investments, and in enabling those fund managers to be properly accountable to investors and the wider public.



Sub-task 4.2.2: Social aspects

#	Framework	Reference - Link	Description – Notes
201	Methodological framework to evaluate a cluster policy in terms of social capital production	Nardone G., Lopolito A. and Muscio A. (2013). A Methodology to Evaluate Technological Cluster Policies Through the Impact on Social Capital . Conference paper.	A set of indicators that accounts for its structural, relational and cognitive components, from one side, and bonding, bridging and linking dimensions, from the other. The result is a standardized approach, not very expensive in terms of data and information to be collected that can be effectively combined with other methods measuring the performance of the policy through physical outputs as well as economic outcome and impacts.
202	Counterfactual Analysis	Labonne, J. and Chase, R. S. (2011). Do community-driven development projects enhance social capital? Evidence from the Philippines. <i>Journal of Development Economics</i> , 96(2), 348–358.	The method used in this work consist in a counterfactual analysis to explore the impact on community-level social capital of the KALAH-CIDSS (a large-scale CDD project) in the Philippines. This analysis is based on a unique and detailed data set of 2092 households in 135 villages in 16 municipalities: 8 municipalities in which the project is implemented and 8 comparison municipalities where the project is not implemented.
203	Qualitative Tools to the Six Dimensions of Social Capital	Bank, W. (2006). Analyzing Social Capital in Context: A Guide to Using Qualitative Methods and Data . Washington D.C.: World Bank Institute.	The paper provides an overview of the most relevant qualitative methods to study social capital. The authors emphasize the importance of using a combination of quantitative methods and qualitative methods to grasp, respectively, the breadth and the depth to assess a specific phenomenon. Six dimensions of social capital are identified: (i) Groups and networks, (ii) Trust and Solidarity, (iii) Collective action and cooperation, (iv) Information and communication, (v) Social cohesion and inclusion, and (vi) Empowerment and political action.
204	Methodological approach to evaluate social capital in LEADER	Nardone, G., Sisto, R. and Lopolito, A. (2010). Social Capital in the LEADER Initiative: a methodological approach. <i>Journal of Rural Studies</i> , 26(1), 63–72.	Five direct indicators to measure the main component of social capital (structural, cognitive and relational) and an indicator to assess the global social capital within the Local Action Group (LAG).
205	Rural Community Leadership	Bahr, M. J. and Shangreaux, V. (2012). Rural Community Leadership: Three Cornerstones . <i>Rural Minnesota Journal</i> , 7, 1–13.	Leadership matters. The book presents the results of the Blandin Community Leadership Programme, which is based on the assumptions that leaders are a critical resource for communities and that in order to become a healthy community, the quality and quantity of leadership that exists in a community.
206	FLUX-3D	Bas, E. and Guillo, M. (2015). Participatory foresight for social	FLUX-3D is a tool designed to assess innovative proposals (ideas, products,



#	Framework	Reference - Link	Description – Notes
		innovation. FLUX-3D method (Forward Looking User Experience), a tool for evaluating innovations. Technological Forecasting and Social Change , 101, 275–290.	processes or services) according to users' experience. Thanks to its simplicity, together with the fact that it is systematic and based on tridimensional cube-shaped graphic representations, FLUX-3D provides key information about users' satisfaction – with regard to their expectations – immediately and at first sight, in three different levels of analysis (dimensions, indicators, variables), and in a very accessible as well as intuitive way. It can additionally provide real time feedback which is helpful both for short-, medium- and long-term decision-making because of its participatory and open nature.
207	Measuring social capital: an integrated questionnaire	Grootaert, C., Narayan, D., Woolcock, M. and Nyhan-Jones, V. (2004). Measuring social capital: an integrated questionnaire . World Bank working paper no. 18. Washington, DC: The World Bank.	An integrated method to collect qualitative and quantitative data on various aspects of social capital: 1. Groups and networks, 2. Trust and solidarity, 3. Collective action and cooperation, 4. Information and communication, 5. Social cohesion and inclusion, 6. Empowerment and Political Action. An extended questionnaire and suggestions on data analysis are provided.
208	Comprehensive Evaluation of Local Action Groups in LEADER	Lopolito, A., Nardone, G. and Sisto, R. (2011). Towards a comprehensive evaluation of local action groups in LEADER programmes . <i>New Medit</i> , 10(1), 43–49.	It proposes a method for the evaluation of Rural Development Programmes, allowing for a quantitative analysis of tangible and intangible outputs of the Local Action Groups (LAGs). Some indicators are presented that account for the main aspects envisaged in the European Commission guidelines for the evaluation of the implementation of local plans, as utilisation of resources, effectiveness, efficiency and sustainability. In particular, the latter is intended in terms of institutional sustainability and analysed through the social capital theory.
209	Multi-step factor analysis	Pugno, M. and Verme, P. (2012). Life Satisfaction, Social Capital and the Bonding-Bridging Nexus . Policy Research working paper no. WPS 5945. Washington, DC: The World Bank.	The paper provides a four-step analysis to find variables that will approximate the bonding and bridging dimension of social capital.
210	Methodological approaches to capture impacts of LEADER and quality of life in rural areas	Grieve, J. and Weinspach, U. (2011). Capturing impacts of Leader and of measures to improve Quality of Life in rural areas . In 122 nd EAAE seminar "Evidence-based agricultural and rural policy making: methodological and empirical challenges of policy evaluation", Ancona, Italy.	Participatory evaluation tools, Social Network Analysis, Social accounting and audit at Local Action Group (LAG)-level, rating process, to capture effects on social capital of measures to improve quality of life in rural areas.
211	Approaches to incorporate	Bill and Melinda Gates Foundation Impact Planning and Improvement.	Two classical methods (cost-effectiveness analysis and cost-benefit analysis) to integrate cost in measuring social value creation and six approaches that have



#	Framework	Reference - Link	Description – Notes
	cost into estimation of social value creation	Tuan, M. T. (2008). Measuring and/or estimating social value creation: Insights into eight integrated cost approaches . Bill and Melinda Gates Foundation.	been developed by philanthropic and non-profit organisations in recent years.
212	Assessment of social return of investment in private companies	Olsen, S., and Galimidi, B. (2008). Catalogue of approaches to impact measurement: assessing social impact in private ventures . The Rockefeller Foundation.	25 different approaches that are currently being applied in privately-held companies and/or non-profit organisations to measure social impact of a certain investment.
213	Holistic method to measure social value	Retolaza, J. L., San-Jose, L., and Ru'z-Roque-i, M. (2016). Polyhedral Model: Social Value Model for Stakeholders. In: <i>Social Accounting for Sustainability</i> (pp. 37–51). Springer International Publishing.	A method (the Polyhedral Model) to quantify financial value, social value and emotional value deriving from the participation to a certain organisation.
214	Methodology to evaluate diversity of organisational characteristics	Lozano, S., Arenas, A., and Sánchez, A. (2008). Community connectivity and heterogeneity: Clues and insights on cooperation on social networks . <i>Journal of Economic Interaction and Coordination</i> , 3(2), 183–199.	The paper analyses the role of diversity as a factor that enhances resilience of organisations to uncertainty in their socio-economic environment. The Authors have theoretically abstracted the regional innovation scenario in a complex network approach, inspired in a previous work (Saxenian, 1994) where certain organisational characteristics were related to the success or failure of industrial districts to confront highly competitive markets. A simple model is built to grasp some general properties of the substrate of interactions in socio-economic environments, and the dynamics of the innovation processes on top of them.
215	Theory-based template to analyse cases of social innovation for sustainable consumption	Jaeger-Erben, M., Rückert-John, J. and Schäfer, M. (2015). Sustainable consumption through social innovation: a typology of innovations for sustainable consumption practices. <i>Journal of Cleaner Production</i> , 108, 784–798.	Qualitative approach. Questionnaire for qualitative analysis of SI for sustainable consumption.
216	Methodological framework for measuring social innovation	Bund, E., Gerhard, U., Hoelscher, M. and Mildemberger, G. (2015). A methodological framework for measuring social innovation . <i>Historical Social Research/Historische Sozialforschung</i> , 48–78.	It offers an overview of Mixed Methods Approaches to measure SI impacts. It includes qualitative and quantitative methods.



#	Framework	Reference - Link	Description – Notes
217	RESINDEX	Unceta, A., Castro-Spila, J. and García Fronti, J. (2016). Social innovation indicators. <i>Innovation: The European Journal of Social Science Research</i> , 29(2), 192–204.	It provides indexes for potential and realized capacity of social innovation.
218	Diffusion of SI	Young, H. P. (2011). The dynamics of social innovation . <i>Proceedings of the National Academy of Sciences</i> , 108(4), 21285–21291.	Modelling the dynamics of social innovation as a coordination game played on a network.
219	Measures to assess the impact on households' economic welfare and social capital	Ban, R., Gilligan, M. J., Rieger, M. (2015). Self-Help Groups, Savings and Social Capital: Evidence from a Field Experiment in Cambodia . Policy Research Working Paper No. 7382. Washington, DC.: The World Bank.	The methodological framework proposed in this work includes both lab-in-the-field techniques and a standard survey. The first method was used to measure subjects' norms and the second to ask about social activities.
220	Effect of the Community Development Fund (CDF) on social capital	Avdeenko, A. and Gilligan, M. J. (2014). International Interventions to Build Social Capital: Evidence from a Field Experiment in Sudan . Policy Research Working Paper No. 6772. Washington, DC.: The World Bank.	Different lab-in-the field techniques and a networks survey to understand the effect of CDF on social capital.
221	Baseline survey to guide good evaluations for CDD programs	World Bank (2005). <i>CDD (Community Driven Development) and Social Capital Impact: Designing a Baseline Survey in the Philippines</i> . Washington, DC.: The World Bank.	A baseline survey as an example to develop a technically rigorous evaluation working and to approach to a quantitative measurement of social capital.
222	Measuring the contribution of human capital to the wealth of a countries	Hamilton, Kirk; Liu, Gang. (2013). Human Capital, Tangible Wealth, and the Intangible Capital Residual https://academic.oup.com/oxrep/article/30/1/70/559495 . Policy Research Working Paper No. 6391. Washington, DC.: The World Bank.	The authors in this work used the lifetime income approach to estimate the contribution of human capital to the wealth of thirteen selected countries. Mainly focused on human capital.
223	Leader programme 2007–2013	Dax, T., Strahl, W., Kirwan, J. and Maye, D. (2016). The Leader programme 2007–2013: Enabling or disabling social innovation and neo-endogenous development? Insights from Austria and Ireland . <i>European Urban and Regional Studies</i> , 23(1), 56–68.	Methodological instruments applied at this stage included: data analysis of Leader performance (strategic priority setting and analysis of expenditures) in all Austrian and Irish Leader regions; a qualitative analysis of implementation issues at all administrative levels (national, regional and local) in Austria; and similarly in Ireland where more than two thirds of the country's Integrated Local Development Companies (ILDCs) (who perform the role of LAGs in the Irish



#	Framework	Reference - Link	Description – Notes
			context) were analysed.
224	Analysis of social capital at country level	Grootaert, C. and Van Bastelar, T. (2002). Understanding and Measuring Social Capital: A Multidisciplinary Tool for Practitioners. Directions in Development. Washington, DC: The World Bank.	Different quantitative and qualitative approaches to measure social capital starting from empirical experience. It considers social capital at country level and not at a community level.
225	Social Impact Assessment Guidance	Vanclay, F., Esteves, A. M., Aucamp, I. and Franks, D. (2015) Social Impact Assessment: Guidance for assessing and managing the social impacts of projects. Fargo ND: International Association for Impact Assessment.	Good practice guidance for the 26 tasks comprising SIA 34 Phase 1: Understand the issues 45 Phase 2: Predict, analyse and assess the likely impact pathways 51 Phase 3: Develop and implement strategies 60 Phase 4: Design and implement monitoring programs 64 Typical contents listing of a Social Impact Assessment report and/or a Social Impact Management Plan.
226	Social capital as social networks	Sabatini, F. (2009). Social capital as social networks: A new framework for measurement and an empirical analysis of its determinants and consequences. <i>The Journal of Socio-Economics</i> 38(3), 429–442.	This paper sets up a new framework for measurement of social capital, connected to indicators for five different dimensions of the concept: strong family ties (i.e. bonding social capital), weak informal ties (bridging social capital), voluntary organisations (linking social capital), active political participation and civic awareness
227	Social capital in Italy	Putnam, R. D., Leonardi, R. and Nanetti, R.Y. (1994). <i>Making democracy work: Civic traditions in modern Italy.</i> Princeton University Press.	This work offers empirical evidence for the importance of "civic community" in developing successful institutions. Its focus is on a unique experiment begun in 1970 when Italy created new governments for each of its regions. It measures the social aspects as aggregates at regional level and does not apply at a local or communitarian basis.
228	Measuring human wealth, social trust and social capital	Hamilton, K., Helliwell, J. and Woolcock, M. (2016). Social Capital, Trust, and Well-being in the Evaluation of Wealth. Policy Research Working Paper No. 7707. Washington, DC: The World Bank.	The authors propose to use the well-being analysis to develop wealth-equivalent measures of the value of social capital.
229	Relationship between social capital and quality of government	Knack, S. (2000). Social Capital and the Quality of Government: Evidence from the United States. Policy Research Working Paper No. 2504. Washington, DC: The World Bank.	A multivariate analysis to assess the correlation between different social capital index and government performance indicators.
230	World Values Survey	World Values Survey	The World Values Survey (www.worldvaluessurvey.org) is a global network of social scientists studying changing values and their impact on social and political life. The survey was started in 1981 and consists of nationally representative surveys conducted in almost 100 countries which contain almost 90 percent of



#	Framework	Reference - Link	Description – Notes
			the world's population, using a common questionnaire.
231	European Values Survey	European Values Survey	The European Values Study is a large-scale, cross-national, and longitudinal survey research program on basic human values. It provides insights into the ideas, beliefs, preferences, attitudes, values and opinions of citizens all over Europe. It is a unique research project on how Europeans think about life, family, work, religion, politics and society.
232	Analyzing Social Capital in Context	Dudwick, N., Kuehnast, K., Jones, V. N. and Woolcock, M. (2006). Analyzing social capital in context: a guide to using qualitative methods and data . Washington, DC: The World Bank.	This document provides concrete suggestions for using qualitative methods to explore six sometimes overlapping dimensions of social capital: (i) groups and networks, (ii) trust and solidarity, (iii) collective action and cooperation, (iv) information and communication, (v) social cohesion and inclusion, and (vi) empowerment and political action. These dimensions reflect two different ways of thinking about social capital.
233	Polyhedral Model: Social Value Model for Stakeholders	Retolaza J.L., San-Jose L. and Ruíz-Roqueñi M. (2016) Polyhedral Model: Social Value Model for Stakeholders . In: Social Accounting for Sustainability, 37–51.	Based on the previous analysis of the different methods for quantifying social value and the four prior assumptions established above—Action Research, Stakeholder Theory, the phenomenological perspective and fuzzy logic—a comprehensive, holistic model is developed that we call the “Polyhedral Model”. This model makes it possible to identify and then quantify the distribution of value between the various stakeholders of an organisation.
234	Qualitative enquiry	Patton, M.Q. (2002). <i>Qualitative Research & Evaluation Methods</i> . Thousand Oaks, CA: Sage Publications. Creswell, J. W. and Poth C. N. (2018). Qualitative inquiry and research design: Choosing among five traditions (4 th Ed). Thousand Oaks, CA: Sage. Garbarino, S. and Holland, J. (2009). Quantitative and Qualitative Methods in Impact Evaluation and Measuring Results . Issues Paper. UK Department for International Development.	These references provide a detailed overview on methods to carry out qualitative research: from philosophical assumptions, to approach and design of the study. It discusses standards of validation and evaluation in qualitative research.
235	Blended value approach	Dayson, C. (2016). Evaluating social innovations and their contribution to social value: the benefits of a 'blended value' approach . <i>Policy and Politics</i> , 45 (3), 395–411.	Drawing on a case study of a social prescribing pilot, this paper provides an example of how social value can be evaluated to support decisions by commissioners of socially innovative interventions. It argues that social value presents an epistemological, and methodological challenge for commissioners seeking to embed it in decision making and recommends evaluating social innovations through a 'blended value' lens.



Sub-task 4.2.3: Environmental aspects

#	Framework	Reference - Link	Description – Notes
301	Fuzzy Cognitive Mapping	Papageorgiou, E.I. and Salmeron, J.L. (2013). A Review of Fuzzy Cognitive Maps Research During the Last Decade . <i>IEEE Transactions on Fuzzy Systems</i> , 21, 66–79.	FCM are inference networks, using cyclic digraphs, for knowledge representation and reasoning. Over the past decade, FCMs have gained considerable research interest and are widely used to analyse causal complex systems, which have originated from the combination of fuzzy logic and neural networks. FCMs have been applied in diverse application domains, such as computer science, engineering, environmental sciences, behavioural sciences, medicine, business, information systems, and information technology. Their dynamic characteristics and learning capabilities make them essential for a number of tasks such as modelling, analysis, decision making, forecast, etc. (make this description more understandable).
302	Tool for Sustainability Impact Assessment (ToSIA)	Lindner, M., Suominen, T., Palosuo, T., Garcia-Gonzales, J., Verweij, P., Zudin, S. and Päivinen, R. (2010). ToSIA – A Tool for Sustainability Impact Assessment of Forest-Wood-Chains . <i>Ecological Modelling</i> , 221, 2197–2205.	ToSIA was originally developed as the decision support tool for the forestry sector. ToSIA analyses environmental, economic, and social impacts of changes in forestry-wood production chains, using a consistent and harmonised framework from the forest to the end-of-life of final products. It allows users to analyse different kinds of sustainability effects in a balanced way. ToSIA is a flexible tool, based on three concepts: Alternative process chains (baseline and scenarios); Material flow along the chain (e.g. wood, timber products, reindeer meat - all converted to tons of Carbon); Indicators per process and indicators multiplied with the material flow ToSIA assesses the sustainability impacts of alternative supply chains.
303	Analytic Hierarchy Process	Saaty, T. L. (2008). Decision making with the analytic hierarchy process . <i>International Journal of Services Sciences</i> 1(1), 83–98.	AHP is a structured technique for organising and analysing complex decisions, based on mathematics and psychology. It provides a comprehensive and rational framework for structuring a decision problem, for representing and quantifying its elements, for relating those elements to overall goals, and for evaluating alternative solutions.
304	Analytic Network Process	Saaty, T. L. (1996). Decision Making with Dependence and Feedback: The Analytic Network Process . Pittsburgh, Pennsylvania: RWS Publications.	ANP is like AHP, where there is a list of criteria and a discrete set of decision alternatives; but the main difference is that the elements of the model are not hierarchical but rather arranged so that any element of the model can be connected to any other elements of the model (i.e. feedback loops). This kind of structure is more similar to actual social and natural systems; theoretically, the judgments should be more 'sound' than the ones based on AHP.
305	Bayesian Belief Network	Aoqiang, Z., Shanshan, F., Di, Z. and Zhe, M. (2015). Using Bayesian network for risk analysis of inland waterway transportation system considering environmental effects. Presented at the 2015 International Conference on	A Bayesian belief network is a graphical representation of a probabilistic dependency model. It consists of a set of interconnected nodes, where each node represents a variable in the dependency model and the connecting arcs represent the causal relationships between these variables. Each node or variable may take one of a



#	Framework	Reference - Link	Description – Notes
		Transportation Information and Safety (ICTIS), 89–694.	number of possible states or values.
306	Life cycle assessment	Kulak, M., Graves, A. and Chatterton, J. (2013). Reducing greenhouse gas emissions with urban agriculture: A Life Cycle Assessment perspective. <i>Landscape and Urban Planning</i> , 111, 68–78.	Life Cycle Assessment is a widely applied approach for estimating the environmental impact associated with a product, service or activity throughout its life cycle. LCA has most commonly been used in industry as a tool for process selection, design, and optimisation. It has also been used to quantify the impact of food production options. For example, LCA can be used to compare different food supply chains.
307	World Overview of Conservation Approaches and Technologies (WOCAT)	https://qcat.wocat.net/en/wocat/ https://www.wocat.net	WOCAT is a global network which supports innovation and decision-making processes in Sustainable Land Management (SLM). WOCAT provides tools and methods that allow SLM specialists to identify fields and needs of action and to share their valuable knowledge in land resources management. In this example, the WOCAT Approach describes a process of social innovation in a region with dairy farming in the eastern Netherlands, driven by a foundation of farmers and inhabitants.
308	STELLA	Kassa, H., Campbell, B., Sandewall, M., Kebede, M., Tesfaye, Y., Dessie, G., Seifu, A., Tadesse, M., Garede, E. and Sandewall, K. (2009). Building future scenarios and uncovering persisting challenges of participatory forest management in Chilimo Forest, Central Ethiopia . <i>Journal of Environmental Management</i> , 90, 1004-1013. Sandker, M., Campbell, B.M., Ruiz-Pérez, M., Sayer, J.A., Cowling, R., Kassa, H. and Knight, A.T. (2010). The role of participatory modelling in landscape approaches to reconcile conservation and development . <i>Ecology and Society</i> , 15(2), 12.	STELLA is a participatory modelling tool to help understand a studied system by means of “systems thinking” through diagram-based modelling. Diagram-based modelling uses a stock and flow diagram to show the dynamic relationships among variables. Stock and flow models can be used to model almost any kind of (material) flow, from population models to economic models. The tool can be applied in a participatory process by involving local stakeholders in a series of discussions to verify the flow of variables and data.
309	Streamline	de Vries Lentsch, A. (2015). Streamline - Enabling public ownership in Orkney's marine energy futures using an engaging, two-way, vision based & interactive interview format . MSc thesis, School of GeoSciences, University of Edinburgh.	The Streamline canvas tool resembles a mind-mapping tool and functions as an interactive visualization tool designed to stimulate the creativity of stakeholders and “out-of-the-box” thinking. A guided stepwise set of questions encourage participants to use images, graphs and texts to express their individual visions, desired future or viewpoints (“canvases”) for living, working, food shopping and so on.
310	Integrated Valuation of Environmental Services and Trade-offs	http://www.naturalcapitalproject.org/	InVEST enables decision makers to assess quantified trade-offs associated with alternative management choices and to identify areas where investment in natural capital can enhance human development and conservation. The toolset currently includes eighteen distinct ecosystem service models designed for terrestrial, freshwater, marine, and coastal ecosystems, as well as a number of “helper tools” to



#	Framework	Reference - Link	Description – Notes
	(INVEST)		assist with locating and processing input data and with understanding and visualizing outputs.
311	The Economics of Ecosystems and Biodiversity (TEEB)	TEEB (2010). The Economics of Ecosystems and Biodiversity Ecological and Economic Foundations . Edited by Pushpam Kumar. Earthscan, London and Washington.	The Economics of Ecosystems and Biodiversity (TEEB) is a global initiative focused on “making nature’s values visible”. Its principal objective is to mainstream the values of biodiversity and ecosystem services into decision-making at all levels.
312	Common International Classification of Ecosystem Services (CICES)	Haines-Young, R. and Potschin, M. (2013). Common International Classification of Ecosystem Services (CICES): Consultation on Version 4 , August-December 2012. EEA Framework Contract No EEA/IEA/09/003.	It supports their contribution to the revision of the System of Environmental-Economic Accounting (SEEA) which is currently being led by the United Nations Statistical Division (UNSD).
313	QUICKSCAN	Verweij, P., Janssen, S., Braat, L., van Eupen, M., Pérez Soba, M., Winograd, M., de Winter, W. and Cormont, A. (2016). QUICKScan as a quick and participatory methodology for problem identification and scoping in policy processes. <i>Environmental Science & Policy</i> , 66, 47–61.	The QUICKScan software tool is a spatial modelling environment to combine expert knowledge with spatial and statistical data. Results are visualized in interactive maps, summary charts and trade-off diagrams.
314	Framework of Participatory Impact Assessment (FOPIA)	Schindler, J., Graef, F. and König, H. J. (2016). Participatory impact assessment: Bridging the gap between scientists' theory and farmers' practice . <i>Agricultural Systems</i> , 148.	FoPIA provides a structured sequence of methodological processes for engaging stakeholders and harnessing their knowledge and expertise for the assessment of land use policy impacts. FoPIA weighs sustainability impacts, giving equal consideration to the three sustainability dimensions, namely: social, economic and environmental.
315	Delphi method	Dalkey, N. and Helmer, O. (1963). An experimental application of the Delphi method to the use of experts . <i>Management Science</i> , 9(3), 458–467.	The Delphi method is a structured communication technique or method, originally developed as a systematic, interactive forecasting method which relies on a panel of experts.
316	Integrated backcasting modelling system	Brunner, S. H., Huber, R. and Grêt-Regamey, A. (2016). A backcasting approach for matching regional ecosystem services supply and demand . <i>Environmental Modelling & Software</i> , 75, 439–458.	It is an interdisciplinary multi-method backcasting approach to infer land-use policy strategies for matching the regional supply of and demand for ecosystem services (ES) over a given time horizon. It integrates normative and explorative approaches in land-use and ES modelling.
317	Hedonic Pricing Method	Rosen, S. (1974). Hedonic prices and implicit markets: product differentiation in pure competition . <i>Journal of Political Economy</i> , 82(1), 34–55.	HPM is a revealed preference method of valuation. Generalised, it is a valuation method based on multiple regression equations in which the dependent variable is the price of the product, and the independent variables are its characteristics.
318	Contingent	McFadden, D. (1980). Econometric models for probabilistic	The Contingent Choice Method can be used to estimate economic values for virtually



#	Framework	Reference - Link	Description – Notes
	Choice Method	choice among products. Journal of Business, S13–S29.	any ecosystem or environmental service, and can be used to estimate non-use as well as use values.
319	Criteria to evaluate innovation in nature-based businesses	O'Driscoll, C., Leonardi, A. and Masiero, M. (2017). Are nature-based businesses really innovative? An assessment of European entrepreneurial initiatives. ECOSTAR: Project co-funded by the Erasmus+ Programme of the European Union.	This report presents the results of an assessment of the innovation degree of sixteen nature-based businesses in the European Union (EU). Nature-based businesses are socio-economic initiatives that make profit by marketing, promoting and enhancing biodiversity and ecosystem services. The custom-made assessment framework for included: 1) New product and outcome; 2) New approaches to creating value; 3) New approaches to resource use; 4) New processes; 5) New markets: demand and needs; 6) New networks and organisation.
320	EU Strategic Environmental Assessment	EU (2003). Protocol on Strategic Environmental Assessment to the Convention on Environmental Impact Assessment in a Transboundary Context. SEA Protocol, Kyiv.	The Protocol was adopted by an Extraordinary meeting of the Parties to the Espoo Convention, held on 21 May 2003 during the Ministerial "Environment for Europe" Conference in Kyiv, and ensures that individual Parties integrate environmental assessment into their plans and programmes.
321	Millennium Ecosystem Assessment	MA. (2005). Ecosystems and Human Well-being: A Framework for Assessment. Island Press.	The Millennium Ecosystem Assessment assessed the consequences of ecosystem change for human well-being. From 2001 to 2005, the MA involved the work of more than 1,360 experts worldwide. Their findings provide a state-of-the-art scientific appraisal of the condition and trends in the world's ecosystems and the services they provide, as well as the scientific basis for action to conserve and use them sustainably.
322	EU Environmental Impact Assessment	EC Directive (2011/92/EU) of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment.	The directive provides guidance on the assessment of the effects of certain public and private projects on the environment in the European Union.
323	The Eco-Innovation Scoreboard	EU Eco-Innovation Observatory. Eco-Innovation Scoreboard. Directorate General for the Environment and European Commission.	Eco-Innovation Scoreboard (Eco-IS) and the Eco-Innovation Index illustrate eco-innovation performance across the EU Member States. They aim at capturing the different aspects of eco-innovation by applying 16 indicators grouped into five dimensions: eco-innovation inputs, eco-innovation activities, eco-innovation outputs, resource efficiency and socio-economic outcomes. The Eco-Innovation Index shows how well individual Member States perform in different dimensions of eco-innovation compared to the EU average and presents their strengths and weaknesses. The Eco-IS and the Eco-Innovation Index complements other measurement approaches of innovativeness of EU countries and aims to promote a holistic view on economic, environmental and social performance.
324	EU level	OPPLA. EU level ecosystem services mapping toolbox.	This dataset contains maps of supply and demand of ecosystem services, and GIS tools



#	Framework	Reference - Link	Description – Notes
	ecosystem services mapping toolbox	Supported by the European Commission under the Environment Theme.	to make such maps. The tools are targeted at EU level and provide a broad picture of ES supply and demand. Tools are moderate complexity methods for mapping that upscale findings from detailed process based. It includes: The landscape heterogeneity on ecosystem service supply is that a database that demonstrates the relevance of accounting for landscape heterogeneity for particular ecosystem services and can be used to study trade-offs among ecosystem services through spatial. EPIC WebGIS is an interactive spatial data infrastructure, which provides georeferenced cartography at a national scale, using data visualization. Database for Synthesis of Information on Ecosystem Services (SynES) is a database that was developed to synthesis site-specific biophysical and socio-economic information on ES. It allows a consistent integration of information by multiple users and from multiple sources. It is a flexible tool that can be used within an individual ES assessment/project.
325	Public Participation Geographic information Systems (PPGIS)	McCall, M. K. (2015). Applying PGIS and Participatory Mapping to Participatory Understanding and Management of (Rural) Space, utilising Local Spatial Knowledge . A bibliography. UNAM.	PPgis.net is the electronic forum on participatory use of geo-spatial information systems and technologies. We host four distinct communities, namely the global list which is Anglophone, and lists for French- Spanish- and Portuguese-speaking practitioners. These online platforms serve as global avenues for discussing issues, sharing experiences and good practices related to participatory mapping, Participatory GIS (PGIS), Public Participation GIS (PPGIS), and Volunteered Geographic Information (VGI).
326	Ecosystem Approach Handbook	Porter, J., Jagota, L., Brookes, J., Mahony, P., Howard, B., Waters, R. and Hunt, D. (2014). Ecosystem Approach Handbook . Manchester: Countryside.	The Ecosystem Approach Handbook has been developed by Natural England and Countryside to help landscape scale partnerships benefit from the ecosystem approach.
327	Collaborative decision-analytic framework	Thorne, K., Mattsson, B., Takekawa, J., Cummings, J., Crouse, D., Block, G., Bloom, V., Gerhart, M., Glodbeck, S., Huning, B., Sloop, C., Stewart, M.m Taulor, K. and Valoppi, L. (2015). Collaborative decision-analytic framework to maximize resilience of tidal marshes to climate change . <i>Ecology and Society</i> , 20(1).	The article describes an application of collaborative decision analysis with a diverse team of stakeholders who preserve, manage, or restore tidal marshes across the San Francisco Bay estuary, USA, as a case study.
328	Participatory community	Wang, C., Miller, D.R., Brown, I., Jaing, Y. and Castellazzi, M. (2015). Visualisation techniques to support public	In this paper, community engagement was facilitated by the use of spatially explicit quantitative scenarios of land-use change in combination with interactive visualization



#	Framework	Reference - Link	Description – Notes
	scenario development	interpretation of future climate change and land-use choices: a case study from N-E Scotland . <i>International Journal of Digital Earth</i> .	tools (Virtual Landscape Theatre (www.hutton.ac.uk/learning/exhibits/vlt)). Interactive virtual reality tools enabled audiences to explore and vote on multiple future scenarios compared to the present landscape. Findings suggested preferences for visual diversity, good stewardship and perceived naturalness, all of which should be considered in developing planned responses to change.
		Pascual, U., Balvanera, P., Díaz, S., Pataki, G., Roth, E., Stenseke, M., Watson, R.T., Dessane, E.B., Islar, M., Kelemen, E., Maris, V., Quaas, M., Subramanian, S.M., Wittmer, H., Adlan, A., Ahn, S-E, Al-Hafedh, Y.S., Amankwah, E., Asah, S.T., Berry, P., Bilgin, A., Breslow, S.J., Bullock, C., Cáceres, D., Daly-Hassen, H., Figueroa, E., Golden, C.D., Gómez-Baggethun, E., González-Jiménez, D., Houdet, J., Keune, H., Kumar, R., Ma, K., May, P.H., Mead, A., O’Farrell, P., Pandit, R., Pengue, W., Pichis-Madruga, R., Popa, F., Preston, S., Pacheco-Balanza, D., Saarikoski, H., Strassburg, B.B., van den Belt, M., Verma, M., Wickson, F. Yagi, N. (2017). Valuing nature’s contributions to people: the IPBES approach . <i>Current Opinion in Environmental Sustainability</i> , 26, 7–16.	The interplay of different worldviews and values associated with Nature’s Contributions to People (NCP) lead to diverse perspectives on issues such as conservation, equity, resilience and ways of achieving sustainable development goals. The paper presents the rationale for an inclusive incorporation of diverse values of NCP in decision making, as well as a (non-prescriptive) set of methodological steps for doing so (p. 9).



Sub-task 4.2.4: Governance/institutional aspects

#	Framework	Reference - Link	Description - Notes
401	Transition framework for bottom-up initiatives	Dijkshoorn-Dekker M., Soma K. and Blaeij A. <i>Green bottom-up initiatives in the cities</i> . Wageningen Economic Research. The Hague. (in progress, in Dutch)	The dialogue instrument called 'Transitions framework for bottom-up initiatives' is aiming at improving institutional contexts for bottom-up initiatives. The dynamics of such initiatives are fully dependent on formal and informal institutional settings. Rules, regulation, norms, subsidies and procedures are all part of that. The framework has been applied in the Netherlands, including multilevel government bodies, NGOs and citizens (initiatives).
402	Global detector	Benninga J., Hennen W., Dijkshoorn Y. and van Galen M. (2017). International Production Potential Model: Model description Floriculture . Wageningen Economic Research. The Hague. (in progress, in Dutch)	The Global detector is a Geographical Information System (GIS) showing how agricultural, environmental as well as governance factors vary across geographical areas. It has been applied for food security and climate change issues, among others, at different scales (local, regional, national, international). Depending on what is important to show, this tool gives information about geographical variability.
403	Cost benefit analyses application	Jongeneel R., Polman P. and Slangena L. (2012). Cost-benefit analysis of the Dutch nature policy: Transaction costs and land market impacts. <i>Land Use Policy</i> , 29(4), 827–836.	This paper follows a standard economic CBA approach and adds transaction costs of governance. These costs were calculated based on literature. CBA can be applied to different projects and internal and external governance.
404	Social impact assessment	Symes, D., and Hoefnagel, E. (2010). Fisheries policy, research and the social sciences in Europe: challenges for the 21st century. <i>Marine Policy</i> , 34(2), 268-275.	Social impact assessments are aimed at taking community values into account during decision-making processes. By means of community contributions a set of social indicators are assessed with respect to different policy scenarios. The approach is often carried out qualitatively.
405	Qualitative multicriteria analyses	Soma, K. (2010). Framing participation with multi-criterion evaluations to support the management of complex environmental issues. <i>Environmental Policy and Governance</i> . 20, 89–106.	This is a framework consisting of a step by step procedure to take into account different types of information. This includes policy scenarios, social, ecological and economic objectives/ criteria, weights (relative importance), multiple stakeholder contributions, indicators, impact scores. Eventually, the most effective policy options are suggested, which may be more dependent on how much the stakeholders disagree. It is possible to clearly see why some policy options are preferred to others. The framework aims at both process and outcome qualities.
406	Citizens deliberation	Soma K. and Vatn A. (2014). Representing the common goods – Stakeholders vs. citizens. <i>Land Use Policy</i> , 41, 325–333.	This is a form of the more well-known citizens conference or citizens juries, although here with more emphasis on the role of communication, listening, thinking long term, thinking from a societal (not private) point of view, asking instead of negotiating, etc. The method is designed for possibilities to combine scientific information with norms about what is a better thing to do at a local level, but this part is not that dominating



			during the process.
407	Institutional analysis	<p>Polman, N. (2002). <i>Managing Wildlife and Landscape on Dutch Farms</i>, PhD Thesis, Wageningen University.</p> <p>Beckmann, V., Eggers, J. and Mettepenningen, E. (2009). Deciding how to decide on agri-environmental schemes: the political economy of subsidiarity, decentralisation and participation in the European Union. <i>Journal of Environmental Planning and Management</i>, 52(5), 689–716.</p> <p>Mettepenningen, E., Verspecht, A. and Van Huylbroeck, G. (2009). Measuring private transaction costs of European agri-environmental schemes. <i>Journal of Environmental Planning and Management</i>, 52(5), 649–667.</p>	Stakeholder surveys (face to face, telephone). In general, questionnaire surveys gather 'facts' like prices, quantities of goods bought, incomes, revenues and so forth. Surveys are often conducted by a national statistics agency or may be specially designed by an investigator to address a particular question 1. One of the main uses of surveys is 'Confronting theory with evidence': theory testing and 'anomaly generation'. Surveys can be applied to the methodological use of measurement. However, measurement is not an easy task: researchers are confronted with measurement problems similar to those of governance parties.
408	Mixed methods	<p>Scott, R. J. and Boyd, R. (2016). Collaborating for results in New Zealand: Evaluation using mixed methods and triangulation. Presented at the 2016 conference of the International Public Management Network. St Gallen, Switzerland.</p>	Triangulation and complementarity of findings through different methods. It provides indications for measurable targets and agencies responsible for achieving them.
409	Multiple-criteria analysis	<p>Merad, M., Dechy, N., Marcel, F. and Linkov, I. (2013). Multiple-criteria decision-aiding framework to analyze and assess the governance of sustainability. <i>Environ Syst Decis</i>, 33, 305–321.</p>	The assessment of the governance of an organisation. The objective is to elaborate a diagnosis of the quality of governance of the organisation with respect to sustainable development and a cross-comparison of organisational governance. The objective is also to obtain a ranking of the set of organisations according to the quality of their governance with respect to SD challenges.
412	Actor networks	<p>Swilling, M., Musango, J. and Wakeford, J. (2016). Developmental states and sustainability transitions: prospects of a just transition in South Africa. <i>Journal of Environmental Policy & Planning</i>, 18(5), 650–672.</p>	This paper endeavours to fuse the core conceptual concerns of the developmental state and sustainability transition literatures. It is argued that a just transition would consist of a dual commitment to human well-being (with respect to income, education and health) and sustainability (with respect to decarbonization, resource efficiency and ecosystem restoration). However, to understand these processes we need a better understanding of political dynamics, and for this purpose the notion of a socio-political regime is introduced. A case study of South Africa's dual developmental and environmental trajectories is presented, revealing how different it is to the East Asian experience.
413	Network embeddedness and	<p>Lee, E. W. and Restrepo, J. M. (2015). Institutional embeddedness and the scaling-up of collaboration and social innovation: the case of a Hong Kong-based</p>	This paper utilises the case of an international NGO (INGO) in Hong Kong to explore how institutional embeddedness may facilitate the scaling-up of collaboration and social innovation. It adapts Hess's (2004) framework to contend that the scaling-up of



	cooperation	international NGO. <i>Policy & Politics</i> , 43(3), 459–471.	collaboration among organisations is affected by the societal, network and territorial embeddedness of the organisational actors.
414	Framework for collaborative governance	Emerson, K., Nabatchi, T. and Balogh, S. (2012). An integrative framework for collaborative governance. <i>Journal of public administration research and theory</i> , 22(1), 1–29.	This article synthesises and extends a suite of conceptual frameworks, research findings, and practice-based knowledge into an integrative framework for collaborative governance. The framework specifies a set of nested dimensions that encompass a larger system context, a collaborative governance regime, and its internal collaborative dynamics and actions that can generate impacts and adaptations across the systems. It also provides a broad conceptual map for situating and exploring components of cross-boundary governance systems that range from policy or program-based intergovernmental cooperation to place-based regional collaboration with nongovernmental stakeholders to public-private partnerships. The framework integrates knowledge about individual incentives and barriers to collection action, collaborative social learning and conflict resolution processes, and institutional arrangements for cross-boundary collaboration.
415	ITC-enabled citizen observatories	Wehn, U. and Evers, J. (2015). The social innovation potential of ICT-enabled citizen observatories to increase eParticipation in local flood risk management. <i>Technology in Society</i> , 42, 187–198.	Citizen observatories refer to observations of ordinary citizens, which are included in earth observation and environmental management. Advanced citizen observatories can enable a two-way communication paradigm between citizens and decision makers, potentially leading to changes to local environmental management processes and, as such, in social innovation processes and outcomes. This paper analyses the social innovation potential of ICT-enabled citizen observatories to increase eParticipation in local flood risk management.
415	Sustainable business models	Naik, G. (2011). Designing a sustainable business model for e-governance embedded rural telecentres (EGERT) in India. <i>IIMB Management Review</i> , 23(2), 110–121.	The academic perspective suggests an alternative model for rural telecentres and details the contentious issues clustered round the role of the government; the viability of partnership models with the private and NGO sectors; the institutional design for rural telecentres; the services to be rendered by the centres and the likely markets for them; the location of the centres and support in the form of infrastructure and manpower; and the technology to support the institutional design. Stakeholder representatives from the government, the industry, the NGO sector and the academia discuss these issues in the second part of the article, and make suggestions towards a viable model for service.
417	Social media ecosystems	Hanna, R., Rohm, A. and Crittenden, V. L. (2011). We're all connected: The power of the social media ecosystem. <i>Business horizons</i> , 54(3), 265–273.	Many companies do not truly understand how to use social media effectively, what performance indicators they should be measuring, and how they should measure them. This article offers a systematic way of understanding and conceptualizing online social media, as an ecosystem of related elements involving both digital and traditional media.



418	Public engagement in online communicative spaces	Firmstone, J. and Coleman, S. (2015). Public engagement in local government: the voice and influence of citizens in online communicative spaces. <i>Information, Communication & Society</i> , 18(6), 680–695.	The communications and engagement strategies of local councils play an important role in contributing to the public's understanding of local democracies, and their engagement with local issues. Drawing on over 20 face-to-face semi-structured interviews with stakeholders, the research asks what the differing motivations behind the Council's communications and engagement strategies mean for the way that digital media are and might be used in the future to enhance the role of citizens in local governance. The research suggests that while there are no grounds for expecting digital media to displace existing channels of public engagement, digital media are beginning to play an important role in defining and reconfiguring the role of citizens within local governance.
419	ICT	Duberry, J. (2015). <i>Environmental governance and new ICTs: the impact of new information and communication technologies on global environmental governance</i> . Universitat Pompeu Fabra. Departament de Dret.	Two case studies are analysed. The first one illustrates that the use of new ICT improves the participation and the creation of consensus around certain values, and shows therefore that the use of new ICTs has a positive impact on the legitimacy (of a global governance mechanism). The second case study examines the use of new ICTs by IUCN and demonstrates that it has no substantial impact on the internal capacities of the organisation.
420	Values in online communities	Seraj, M. (2012). We create, we connect, we respect, therefore we are: intellectual, social, and cultural value in online communities. <i>Journal of Interactive Marketing</i> , 26(4), 209–222.	The aim of this paper is to explore the main characteristics of an online community that can deliver value to its consumers and instigate engagement. Netnography along with online and offline in-depth interviews were used to reveal three specific online community characteristics that create value for the members of Airliners.net: goal driven and quality content (intellectual value), interactive environment for building relationships (social value), and self-governed community culture consistent with its principles (cultural value).
421	Participatory budgeting	Džinić, J., Svidroňová, M. M. and Markowska-Bzducha, E. (2016). Participatory Budgeting: A Comparative Study of Croatia, Poland and Slovakia . <i>NISPAcee Journal of Public Administration and Policy</i> , 9(1), 31–56.	Over the last twenty years, participatory budgeting (PB) has become a popular form of co-production intended to improve the quality of local governance. The aim of the article is to provide a comparative analysis of the use and role of PB in Croatia, Poland and Slovakia and to identify the models of PB used in selected countries. The main findings are that PB indeed enables better allocation of public sources according to citizens' needs (various public services were delivered following the trend of social innovation and co-creation), but low amounts are assigned for PB from public budgets and citizens have low interest in participating in these processes.
423	Bottom-up social innovation	Bosworth, G., Rizzo, F., Marquardt, D., Strijker, D., Haartsen, T. and Aagaard Thuesen, A. (2016). Identifying social innovations in European local rural development initiatives. <i>Innovation: The European Journal of Social</i>	Multi-case analysis, drawing from different European countries. The authors use existing datasets and a number of (additional) methods: mixed method, focus group discussions, case and country wide surveys, embedded case study design, and in depth, semi-structured interviews.



		<i>Science Research</i> , 29(4), 442–461.	
424	Structural equation modelling	Gobattoni, F., Pelorosso, R., Leone, A. and Ripa, M. N. (2015). Sustainable rural development: The role of traditional activities in Central Italy. <i>Land Use Policy</i> , 48, 412–427.	In this paper, a questionnaire was compiled on the basis of current literature on attitude models and distributed to the community of a rural area in Central Italy (six municipalities). The data gathered were statistically analysed by structural equation modelling (SEM). The results obtained allow several factors influencing attitude to be identified as well as highlighting the difference in the responses of farmers and artisans compared with those of the rest of the community.
425	Diffusion of grassroots innovation	Seyfang, G. and Longhurst, N. (2016). What influences the diffusion of grassroots innovations for sustainability? Investigating community currency niches. <i>Technology Analysis & Strategic Management</i> , 28(1), 1–23.	The approach is from strategic niche management where they seek to identify conditions required for niches to successfully diffuse their ideas and practices into wider society. The authors gather evidence from websites, documents and elite informants. The quality of the data varies enormously between the niches. They applied a mixed-method case study approach: reviewing previous literature and research (including grey literature), reviewing networks and projects' own publication and websites, elite interviews, review of relevant policy documents. They applied standard qualitative techniques to develop case study dossiers. They also developed a number of metrics.
426	Capability approach	Ibrahim, S. (2017). How to Build Collective Capabilities: The 3C-Model for Grassroots-Led Development. <i>Journal of Human Development and Capabilities</i> , 18(2), 197–222.	Capabilities need to be built from the bottom-up. Social innovations at the grassroots seek to present new solutions to existing social problems. The paper argues that three crucial C-processes are integral conditions for promoting successful, scalable and sustainable social innovations at the grassroots, namely: (1) Conscientization; (2) Conciliation and (3) Collaboration. By linking the individual, collective and institutional levels of analysis, the paper demonstrates the importance of individual behavioural changes, collective agency and local institutional reforms for the success, sustainability and scalability of social innovations at the grassroots. The paper acknowledges conflict, capture and cooptation as potential limitations and recognizes the role of contextual factors in initiating, implementing and sustaining social innovations at the grassroots.
427	Socially Innovative Initiatives	Belando, M. V. S. (2016). Building alternatives to the creative turn in Barcelona: The case of the socio-cultural centre Can Batlló. <i>City, Culture and Society</i> .	The aim of this paper is to study the nature of local Socially Innovative Initiatives developed in the socio-cultural field and their capacity to counterbalance the tendency towards a market rationality in urban cultural affairs. The goal is to explore how and to what extent Socially Innovative Initiatives offer alternatives to creative city policies focusing on the production of socio-cultural services and innovation in governance and decision-making processes.
428	Community participation in	Malek, A., and Costa, C. (2015). Integrating communities into tourism planning through social innovation. <i>Tourism</i>	The underlying idea is creation of innovative and appropriate development strategies to involve local communities as a key agent in the decision-making and planning of



	tourism planning	<i>Planning & Development</i> , 12(3), 281–299.	tourism destinations in order to ensure positive local attitudes and improvement in communities' quality of life. Utilising the information gathered from the (ECoC), Guimarães 2012, as the case study, this paper discusses a complex concept that encapsulates the main dimensions of the community tourism development and social innovation in practice.
429	Social innovation in energy autonomy projects	Yalçın-Riollet, M., Garabuau-Moussaoui, I., and Szuba, M. (2014). Energy autonomy in Le Mené: A French case of grassroots innovation. <i>Energy Policy</i> , 69, 347–355.	The purpose of this article is to propose an exploratory and in-depth analysis of one advanced French case: Le Mené, a pioneer in local energy autonomy. In studying this case (interviews, analysis of documents), comparing it with other sources of data (expert interviews, comparative observation of other initiatives) and taking stock of various social sciences studies, the authors show that a social innovation was produced through the hybridisation of actors, sociotechniques and discourses.
430	Governance and competence perspectives	Williamson, O. E. (1999). Strategy research: governance and competence perspectives . <i>Strategic Management Journal</i> , 1087–1108.	The research challenges posed by competence to which governance can and should respond include dynamic transaction costs, learning, and the need to push beyond generic governance to address strategy issues faced by particular firms (with their distinctive strengths and disabilities). The future of these two perspectives, individually and in combination, is projected.
431	Econometrics of contracts	Masten, S. E. and Saussier, S. (2000). Econometrics of contracts: an assessment of developments in the empirical literature on contracting . <i>Revue d'économie industrielle</i> , 92(1), 215–236.	The authors review the empirical research on contracting, with special emphasis on the relative contributions of agency and transaction cost theories, first, in providing structural guidance to empirical researchers and, second, in identifying observable determinants of both the decision to contract and the design of contractual agreements.
432	Poverty and social impact analysis	Ahmed, V. and Ahmed, S. (2014). Poverty and social impact analysis of expanded program on immunization in Pakistan (Vol. 143). Working Paper.	By adopting a Poverty and Social Impact Analysis (PSIA) methodology, this paper carries out an impact assessment analysis of the national EPI by focusing on its contributions towards Pakistan's social economy. Using the PSIA methodology, it carries out an institutional analysis, a health and social service delivery analysis of the EPI through a survey of 2000 households across Pakistan, and an empirical analysis using micro-simulation techniques, which quantifies the EPI impact in terms of lives saved and workers added to the labour force since 1978.
433	Game theory in urban regeneration	Ferri, B. and Maturo, A. (2015). An approach to urban regeneration by game theory and decisions. <i>International Journal of Mathematics, Game Theory, and Algebra</i> , 24(1), 25.	Interventions of urban and territorial planning require complex choices involving the selection of the priority actions in which to invest public resources, involving the community in the identification of objectives, and analyzing changes and improvements pursued by the policies implemented. Sustainable management of land use is investigated through the analysis of the main strategies formulated at national and European level. We also deal with the issues of demographic changes and social housing in urban areas which require social innovation and better welfare services,



			infrastructure, green areas, urban quality and sustainability.
434	Local government capacity	Purushottama, R., Juraj, N. and de Vries Michiel, S. (2015). The State of Local Government. <i>Viešoji politika ir administravimas</i> , 14(3), 160–176.	The paper addresses the varying capacity of local governments in different regions in the world. Local Government Capacity as a concept can have varying definitions, but in this framework it seems adequate to simply define it as 'the ability of local government to perform their functions in an effective and efficient way'. Governance capacity links to (1) institutional capacity; (2) technical capacity; (3) administrative capacity; and (4) political capacity. The idea behind argues that in order to improve the capacity of local governments especially in regions where its adequate performance is severely needed, a more differentiated approach to capacity-building is required, pinpointing the main factors inhibiting local government performance. Governance implies that local public decision-making has progressively involved policy networks, public partnerships and several agencies working collaboratively which transcends organisational boundaries.
435	Corporitisation of local government	Citroni, G., Lippi, A. and Profeti, S. (2015). Representation through corporatisation: municipal corporations in Italy as arenas for local democracy . <i>European Political Science Review</i> , 7(01), 63–92.	The paper illustrates the impact of corporatisation on local representation mechanisms in Italy, considering its opaque side with specific reference to the problem of democratic accountability and control, and the creation of new local oligarchies. Empirical evidence is provided from research on municipal enterprises in six different Italian regions. Statistical data on companies (amount of social capital, fields of activity, private and public shareholders, etc.), as well as qualitative data, are analysed in order to show how corporatisation has provided local actors with unusual (and often non-transparent) channels of political representation and public-private bargaining.
436	Governance innovation for social inclusion	Pradel-Miquel, M. (2015). Making polycentrism: Governance innovation in small and medium-sized cities in the West Midlands and Barcelona metropolitan regions. <i>Environment and Planning C: Politics and Space</i> , 33 (6).	This article focuses on the social configuration of small and medium-sized municipalities as collective actors and their role in the emergence of polycentrism. The article analyses how the economic, political and social hegemonic actors in these cities organise innovative strategies to ensure the centrality of their area in the metropolitan region presenting the analysis of two areas in two European metropolitan regions; the Black Country in the West Midlands conurbation (United Kingdom) and the Vallès Occidental area in the Barcelona Metropolitan Region (Spain). In both areas, innovative forms of governance oriented towards local economic development and social cohesion have emerged involving municipalities, chambers of commerce, trade unions and third sector actors.
437	Metagovernance networks	Sørensen, E. and Torfing, J. (2009). Making governance networks effective and democratic through metagovernance. <i>Public administration</i> , 87(2), 234–258.	Governance through the formation of networks composed of public and private actors might help solve wicked problems and enhance democratic participation in public policy-making, but it may also create conflicts and deadlocks and make public



			governance less transparent and accountable. The paper discusses how to assess the effective performance and democratic quality of governance networks, and describe how different metagovernance tools can be used in the pursuit of effective and democratic network governance.
438	Key factors for the success of SI	Neumeier, S. (2017). Social innovation in rural development: identifying the key factors of success. <i>The geographical journal</i> , 183(1), 34–46.	This article focuses on factors supporting the success of social innovation; that is, factors that support the development of a social innovation that enhances the probability of a high rate of adoption. To achieve this, the questions addressed are: Which factors bring forward social innovation? Where in the innovation process do they take effect? To what extent can rural development policy purposefully exert influence on these factors? Drawing on findings in innovation and social innovation research as well as from the rural participative planning discourse, it is shown that three tiers of factors influence the success of social innovation.
439	Multi-agent model of innovation	Windrum, P., Schartinger, D., Rubalcaba, L., Gallouj, F. and Toivonen, M. (2016). The co-creation of multi-agent social innovations: a bridge between service and social innovation research . <i>European Journal of Innovation Management</i> , 19(2), 150–166.	The research fields of service innovation and social innovation have, until now, been largely disconnected. At the most basic level, a great many social innovations are services, often public sector services with social entrepreneurs organising and delivering service innovations. As well as this overlap in the focus of research, scholars in both research fields address socio-economic concerns using multidisciplinary perspectives. This paper provides a framework that can bridge the two research fields. Inter-linkages between service and social innovation are shown by identifying research areas in which both find a joint heuristic field.
440	Network analysis	Pel, B. and Bauler, T (eds) (2014). The institutionalization of social innovation: Between transformation and capture . TRANSIT deliverable 2.2, TRANSIT: EU SSH.2013.3.2-1 Grant agreement no: 613168.	The paper highlights that social innovation, whether transformative or not, is a collective process involving diverse social actors. Social innovation proves relevant to diverse actors and institutional logics, and is translated by those in divergent ways. This results in contestation, and in a dialectical process in which transformative moments and capture alternate. The paper provides a conceptual framework for TSI governance, and formulates questions for further research on TSI governance and management.
441	UNPD 2009	UNPD (2009). A user's guide to measuring local governance . Oslo Governance Centre.	This Guide is intended to respond to an increasing demand from UNDP Country Offices and a wide range of national stakeholders for guidance on the multiplicity of tools and methods that are being used to measure, assess and monitor governance at the local level. The Guide uses the term 'local governance' to cover the range of governance issues that exist at the local level, including decentralisation of policies and processes, the roles and inter-relationships of different actors and institutions, local democracy and local government performance.
442	Governance	Arts, B. and Goverde, H. (2006). The governance capacity	The Governance Capacity Approach assesses the governance capacity of 'new modes



	Capacity Approach	of (new) policy arrangements: a reflexive approach. In: B. Arts and P. Leroy (Eds.), <i>Institutional Dynamics in Environmental Governance. Environment & Policy</i> , 47, 69–92.	of governance' by evaluating legal, political and economic qualities (p. 69)
443	Measuring Forest Governance	Secco, L. R., Pettenella, D.M. and Gatto, P. (2014). Why and how to measure forest governance at local level: A set of indicators . <i>Forest Policy and Economics</i> , 49, 57–71.	The paper presents and discusses an original set of indicators to measure the quality of forest governance at local administrative/spatial level and the method used to develop them. A draft list of indicators (mainly process-oriented) was formulated with respect to seven governance key dimensions (sustainability, efficiency, effectiveness, participation, transparency, accountability and capacity).
444	Governance and social capital in forestry	Górriz-Mifsud, E., Secco, L. and Pisani, E. (2016). Exploring the interlinkages between governance and social capital: a dynamic model for forestry. <i>Forest Policy and Economics</i> , 65, 25–36.	The paper proposes hence a dynamic, nested model comprehensively illustrating the co-evolution of SC and forest governance elements along a policy process.
445	Definitions of governance	Kjær, A.M. (2004). <i>Governance: key concepts</i> . Cambridge, UK: Cambridge University Press. Veldkamp, A., N. Polman, S. Reinhard, and M. Slingerland. (2011). From scaling to governance of the land system: bridging ecological and economic perspectives . <i>Ecology and Society</i> , 16(1), 1. Masey, A, K. Johnston-Miller (2016). Governance: public governance to social innovation? <i>Policy and Politics</i> , 44(4), 663–675.	Governance is a contested concept. These references provide different approaches to the definition and its operationalisation.
446	Empirical research in governance	Bouchard, M. J., C. Trudelle, L. Briand, J. L. Klein, B. Levesque, D. Longtin, M. Pelletier (2015). A relation database for better understanding the impacts of social innovation on social transformation . In: Nicholls et al. (eds.) <i>New Frontiers in social innovation research</i> . (pp. 69–85). Palgrave Maxmillan.	The authors highlight the requirements empirical research as follows: i) Choices must be coherent throughout the operationalisation of the database and comply with principle of relevance, calling for coherence with the original nature of the material analysed, from the case studies; ii) To deal with from team to team varying analytical frameworks – although sharing a common basis – which will evolve over time (adjusting data collection); and iii) Data collection will be based on interviews and document analysis which will already be filtered and codified by researchers. (pp.75-76)



Task 4.3: Qualitative methods for Policy

#	Framework	Reference - Link	Description - Notes
501	Innovation System Approach (IS Approach) (Qualitative)	<p>Freeman, C. (1995). The “National System of Innovation” in Historical Perspective. <i>Cambridge Journal of Economics</i>, 19(1), 5–24.</p> <p>Lundvall, B-A. (ed.) (1992). <i>National Innovation Systems: Towards a Theory of Innovation and Interactive Learning</i>. London: Pinter Publishers.</p> <p>Edquist, C. and Johnson, B. (1997). Institutions and Organisations in Systems of Innovation, In: Edquist, C. (ed.): <i>Systems of Innovation. Technologies, Institutions and Organisations</i> (pp. 41–60). London: Pinter Publishers.</p>	<p>Innovation Systems are defined as the network of institutions in the public and private sector whose activities and interactions initiate, import, modify and diffuse innovations (Freeman 1995). The approach scrutinizes the elements and relationships between actors and institutions which interact and produce innovations and new knowledge (Lundvall 1992, Edquist and Johnson 1997).</p>
502	Understanding Institutional Resource Regimes (IRR) (Qualitative)	<p>Gerber, J.-D., Knoepfel, P., Nahrath, S. and Varone, F. (2009). Institutional Resource Regimes: Towards sustainability through the combination of property rights theory and policy analysis. <i>Ecological Economics</i>, 68(3), 798–809.</p> <p>Knoepfel, P. (2007). Environmental Policy Analyses: Learning from the Past for the Future – 25 Years of Research. Berlin: Springer (see Chapter 15 on IRR).</p> <p>Scharpf, F. W. (1997). <i>Games real actors play: actor-centered institutionalism in policy research</i>. Boulder Colorado: Westview Press.</p> <p>Knoepfel, P., Larrue, C., Varone, F., and Hill, M. (2011). <i>Public Policy Analysis</i>. Bristol: Policy Press.</p>	<p>“A natural resource regime is an explicit (or implicit) structure of rights and duties characterizing the relationship of individuals to one another with respect to that particular resource” (Bromley 1992, 8). Methods: Data collection in the context of case studies; semi-structured interviews with local stakeholders and authorities.</p>
503	Understanding social capital in cases of social farming, social gardening and Green Care	<p>Wiesinger, G. (2015). The right concept in the wrong place? The Interrelationship between Care Farming and Social Capital. <i>Connecting local and global food for sustainable solutions in public food procurement</i>, 14, 314.</p>	<p>The Actor-network Theory (ANT) is a “material-semiotic” method which treats objects as part of social networks. It is very much related to other versions of material-semiotics (notably the work of philosophers Gilles Deleuze, Michel Foucault and feminist scholar Donna Haraway). It is a way of being faithful to the insights of ethnomethodology and its detailed descriptions of how common activities, habits and procedures sustain each other. ANT is mostly associated with studies of science and technology and with the sociology of science.</p>
504	Assessing the level of participation in LAG (LEADER)	<p>Asamer-Handler, M., Lukesch, R., Fischer, M., Kripigans, N. and Schuh, B. (2014). <i>Ausmaß und Wirkung von Beteiligung in Lokalen Aktionsgruppen (LAG) 2007-2013</i>. End project report for the Austrian Ministry of Agriculture and Forestry.</p>	<p>The assessment applied a mix of quantitative Full Sample Survey (quantitative questionnaire) with graphic network analysis (Holzer 2006, p. 30) to measure the number of contacts (nominalistic and reputational (the ones who are “seen” as belonging to the network, Jansen 2006, 73),</p>



	Action groups)	Holzer, B. (2006). Netzwerke, Bielfeld, transcript. Janse, D. (2006): Einführung in die Netzwerkanalyse. <i>Grundlagen, Methoden, Forschungsbeispiele</i> . Wiesbaden: Verlag für Sozialwissenschaften.	one online survey, and qualitative methods: picture and image analysis from photo documentation (interpretation of meaning of the pictures), Analysis approach: Coding of Actors Lists with categories.
506	Visual Methods: Interpretation of Pictures	Bohnsack, R. (2008). The Interpretation of Pictures and the Documentary Method . <i>Forum Qualitative Sozialforschung</i> , 9(3), 26.	The interpretation of pictures was used as one tool in the study by Asamer-Handler et al. (2014) to assess the level of participation in LEADER action groups.
507	Participant Observation	Fine, G. A. (2003). Towards a peopled ethnography developing theory from group life . <i>Ethnography</i> , 4(1), 41-60. Geertz, C. (1973). Thick description: Towards an interpretive theory of culture. In Clifford Geertz (Ed.), <i>The interpretation of cultures</i> (pp. 3–32). New York: Basic Books.	Observation, particularly participant observation, has been used in a variety of disciplines as a tool for collecting data about people, processes, and cultures in qualitative research. It was most prominently used by Bronislaw Malinowsky (who participated in the lives of native peoples) in the 1920s for his field research and ethnographic work. His colleague, Margaret Mead, applied it differently by did not participate directly. She observed and documented the observations (with "documentation protocols" and "field diaries"). The method is still used mainly in anthropological field work.
508	Q-method	Barry, J. and Proops, J. (1999). Seeking sustainability discourses with Q methodology . <i>Ecological Economics</i> , 28(3), 337–345. Brown, S. (1980). <i>Political Subjectivity: Applications of Q Methodology in Political Science</i> . Yale: Yale University Press. Brown, S. (1996). Q methodology and qualitative research . <i>Journal Qualitative Health Research</i> 6, 561–567. McKeown, B. and Thomas, D. (2013). Q-Methodology . London: Sage. Nijnik, M., Zahvoyska, L., Nijnik A., Ode A. (2009). Public evaluation of landscape content and change. <i>Land Use Policy</i> , 26, 77–86 Nijnik M, Nijnik A, Brown I. (2016). Exploring the linkages between multi-functional forestry goals and the legacy of spruce plantations in Scotland . <i>Canadian Journal of Forest Research</i> , 46, 1247–1254. Stephenson, W. (1953). <i>The Study of Behaviour: Q Technique and its Methodology</i> . Chicago: University of Chicago Press. Sweden, P. (2006). Post-normal science in practice: A Q study of the potential for sustainable forestry in Washington State, USA. <i>Ecological Economics</i> , 57(2), 190–208. Watts, S. and Stenner P. (2012). <i>Doing Q Methodological Research:</i>	The Q-method employs input from psychology (Stephenson, 1963) and action research to analyse subjective attitudes and perceptions that are difficult to quantify with any other means. its results are case and context specific and rewording is needed for different types of respondents at the national, subnational and local levels. An extensive literature review is provided.



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		<p><i>Theory, Method and Interpretation.</i> Sage, London.</p> <p>The Q Method Page. Available at: http://schmolck.userweb.mwn.de/qmethod/.</p>	
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