



Title of Proposal

Unlocking the potential of rural, natural-resource-based communities for sustainable bioeconomy growth by amplifying the Model Forest multi-stakeholder landscape platform for social innovation (RUCOM)

List of participants

Participant no	Participant organisation name	Country
1 (Coordinator)	Swedish University of Agricultural Sciences (SLU)	Sweden
2	Centre de coopération internationale en recherche agronomique pour le développement (CIRAD)	France
3	University of Sarajevo	Bosnia Herzegovina
4	Centro Agronómico Tropical de Investigación y Enseñanza (CATIE)	Costa Rica
5	Croatian Forest Research Institute	Croatia
6	Istituto di Biometeorologia del Consiglio Nazionale delle Ricerche (IBIMET-CNR)	Italy
7	Al Akhawayn University	Morocco
8	Vojvodina šume	Serbia
9	CESEFOR Foundation – Mediterranean Model Forest Network Secretariat (MMFNS)	Spain
10	Institut National de Recherches en Génie Rural, Eaux et Forêts (INRGREF)	Tunisia
11	Marmara Forest Research Institute (MARMARA FRI)	Turkey
12	Innovation Academy	Greece
13	Empresa de Transformación Agraria, S.A. (TRAGSA)	Spain

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1. Excellence

1.1. Objectives

Fostering sustainable management of forests and other landscape natural resources has been highlighted as a capital strategy e.g. in the EC Innovating for sustainable growth (EC 2012) and in the new EU Forest Strategy (EC 2013). In these and other Commission Communications it is argued that the unsustainable exploitation of natural resources have to be mitigated and reversed. It is also argued that this is a societal challenge whose solution towards a responsible bioeconomy relies on the capacity of knowledge-based adaptation involving participatory models that engage citizens and end-users and that evolves in the interface between science, society and policy (EC 2012). In this project we amplify the international Model Forest¹ concept and the over 20 years of global experience in partnership, sustainability and landscape, to empower rural communities and to facilitate development of social innovation.

The main goal of the project is to contribute to an innovative, sustainable and inclusive bioeconomy for Europe, based on rural community multi-stakeholder partnerships and their local landscape/territorial bio-physical and socio-ecological premises.

The operational objective of the project is to empower the growth potential of rural areas in Mediterranean to northern boreal and alpine biomes, through enhanced governance and social innovation using Model Forests as our case study, implementation and dissemination infrastructure.

The science and technology objective of the project is to unfold the key natural-resource and social-capital mechanisms for enhanced sustainable development trajectories, and to monitor (Technology Readiness Levels; TLR) social innovation tools for integrated and improved landscape and territorial natural resource sustainable management and governance.

The specific project objectives are:

- To apply action-research to the issues of policy integration and policy feedback in support of social innovation in rural areas, using an inter-linked bottom-up and top-down implementation assessment of European policies, such as the European Landscape Convention and the EU Forest Strategy;
- To advance the existing knowledge on evidence-based adaptive monitoring, planning and governance of landscapes and natural resources, focusing on ecosystem-based management and ecosystem services as a concept for classifying, mapping, assessing and balancing natural and cultural values;
- To develop, in controlled conditions, pilot social innovation initiatives in natural resource management, supporting more sustainable agri-food and forestry systems;
- To carry out TLR-based monitoring, adaptive benchmarking and evaluation of social innovation in different rural community settings, with emphasis on marginalized social communities and groups; and

¹ Model Forests are based on an approach that combines the social, cultural and economic needs of local communities with the long-term sustainability of large landscapes in which forests are an important feature but where a coherent, holistic view on landscapes and people is applied. By design they are voluntary, broad-based initiatives where people with differing interests and perspectives form a neutral partnership based on the following goal: to manage their own natural resources in a way that makes the most sense to them given their history, economic and cultural identities and in a way that does not jeopardize future generations. The partnership defines what sustainability means in their own context, develops a common goal, governance structure and strategic plan, and works collaboratively to achieve the goals set out in that plan. The goals typically strive to harmonize economic and non-economic priorities. A Model Forest is best thought of as a long-term process rather than a project. (www.imfn.net)

- To produce, with the participation of the involved communities, participation models, policy uptake and policy realisation opportunities, co-production of knowledge, communication, dissemination, learning and networking outcomes.

Global dissemination of project outputs and results will be secured through continuous exchange with the International Model Forest Network (www.imfn.net).

1.2. Relation to the work programme

The project addresses the topic “Unlocking the growth potential of rural areas through enhanced governance and social innovation”. Rural areas are critical to ensure sustainable growth in EU. Their natural and cultural territorial capital, different in different settings, provide the experience platform for innovative social mechanisms and lessons learned that can be implemented elsewhere and used to influence and promote institutional capacity building in a wider context.

In this project we apply the Model Forest approach as a way forward to unlock the growth potential of rural communities and thus further develop bioeconomy based sustainability in practice. The terms sustainability and sustainable development have been subject to long intellectual debates across disciplines since the original Brundtland definition suggested a three-pillar approach that stresses the social, economic and ecological dimensions of change and citizen participation (e.g. Leach et al. 2010). Since the United Nations Conference on Environment and Development in 1992, a multitude of policies, planning approaches and indicators, etc. have emerged to operationalize sustainability. However, many of these initiatives have been criticized for being overly managerial (Jordan and Adger 2009), sensitive to changes in politics (Meadowcroft 1999) or for a lack of capacity and commitment (Vogler & Jordan 2003). In the EU Forest Strategy (EC 2013) it is argued that the current forest policy context is complex and fragmented and that sustainable forest management has to acknowledge the multifunctional role of forests (EC 2013 guiding principle) in a coherent and holistic perspective. Sustainability and sustainable development have much potential, but operationalization remains a weak point (Leach et al. 2010). This situation calls for new forms of applied research that can offer cross-disciplinary integrative methods for place-based analysis and implementation (Kates 2011).

There is an increasing awareness of the ongoing overuse of natural resources and environmental degradation that, amongst others, is reflected in shifting societal values on landscapes and natural resources as well as in the emergence and adoption of new approaches to ecosystem management. (Biggs et al. 2010). Furthermore, the failure of top-down policy and management strategies to halt ecosystem stress and adequately address rural landscapes and people, suggests that more innovative approaches are required to in reality achieve sustainability (Foley et al. 2005). New governance and participation models are vital to promoting sustainable resource use that simultaneously assures rights and responsibilities of rural and marginalized people and their opportunities for involvement in decisions that affect their immediate environments and livelihoods (e.g., Huntington 2011).

Research that links social innovation to sustainability is recent and undeveloped. Biggs et al. (2010) define social innovations as “*new concepts, strategies, initiatives, products, processes or organizations that meet pressing social needs and profoundly change the basic routines, resource and authority flows, or beliefs of the social system in which they arise*”. Social innovation can be initiated by groups in any sector or combination of sectors: public, private, indigenous, or civil society. To be durable and to effect transformation, social innovation requires the establishment of favourable conditions and the deliberate agency of social or institutional actors who can diffuse novel ideas within and beyond their local contexts. Emergent conditions may be fostered through “*institutional bricolage*” (Cleaver 2002, 2012); i.e. mechanisms for resource management and collective action. Cleaver (2002) suggested that “bricoleurs” apply their knowledge, power and agency to take collective action. Biggs et al. (2010) build on this idea in relation to social innovation, referring to these individuals or organizations as social or institutional entrepreneurs that provide leadership by

visions, engagement, conflict management and network facilitation. Biggs et al. (2010) used this approach to explore factors that could transform ecosystem management from a sectorial approach using management experts to a more adaptive, integrated, and collaborative form of management, and found that social innovation is most likely to occur where four conditions are met: 1) Environmental awareness and attachment to local ecosystems; 2) Capacity for social entrepreneurship in the environmental arena; 3) Mechanisms that promote dialogue between key stakeholders; and 4) Institutional support to stakeholders. Furthermore, they pointed out that because social innovation implies ‘trying something new’, innovations are most likely to be developed where there are strategies for ongoing learning, re-evaluation and adaptation of management strategies.

This line of thinking forms a central axis in this project proposal, and also provides the justification for using a large set of Model Forests in different countries and regions. We focus on developing, understanding and monitoring characteristics of innovations at a local landscape level and the potential to successfully diffuse innovations. We apply the four conditions above but also emphasize that innovations can occur within each of those conditions. For example, new tools may need to be tested to foster environmental awareness or dialogue among stakeholders so that they can work effectively in rural sustainability.

The range and diversity of selected Model Forests provides a setting for documenting and analysing social innovation solutions already developed and in development. For example, Vilhelmina Model Forest Sweden and Urbión Model Forest Spain have developed a Model Forest GIS as part of a toolbox for co-production of knowledge and improved land-use dialogues (Sandström 2015; Gomez et. al. 2013) that have been tested in other contexts (Prince Albert Model Forest Canada, and Ifrane and Mirna Model Forests Morocco and Croatia, respectively). Although rural areas are diverse across EU and elsewhere, social innovation tools that work in one place may also work in other places. Likewise, innovative governance mechanisms at various levels and policy implementation instruments may act as both catalysts and as constraints to social innovation. The existing partnership working with any single Model Forest, including end-users such as forest industry, private sector business, local, regional and national authorities and research, makes it possible to promote consolidated actions.

1.3. Concept and approach

1.3.1. Territorial/landscape approach and Model Forests

Social innovation in agriculture, forestry and rural development relies on the capacity of “*tackling the societal challenge*” (EC 2012), e.g. through sustainable natural resource management, mitigating and adapting to climate change, investment in knowledge, innovation and skills, and participatory governance and informed dialogue (EU 2012). Climate change, globalization of natural-resource-based markets, new land-use strategies and priorities, supra-national policy development and other global environmental circumstances challenge the sustainability paradigm in land use, management and governance (Svensson et al. 2012). The territorial or landscape approach has increasingly been promoted as a new perspective to address global challenges at a local level (e.g. CBD SBSTTA 2011; Chavez-Tafur & Zagt 2014) and to establish a coherent holistic view on the multiple benefits of forests and landscapes (EC 2013). With increasingly competing and more diverse use of natural resource and territory/landscape, the planning, governance and policymaking stakeholders have come to realize the limitations of sectorial approaches (Chavez-Tafur & Zagt 2014). Instead, integrated approaches that cover different land cover types, various land-use stakeholders, policies at different levels as well as the human population and their past, present and future needs are being sought (Sayer et al. 2013). Numerous international initiatives and organizations (UNESCO, CGIAR, UNDP, World Bank, FAO, IUCN, IMFN; e.g. IUCN & EAP, 2008, Sayer et. al. 2013) embrace this approach as a concept to manage the natural and cultural capital and fulfil the social, economic and environmental requirements at the local, national and global levels.

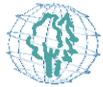
Knowledge and experiences are developing but implementation in practice is insufficient and inappropriate to complex landscapes. Albeit landscape sustainability as a process and as a state is local by nature, the decision making and governance institutions that put the frameworks in place, is not. The adaptive capacity of both policy and decision making systems and of local practical management, and the links between those, need to be strengthened. Hence, developing, implementing and testing solutions to current sustainability challenges in a researcher-practitioner interface is a way to secure bottom-up approaches for meeting the visions and objectives expressed in rural-development and environmental policy frameworks and conventions.

To address the specific challenges in “Unlocking the growth potential of rural areas through enhanced governance and social innovation” we must empower and elevate the general societal capacity to green growth in rural communities. To enable that this project work plan to apply and amplify the Model Forest approach follows five basic steps:

First. We have selected territories or landscape areas; i.e. demarcated land bases with a partnership of stakeholders (various types on various levels) that operate on that area and that have established a shared vision of sustainability (Vignola et al. 2009). These are established and candidate Model Forests or initiative Model Forests in Europe and the Mediterranean basin, complemented with other Model Forests that are specifically chosen to provide needed expertise, complementary action and reference situations with sufficient context in the view of the project objectives.

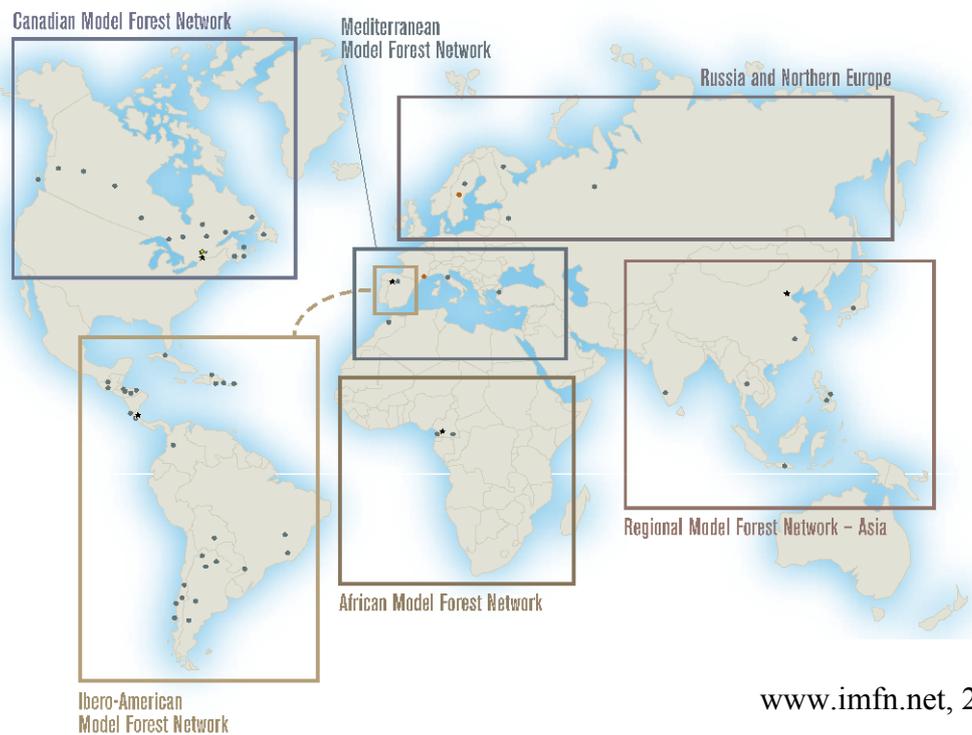
The International Model Forest Network (see e.g. Bonnell et al. 2012 and further articles in *The Forestry Chronicle* vol. 88) is made up of about 60 model forests around the world (see the map on the next page). Model forests are governed by a set of principles and attributes (IMFN 2008; www.imfn.net). These provide general guidance on several aspects of model forest activities and governance: 1) A fully inclusive *partnership* consisting of land use and land management stakeholders including private and public sector; 2) A commitment to work towards *sustainable forest management*; 3) A *landscape* that is large enough in scale to include the major local economic, socio-cultural, and environmental values and premises; 4) A *governance* structure that is transparent, accountable and accessible; 5) A *program of activities* that reflect locally relevant stakeholder and landscape issues, and that are within (but may test) national policies; and 6) A commitment to *networking, sharing experience and knowledge*, and assist in capacity building from local to international levels. In the new EU Forest Strategy (EC 2013) it is stated that: “*Model Forests is an initiative for landscape-scale platforms and broad stakeholder engagement, which carry out global change studies, develop and test local-scale innovation and adaptation strategies, and monitor such efforts over the long term. Thus, it can contribute to support sustainable forest management by implementing resource management policies at the local level, establishing networks and ensuring the participation of local communities.*”

Second. We will use the existing Model Forests to learn which elements facilitate capacity building for innovation and specifically make use of the fact that different Model Forest are at different level of advancement when it comes to sustainable growth and innovation. The Model Forest as a forum and common vision make possible the establishment of nested, concrete initiatives that, collaboratively, take different forms depending on the issue and context. Some advanced Model Forest already have concrete initiatives, for example community-based climate change adaptive strategies (Hooper 2012, Johnston & Hesseln 2012, cf. IPCC 2014), that produce the real changes in the territory and the way natural resources are managed. Public and private actors can provide market access, training and other important assets that contribute to these initiatives (Shogren, 2012, Rico García-Amado et al. 2011).



International Model Forest Network

● member
● candidate
★ Regional Model Forest Secretariat
★ IMFN Secretariat



www.imfn.net, 2015-02-02

In the most advanced cases, these concrete initiatives have evolved along lines of technological innovation and the collaborative management of knowledge and information, making possible the development of high-impact actions that have the potential to transform or establish new markets and/or influence long-established views, practices and policies (e.g. Sandström 2015). In a very general fashion, the initiatives can be classified into: 1) Breakthrough innovations such as new tools or approaches that fundamentally change established views, e.g., remote sensing techniques, novel scenario and modelling approaches or participatory GIS; and 2) Incremental innovations, such as cluster-like vertical integration initiatives, communities of practice providing scale (market power) to small producers, adaptive monitoring, and ecosystem services as a refined approach to classify and balance landscape natural and cultural values.

Third. We will react to the growing body (e.g., CBD SBSTTA 2011; Chavez-Tafur & Zagt 2014; EC 2013) of evidence signalling that there is a need for a landscape approach that integrates the bio-physical natural resource conditions with the socio-economic context of the local community, especially when referring to remote rural areas. To be applicable in delivering new methods for social innovation in a wider context, our network of Model Forests is constructed to be representative of bio-physical, socio-cultural and political settings across Europe. Previous research shows that community capacity can be enhanced through deliberate processes of networking, sharing and learning of good practices across sites (Reed et al. 2014a). We will look into the processes of networking and learning at all levels (between territorial fora, between communities of practice and clusters, between individuals), timely and relevant knowledge support, two-way connection with the policy-making process, and adequate external communication that supports networking and policy uptake.

In terms of biophysical landscape conditions we will specifically emphasise ecosystem services as a concept to classify and balance the provisioning of ecosystem natural and cultural values to people. The EU Forest strategy (EC 2013) specifically point out a need to develop a multifunctional

forest sustainability framework that includes protection and delivery of ecosystem services. The basic project approach will be to map ecosystem services (categories and types) on different land-cover types as input to future management scenarios and sustainability assessments.

Fourth. We will support a specific development of capacity and empowerment, focused on real problems or situations, with a clear direction towards innovation processes and with a “demographic” (in project-partnership terms) and thematic focus on the Mediterranean biogeography (Lavorel 1998, Vogiatzakis et al. 2006). For rural communities, this capacity is determined by a combination of factors, including (based on Williamson et al. 2010): 1) Natural capital – natural resources and environmental services; 2) Human capital – skills, education, and health of individuals that contribute to the knowledge base and economic performance of the community; 3) Economic capital – local industrial base, physical infrastructure such as roads and buildings, financial capital such as organizational budgets and household savings; and 4) Social capital – the relationships between and among community members that contribute to collective action. This fourfold definition of the intrinsic capital for rural growth will be explored in action research in the Model Forests.

Fifth. We undertake action-research on the platform of previous and on-going innovation projects conducted within the framework of Model Forests and its constituencies and where a certain level of shared understanding and knowledge has been developed. Action research is to integrate a broad array of approaches to create new understanding for participants and researchers through solving practical problems and supporting democratic problem-owners control (Levin and Martin 2007). Thus, the project team will develop the action research agenda based on an already existing platform of research. For example, the IMFN regional Canadian Model Forest Network generated in total more than 380 journal articles between 1993 and 2010 (Bonnell 2012). While the benefits and social innovation tools are usually straightforward, it is frequently in the arrangements and new institutions where these initiatives falter, even when provided with state-of-the-art support. Thus there is a need of research that explains how external (i.e. not manageable by the actors) factors such as the natural capital at disposal, access to the policy-making process or influential opinion, impact these processes. Action research will be conducted on, e.g.: 1) Informing decisions, spatial planning, input information, information interpretation, mapping and interlinking; negotiation, monitoring and evaluation, and participatory impact assessment; 2) Securing a close research-practitioner interface to obtain a knowledge-based and applicable strategic approach to problem formulation, testing and solution development; and 3) Specific components related to the community social adaptive capacity context, such as gender aspects (see 1.3.5).

1.3.2. Participating Model Forests

The Model Forests participating as case studies and implementation areas in the project are:

<i>Model Forest</i>	<i>Country</i>	<i>Biome</i>	<i>Research partner</i>
1 Araucarias del Alto Malleco	Chile	Oromediterranean	CATIE / CIRAD
2 Buçak (candidate)	Turkey	Mediterranean	MARMARA FRI
3 Cachapoal	Chile	Mediterranean	CATIE/CESEFOR
4 Chorotega	Costa Rica	Tropical	CATIE
5 Grevena (initiative)	Greece	Mediterranean	CESEFOR
6 Helge å (candidate)	Sweden	Temperate	SLU
7 Ifrane	Morocco	Oromediterranean	Al Akhawayn University
8 Mirna river basin	Croatia	Mediterranean	CFRI
9 Montagne Fiorentina	Italy	Mediterranean	IBIMET – CNR
10 Provence	France	Mediterranean	CIRAD
11 Tlemcen (candidate)	Algeria	Mediterranean	Al Akhawayn University
12 Urbión	Spain	Mediterranean	CESEFOR

13	Páramos de Saldaña (initiative)	Spain	Mediterranean	CESEFOR
14	Vilhelmina	Sweden	Boreal / Alpine	SLU
15	Warta (initiative)	Poland	Temperate	SLU
16	Yalova	Turkey	Mediterranean	MARMARA FRI
17	Dalmatia	Croatia	Mediterranean	CFRI
18	Etna (initiative)	Italy	Mediterranean	IBIMET
19	Kroumirie et Mogods	Tunisia	Mediterranean	INRGREF



As the project develops we will need to add reference and dissemination Model Forests and other landscape initiatives, e.g. UNESCO Man and Biosphere areas, beyond the above list of Model Forests, to secure project outcomes and implementation. Moreover, since the project builds on the existing level of competence and experience within the International Model Forest Network and on Model Forests as multi-stakeholder platforms, good examples of innovation and initiatives will be applied. The Model Forest program was initiated by Canada in 1992 and some of the most longstanding Model Forests in the international network are located in Canada. As a consequence, Canadian researchers and Model Forest sites have experiences that can be shared with European sites. For the same reason, promising experiences from other EU projects (see 1.3.4) will be assessed and applied where relevant. For example, a training program on adaptation and innovation will be developed, based on lessons learnt from FP7 project “EcoAdapt” (www.ecoadapt.eu), and from which this proposal draws learning and results. In-site and distance learning are provided to all Model Forest teams and constituencies based on that programme.

1.3.3. Innovation rationale

The technology in development here is differently developed and applied in different Model Forests. In the most advanced cases, a TRL 7 can be assigned to the present configuration of natural assets, institutions and accumulated capacities, while others are less developed (e.g. TLR below 3) and have a potential to mature and reach higher TRL-levels.

The project thus assumes a flexible and adaptive methodological approach, with support being provided to local partnerships according to their needs and local partnerships piloting quantum leaps (from TRL 5 to TRL 7, say, or from TRL 7 to 8) according to their present readiness level and capacity to innovate. The level of development provides opportunities to this project, because we, i.e. the project partners altogether, learn from the more developed Model Forest on prerequisites for sustainable growth and social innovation.

The specification of the extent of changes cannot be dictated to these local partnerships. Therefore, a participatory design exercise is to take place during April-May 2015 for the preparation of the full proposal. This will take place in two coordinated steps; first, at the local level in each Model Forest

partnership to secure local relevance of planned activities, and second, as a bottom-up approach to link activities to and secure relevance with respect to pan-national and European policies. The outcome will be an outline of a full set of activities, organized in work packages that correspond to the project specific objectives.

1.3.4. National or international research and innovation activities linked with the project

Previous and present EC-funded projects (in chronological order):

1. Baltic Sea Region Interreg Programme: Baltic Forest Project, “Forests as a resource for sustainable development and spatial planning in the Baltic Sea Region”, 2006-2007
2. EuropeAid: Project “Conservation and sustainable forestry development of the Chiquitano Dry Forests in Bolivia and Paraguay”, 2007-2011
3. MED Programme: Forêt Modèle Project “Coordination of regional policies for the forest with the help of a new governance instrument: the "model forest"”, 2008-2012
4. Baltic Sea Region Interreg Programme: Baltic Landscape Project “Baltic Landscape in change – innovative approaches towards sustainable forested landscapes”, 2011-2014
5. IPA Adriatic Programme, Adriatic Model Forest Project, 2012-2014
6. FP7: Ecodapt Project “Ecosystem-based strategies and innovations in governance networks for adaptation to climate change in Latin American Landscapes”, 2012-2015

Different institutions participating in Model Forest initiatives have developed research and innovation programmes, projects and activities nested within these initiatives.

1.3.5. Overall project approach

The large diversity of landscape contexts where Model Forests and this project support social innovation processes, requires a flexible and adaptive methodological approach. We expect this differentiated process (tailored to Model Forests’ contexts) to reach different level of achievement and require different levels of investments. We will collectively define the potential of the context to allow and respond to project implementation in each site, which results in a TRL-based pre-monitoring scale of social innovations ranging from *i*) business as usual to *ii*) best practice to *iii*) transformative innovations (e.g. requiring institutional redesign or restructuring, opening new economic investments and start-up innovations, etc.).

Some participating Model Forests have a mature process allowing immediate response to or already display examples of strengthened social innovations for adaptive governance (e.g. in terms of identity, leadership, strategic alliances with actors with formally-invested authorities, capacity to gather new allies, etc.). Other Model Forests still lack the conditions needed to deliver ambitious targets of sustainable economic growth and thus need more directed support. Therefore it is necessary to adapt the action-research process to take into account the capacity of different Model Forests to unlock their growth potential through social innovation. We propose to do it in three stages, where indicators will be monitored via Qualitative Comparative Research throughout the project (as part of project monitoring and evaluation activities) for each phase:

In the ***first stage***, the drivers are identified that defines activities for the Model Forest partnership. Furthermore, agents of change are defined and assessed with respect to their values regarding mobilizing issues. This provides a decision-making process within the partnership, a participatory process to engage stakeholders, and an identified set of criteria (e.g. potentials and success proxies towards social innovation) to develop the capacity of Model Forests for sustainable growth. The Model Forests with less potential will have to understand better how to improve their social process, draft an institutional strategic plan and take part in training. Those Model Forests with more potential at the onset will enter directly into the second stage.

In the *second stage*, a strategic planning phase is launched, where Model Forests will complete a strategic plan for the territory, building on the capacity of agents of change and taking uncertainties into account. Pilot projects around drivers are designed and implemented to maintain momentum, motivate agents of change and gather new issues along the way. This phase allows targeting of drivers (e.g. responding to an already well-defined social demand) while promoting engagement in concrete innovations that demand a longer time-span for their concretization. Through the process, the controversies that cannot be tackled within the current socio-institutional context as well as the opportunities, i.e. breakthrough social innovations, are provided and identified.

In the *third stage*, the Model Forests will enter a transformative planning phase. In this phase an extended panel of agents of change will help explore options and discover socially and technically robust ways to tackle difficult problems and enhance promising actions. The Model Forest strategic plans and innovation initiatives will be developed and revised accordingly.

1.3.6. Gender perspective, balance and analysis

The gender analysis for this project is focused on ensuring elements for effective application of gender mainstreaming and integrating these issues in the project research and implementation activities (Lidestav 2014). Gender analysis is integrated in project design and implementation activities in order to improve its scientific quality and societal relevance. At the same time, gender balance in research team composition will be promoted and experts with gender expertise prioritized in research teams. In addition, specific research will be designed based on already existing research related to gender in the context of adaptive capacity (e.g. Reed et al 2014b). The management structure of the project is to be designed to ensure gender balance in the decision-making process and managing functions of the project (coordination, work package leaders, etc.).

1.4. Ambition

1.4.1. Advance beyond the state of the art

The project goes beyond the state-of-the-art. We promote asset-based, inclusive, smart and sustainable growth emphasizing on social innovation to support change-resilient economies based on innovative solutions for sustainable resource use and growth of rural communities. Since we base the activities on Model Forests, the expected outcomes will advance the capacity of any single Model Forest as well as Model Forest networks across countries, Europe and globally. Since a Model Forest is a representative area for a larger area, the solutions developed can be implemented elsewhere and thus provide a general increase in the societies' capacity for social innovation.

The project goes beyond the forest, agriculture and rural sectors and applies a holistic landscape perspective on economic, ecological and socio-cultural values. Here, the focus on ecosystem services provides us with a possibility to map and analyse present and future provisioning of goods and values for people and communities. The project also benefits from past achievements and involves actors from different sectors through its social innovation approach. The intention is to connect all relevant actors to work together in a framework to ensure that forests and remote rural areas are better managed for resilience across different regions, with a primary focus on Mediterranean landscapes. Expected social impacts are, e.g.: 1) Establishment of a shared sustainability vision among the different actors; 2) Enhanced coordination, capacity development and sharing of experiences to encourage synergies; 3) Enhance cross sectorial approaches and optimize the use of resources; 4) Benchmarking and dissemination of innovative activities to increase local ability to adapt to changing conditions and to create smart growth; 5) External and internal communication and visibility as well as mobilization of additional resources and access to the policy-making process; and 6) Creation of opportunities from societal challenges

Rural communities and areas will benchmark a local (landscape/territorial) perspective, and a bottom-up transfer to national and supranational level of knowledge and experiences that contribute to defining a network of locally-adapted strategies to promote smart, sustainable growth. The scope is to assist decision makers and stakeholders to identify and prioritize required changes in policy and practice to integrate measures for local bioeconomies to create new smart, inclusive and sustainable development opportunities.

The objectives tackle long-identified barriers to rural growth through a thorough emphasis on monitoring (the ability to demonstrate actual results has been identified as a major driver of success in this kind of initiatives), the best-possible support to local partnerships that, through the monitoring approach, needs specific empowering actions, and a direct, two-way connection with the relevant policy-making processes. Specifically, the barriers usually faced by these partnerships will be analysed in a research-practitioner interface that involves the community inhabitants themselves in the definition of opportunities to create inclusive, sustainable growth and development. Moreover, the project supports the development and dissemination of technologies, practices and processes related to agriculture and forestry, value chains and rural energy demands, as well as rural income diversification with the aim to increase the resilience and dynamism of the production systems and livelihoods. Considering the limited access of women to appropriate technologies and influential processes, this project pays special attention to ensuring that women have adequate access to processes, technologies and other innovations.

1.4.2. Monitoring and evaluation framework

To assess change and better steer the project towards the objectives, we will develop a monitoring and evaluation framework based on the planned activities and expected impacts, specifically for each model forest. A results diagram will be developed to explicit the assumed logical linkages between inputs, activities, outputs, impacts and the objectives. Outcome mapping will be used to define outcomes in more detail and to identify progress markers to track, including TRL:s. This approach regards outcomes as changes in behaviour, relationships or practices of key partners with which the project interacts and seeks to influence. We will gather evidence to support the monitoring of the identified progress markers as well as to illustrate any unexpected outcomes observed. The data will be collected through process documentation during workshops, meetings and visits, surveys of boundary partners and the partners with whom they work as well as surveys with members of the community. In addition, the most significant change method will be used to collect stories of change with members of the community. This will allow the project team to better understand what these changes mean for community members and to identify unexpected impacts that can be nonetheless extremely important from their point of view.

1.4.3. Innovation potential

The project is brings forward the Model Forest concept, with the experiences that has been gained during the 20-year existence of the IMFN, as a structured process and platform for applying social innovation in rural development. The Model Forest approach is an excellent platform for action research because of it is based on a bottom-up, community oriented process that emphasizes equality and diversity of voices, and a commitment to sustainability and shared decision making that recognizes local circumstances. With Model Forests in 60 different places and 20 different countries there is already great experience in pursuing sustainable rural development. The bottom-up approach is in contrast to the usual approach to rural development, which has been top-down, driven by government ministries far from the local settings, and generally includes little participation of civil society and does not take into account local circumstances.

The innovation potential which this proposal represents lies in the collective learning process, facilitated by an experienced group of researchers, in which different social groups and actors can participate. This approach will result in new skills and practices as well as in new attitudes, values,

behaviours and governance mechanisms. Thus, this project will develop the social capacity and skills required to support the creation of successful social innovation in marginalized rural areas where the social structure is most fragile. The main focus is on supporting local processes and progress, but also, through investigating opportunities of different Model Forests and analysing the trajectory of the development, we will establish a new knowledge platform on prerequisites for rural social innovation. In particular in these learning processes, actors involved in change-resilient economies will have advantages because they will introduce and enhance innovative theologies and methods in their supply chain and create an international network of local sustainable products.

2. Impact

2.1. Expected impacts

In this project we apply the Model Forest approach as a way forward to unlock the growth potential of rural communities and thus further develop bioeconomy based sustainability in practice. Our work plan and change theory layout is displayed on the next page. There, the project specific objectives are presented alongside with the concrete impact (monitored) and expected change to which each of the objectives contribute. Through the fulfilment of each objective, impacts are obtained that contribute to the stated change in the following way:

Action-research on TLR-based monitoring, adaptive benchmarking and evaluation of social innovation in different rural community settings (SO 1) produces the impact (I1). The dimensions and dynamics of social innovation in rural areas are clarified. The change to which this outcome is expected to contribute is that *territorial governance is improved and the way is paved for an integrated approach to rural development.*

Action-research on policy integration and policy feedback (SO 2) produces the impact (I2). The upper levels of the polity perceive benefits from innovative action at this level and support its required instruments, incentives and institutional capacity.

Action-research on evidence-based adaptive monitoring, planning and governance (SO 3) produces the impact (I3). Pathways to unfold the territorial capital of rural regions are identified, and thus shape sustainable development trajectories in different types of rural areas.

The change to which these outcomes (SO2 and SO3) are expected to contribute is that *policy makers and local communities have the capacity and possibilities to improve the formulation and delivery of relevant policies as well as to shape such programmes that explicitly foster the creation of sustainable social innovations.*

Pilot and demonstrated social innovation initiatives in natural resource management (SO 4) produce the impact (I4). More sustainable agri-food and forestry systems and rural development are supported.

Participation models, policy uptake and realisation, co-production of knowledge and capacity (SO 5) produces the impact (I5). Analyses of different innovative governance mechanisms with respect to social innovation in different contexts are delivered.

The change to which these outcomes (SO 4 and SO5) are expected to contribute is *unlocked landscape/territorial potential for smart, inclusive and sustainable growth.*

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