simra
Social Innovation in
Marginalised Rural Areas

From science
to social innovations
connecting forests and people

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INTRODUCTION

SIMRA (Social Innovation in Marginalised Rural Areas) is a four-year project (2016-2020) funded by the European Union's Horizon 2020 programme. It aims to advance understanding of social innovation and innovative governance in agriculture, forestry and rural development, and how it can be boosted, in marginalised rural areas across Europe and around the Mediterranean, including non-EU countries.

WHAT IS SOCIAL INNOVATION?

For the SIMRA consortium, social innovation refers to "the reconfiguring of social practices, in response to societal challenges, which seeks to enhance outcomes on societal well-being and necessarily includes the engagement of civil society actors".

Social innovation aims to increase and introduce new solutions to challenges faced by rural areas, especially those considered as marginalised, which are often associated with a high share of wooded cover.

WHAT IS A MARGINALISED RURAL AREA?

Within SIMRA, rural areas are considered marginalised because:
- of their physical constraints (e.g. mountainous, wooded, arid)
- of their limited access to infrastructure (for example to road transport networks, electricity and/or to telecommunications, including the Internet).
- or they have marginalised populations (i.e. societal marginality) being, for example:
  o people with (very) low incomes
  o high proportion of people at risk of poverty or social exclusion
  o high levels of infant mortality
  o high proportion of early leavers from education and training

WHY A BROCHURE FROM SCIENCE TO INNOVATION?

This brochure aims at showcasing the co-constructed knowledge of social innovation and the diversity of social innovations based upon case studies associated with forestry. The examples that are meeting the criteria of social innovation (see further, in Kluvankova et al., 2018) are extracted from a special issue of the scientific journal *Forest Policy and Economics*.

THE FOREST POLICY AND ECONOMICS SPECIAL ISSUE

This Special Issue, a product of the SIMRA project and its Thematic Session organised at the 125th Anniversary IUFRO Congress in 2017, is a contribution to advancing and exchanging scientific knowledge of social innovation in the context of forestry. A purpose of the Issue is to promote social learning, contribute ideas on social innovation for the development of rural policy and sustainable forestry, and ideas useful for practice communities at various levels. The aim of this work is to increase the well-being of forest-dependent communities and assist them in building resilience to challenges currently faced.

The papers in the special issue focus on identifying and explaining the role and place of social innovation, and the enabling policies and decision-making processes, which lead to an increase in the sustainability and multi-functionality of forests to the benefit of the communities which depend upon them.

This special issue out-scaled the knowledge of social innovation going beyond the SIMRA countries e.g. by analysing "**Perceptions of forest-dependent communities toward participation in forest conservation: A case study in Bago Yoma, South-Central Myanmar**" and "**Evaluating participatory techniques for adaptation to climate change: Nepal case study**". However, this brochure only addresses SIMRA results.

*Find the other collections of examples on SIMRA's website: www.simra-h2020.eu

CAN SOCIAL INNOVATION MAKE A DIFFERENCE TO FOREST-DEPENDENT COMMUNITIES?

Maria Nijnik, Laura Secco, David Miller and Mariana Melnykovych

THE IMPORTANCE OF FORESTRY FOR MARGINALISED RURAL AREAS

Forests are of particular significance to communities living in marginalised rural areas, where people have common difficulties regarding biophysical circumstances, transport and digital infrastructure, housing, and ageing populations. These are compounded by global pressures of climate change, and challenges of addressing energy and food security. All such challenges facing forest-dependent communities require urgent solutions. Increasingly innovation, including social innovation, is considered a driving force of sustainable development and a promising means of responding to social demands. Social innovation helps regenerate the local economy and/or improve people's quality of life. There has been an accompanying increase in the need to understand social innovation and its role in attaining a more sustainable use of forest ecosystem services for the benefit of communities.

SPECIAL ISSUE OF THE SCIENTIFIC JOURNAL 'FOREST POLICY AND ECONOMICS'

Knowledge of social innovation pertaining to rural areas, including the forestry sector is lacking. The SIMRA project team has led the publication of a special issue of *Forest Policy and Economics,* on 'Social Innovation to Increase the Well-Being of Forest-Dependent Communities and Promote Sustainability in Remote Rural Areas' (May 2019). It develops the understanding and advances scientific knowledge of the role and place of social innovation in the development of forest-dependent communities

and of forest social-ecological systems, underpinning this development. The articles present co-constructed knowledge of social innovation and evidence of determinants of success of social innovation based upon case studies.

A SNAPSHOT OF WHAT YOU WILL FIND IN THIS SPECIAL ISSUE

It provides : i) a body of conceptually coherent knowledge as a platform for examining social innovation in forest-dependent communities; ii) enhanced means for assessing the nature and effectiveness of social innovation; and iii) findings from empirical research to observe, evaluate and promote social innovation in marginalised rural areas and communities.

The results improve the knowledge-base of determinants of success in Social Innovation. The theoretical and methodological approaches and deliberative support tools designed and made available in this issue can serve as a basis for improved decisions in forest-dependent communities and assist them in building resilience to challenges currently faced in Europe and more widely. Innovative solutions are reported which promote social learning and contribute ideas on social innovation that are potentially helpful for the development of rural policy and sustainable forestry, and ideas useful for practice communities at various levels in both Europe and beyond.

☛ How to access the "Forest Policy and Economics" special issue?

This brochure is complementary to the *Forest Policy and Economics* special issue entitled 'Social Innovation to Increase the Well-Being of Forest-Dependent Communities and Promote Sustainability in Remote Rural Areas'. This Special Issue is largely a product of the H2020 SIMRA project and its Thematic Session organised at the 125th Anniversary IUFRO Congress in 2017. Each double-page of this brochure highlights the main findings of the papers included in this Special Issue and illustrates the findings by an example.

The full-text research articles of the special issue are available here:
www.sciencedirect.com/journal/forest-policy-and-economics/special-issue/10H9J184QXV

UNDERSTANDING SOCIAL INNOVATION FOR THE WELL-BEING OF FOREST-DEPENDENT COMMUNITIES

A preliminary theoretical framework

Tatiana Kluvánková, Stanislava Brnkaláková, Martin Špaček, Bill Slee, Maria Nijnik, Diana Valero, David Miller, Rosalind Bryce, Mária Kozová, Nico Polman, Tomáš Szabo and Veronika Gežik

SYSTEMATIC ELEMENTS OF THE SIMRA DEFINITION OF SOCIAL INNOVATION

The definition of Social Innovation developed by the SIMRA project underlines four systematic elements. The process of *reconfiguration of social practices* was identified as being at the centre of social innovation, *driven by societal challenges*, and resulting in the *formation of new formal or informal institutions*. Evidence shows that these novel configurations can enhance the well-being of forest-dependent communities, and that *active involvement of civil society actors* is essential to social innovation for demand-led and problem-oriented collective actions.

POSSIBLE DEVELOPMENT TRAJECTORIES FOR FOREST-DEPENDENT COMMUNITIES

Social innovation in forest-dependent communities emerges and develops by informal institutions of individual leadership and collective action of self-organised forest communities. It builds upon people developing trusting relationships as a main driver of the bottom-up process of social innovation, together with the indigenous knowledge and social capacity of a forest community. In some cases, formal institutions of cooperation, participation and capacity-building may enhance the reconfiguration of social practice resulting in networking and/or external knowledge transfer. Legal and institutional support enhance the process. In some cases, there is potential for a transformative change of the socio-ecological system and the possible

scaling out of innovated social practices from the area of origin. In other existing systems, new practices have adapted to the current institutional structure. The divergence of outcomes can be anticipated due to the complexity of forest-related goods and services, which are often public or common goods; the heterogeneity of interests; differences in capabilities between communities; and the differential drawdown of public sector support provided to forest-dependent communities.

BENEFITS OF CO-CONSTRUCTING OF THE SOCIAL INNOVATION TRANSDISCIPLINARY FRAMEWORK

A definition of Social Innovation for marginalised rural areas and findings on the mechanism that supports its emergence and growth can (among other benefits) contribute to the design of the EU's Common Agricultural Policy when addressing societal challenges facing the European communities. There is potential for institutionalising community support and novel governance arrangements to enhance the development of public-private partnerships. These can mobilise actors and the use of internal knowledge of forest-dependent communities to redirect social practices towards sustainability, climate change mitigation, or the well-being of vulnerable groups. An opportunity has been identified to direct the findings towards the subnational level where instruments are required to enhance the cohesion of marginalised rural areas.

☛ Carbon-Smart Forestry due to a Self-Organized Forest Commons Regime in Slovakia

Strong winds during a storm, followed by bark beetle infestation, destroyed a significant part of the forest in the Nizke Tatry National Park in 2007. Since then, a self-organized local community has proven its adaptive capacity to disturbances. It has started applying innovative carbon forestry management practices (e.g. higher tree species diversity, forest natural regeneration, selective cutting, etc.) with the aim of increasing the resilience of the forest to future natural disturbances, and for management practices to be more cost-effective and sustainable. Although the only State financial support was compensation for the forest damage, the change from traditional forest management practices to carbon smart forestry was possible due to self-organisation, strong relationships and a combination of voluntarily-engaged members and experienced foresters.

Towards Developing a Method to Evaluate Social Innovation in Forest-Dependent Communities: A Science-Stakeholder Collaboration

Laura Secco, Elena Pisani, Riccardo Da Re, Todora Rogelja, Catie Burlando, Davide Pettenella, Mauro Masiero, David Miller and Maria Nijnik

EVALUATING SOCIAL INNOVATION IN FORESTRY

To date, Social Innovation has received less attention with respect to forestry than product, process, and organizational and institutional innovations. Moreover, existing policies and research projects are predominantly focused on urban areas despite the increasing importance assigned to social aspects in supporting the development of local communities in all contexts. Therefore, there are knowledge gaps about this emerging topic, especially in rural and forest contexts. For example, it is not clear how to monitor and, above all, how to evaluate social innovation projects in forest-dependent communities. While monitoring focuses on the activities, outputs and management plans of project, evaluation typically assesses the effects produced by policies, programmes or projects. The results of monitoring and evaluation can support both policy makers and practitioners.

KEY QUESTIONS FOR EVALUATION

There are two key questions for the evaluation of Social Innovation.

i) What aspects of social innovation should be evaluated in the context of forest-dependent communities, i.e. "*What to evaluate?*"; and

ii) What characteristics of an evaluation method would capture such aspects, i.e. "*How to evaluate?*".

HIGHLIGHTS OF THE RESULTS AND STEPS FORWARD

Drawing on an analysis of scientific literature and the results of a stakeholder consultation, it became apparent that a mixed quantitative-qualitative participatory-based evaluation was needed, capturing both elements of the social innovation process and their outcomes. The approach enabled the authors to focus on intangible features during the process of change which is due to the social innovation initiative; allow the exploration of failures in cases where results or outcomes have not been achieved, while identifying factors that potentially led to failures. However, outcomes of the project that are quantitatively measured and reported are easier to communicate to policy makers and thus remain fundamental.

It was shown that new social aspects (i.e. quality of social relationships in terms of trust, also known as social capital) and environmental impacts have to be integrated into evaluations. Social innovation is not yet understood as a sustainability issue in terms of environmental impacts, which is of key importance in forest-dependent communities. Changes in the environment due to social innovation, such as in forest ecosystems and related ecosystem services, influence real or potential changes in human well-being and affect the quality of life. Special attention should be given to evaluating the impacts of social innovation through actual changes in policy and governance arrangements (i.e. institutional impacts).

☞ Montagne Fiorentine Model Forest, Italy

The Model Forest is an innovative governance instrument for forested landscapes. It involves a broad partnership welcoming the voluntary participation of representatives of stakeholder interests and values to create a common vision of sustainable management of natural resources and the forest-based landscape. Initiatives may concern the fields of local products, commercial distribution, markets, the environment, tourism and culture. Since joining the International Model Forest Network in 2012, the 55,000 ha Montagne Fiorentine Model Forest (MFMF) has developed its own ethical and sustainable wood certification label ("Il Legno") and taken important steps towards sustainable tourism in the area. The MFMF developed its trademark in 2015 as a means of complying with EU regulations on wood traceability, coupling it with the opportunity to improve its promotion of locally sourced wood. Participants throughout the supply chain recognise the trademark as a guarantee of the origin and quality of the wood, which brings value to their activity.

HUMAN VALUES AS CATALYSTS AND CONSEQUENCES OF SOCIAL INNOVATIONS: FOUR CASES OF EUROPEAN FOREST-DEPENDENT COMMUNITIES

Simo Sarkki, Andrej Ficko, Mariana Melnykovych, Carla Barlagne, Maria Nijnik, Mikko Jokinen, David Miller and Ihor Soloviy

HOW ARE HUMAN VALUES AND FORESTRY CONNECTED?

A major challenge for society is how to organise human-environment relationships to enhance the well-being of people and Nature. Slow progress towards environmental sustainability has often been attributed to the lack of policy instruments for governing resources sustainably. An alternative to limiting environmental degradation whilst ensuring the well-being of people is to support the actions of civil society through the concept of Social Innovation. Social innovation encompasses the reconfiguration of forest management and use, decision-making structures and processes, and stakeholder's perceptions of sustainability. The assessment of values people associate with their social-ecological context has often used the concepts of instrumental and intrinsic values. Recently, the concept of relational values has been offered to capture the meaningfulness of relationships between individuals or societies with other aspects of the lifeworld. Enhancing values which are identified as meaningful for forest-dependent communities can be a motivation of social innovation.

THREE KINDS OF RELATIONAL VALUES

Relational values represent the relationships between the human and non-human world, and responsibilities towards these relationships. In this study, they were divided into three categories of Doing, Belonging and Respecting. Doing encompasses

the individual's perspective of the opportunities offered by nature to individuals. Belonging encompasses a communal dimension of values expressed as the experience of "being at home" in social collectives and landscapes. Respecting addresses environmental and social justice.

WHY DO THESE RELATIONAL VALUES CALL FOR SOCIAL INNOVATION?

Four cases of forest-dependent communities in Europe were analysed, encompassing novel co-management arrangements in Finland, revitalization of traditional forest management practices in Slovenia, community forestry in Scotland, and monitoring for tackling illegal logging in Ukraine. Common causes behind the social innovations was the need of forest-dependent communities to sustain or enhance relational values linked to forests. Once emerged, such social innovations have the potential to become global game-changers by informing alternative ways of valuing human-environment relations. The authors developed a general value hierarchy accounting for value plurality in which relational, instrumental and intrinsic values can be interpreted from any perspective and showed that relational values can be considered as both, catalysts and consequences of social innovations.

☛ Novel forestry co-management in Muonio, Finland

This case study concerns ways of reconciling different forest management objectives in the Municipality of Muonio in northern Finland. Although forests in the municipality are not intact old-growth forests with high conservation value, they provide opportunities for nature-based tourism, which is a very significant employer in the municipality. They also provide important areas of pasture for reindeer herding, a traditional local livelihood. The Finnish State-owned enterprise Metsähallitus manages the use and conservation of forest resources in Finland and carries out logging operations. As a response to a self-organised local campaign against logging, an agreement was reached in 2007 in which Metsähallitus leased the disputed forests for ten years to entrepreneurs in local nature-based tourism. The forests of northern Muonio are currently co-managed as a pilot area of less intensive logging which considers scenic landscape values and their importance for nature-based tourism, reindeer herding and the management of habitats for game. The co-management arrangement has enhanced opportunities for local people to expand current relationships with forests beyond their simple instrumental or intrinsic benefits.

MAPPING EUROPEAN AND FOREST-RELATED POLICIES SUPPORTING SOCIAL INNOVATION FOR RURAL SETTINGS

Alice Ludvig, Gerhard Weiss, Simo Sarkki, Maria Nijnik and Ivana Živojinović

POLICY, FORESTS AND PRESIDENT OBAMA

In 2009, former US President Barack Obama established two new agencies for social innovation. From that time onwards, the concept has become increasingly popular amongst political leaders and policy administrators. In March 2011, Manuel Barroso, then President of the European Commission, introduced the new "Social Innovation Initiative". Since then, at a time of growing uncertainty and economic pressure on public administration, social innovation as a promoter of social welfare has been presented as a solution to many kinds of old and new social risks.

The term "Social Innovation" is applied to denote a broad range of activities connected to explicit goals designed to address inherent societal problems. These problems are rooted in economic and ecological crises such as poverty, unemployment, forced migration, a loss of talent, social inequality and environmental destruction. This article focuses on EU and national policies that have the potential to support social innovation in rural areas. However, many of the policies identified which could support effective social innovation do not have much in common with their targets.

POLICY TARGETS THAT HAVE IMPACT ON SOCIAL INNOVATION IN RURAL AREAS

A threefold typology for categorizing the different policy targets that have impacts on social innovation in rural areas has been identified:

i) Policies targeting vulnerable social groups,
ii) Policies targeting societal challenges,
iii) Policies targeting the participatory inclusion of civil society.

Often the divisions between these groups are indistinct, reflecting the diversity and societal dynamics inherent to the concept of Social Innovation. Policies and institutions can have impacts at both the creation phase and with their outcomes. They also play a decisive role in the organization and support of collective action.

THE MAIN POLICY FACTORS FOR FOSTERING OR HINDERING SOCIAL INNOVATION

A summary of the main policy factors which enable or hinder social innovation, with respect to the forestry sector, is presented below.

FOSTERING POLICY FACTORS	HINDERING POLICY FACTORS
Innovative activities need openness and flexibility, as well as enabling risk to be taken into account	Division of responsibilities across departments limits policy efforts
Support is needed in rural areas for structures which provide opportunities for investment in regional and local development	Conventional policy administration is often resistant to openness and risk-taking features of innovation
Participatory forums or similar tools can foster social innovation in which people share concerns and visions about their communities and their needs, and where they can propose solutions	In some countries, the fear of loss of control and power leads some conventional governments or governance institutions to be averse to "bottom-up" civil society engagement

It was shown that effective social innovation support is cross-sectoral and considers plural goals. Successful policy interventions in forestry consider social innovation as a multi-sectoral issue, while aversion to risk in combination with administrative burdens can hinder social innovations.

☛ **Green Care Forests initiative in Austria**

The Green Care Forests initiative in Austria is an example of public policy targeting vulnerable groups and having an impact on social innovation in forest areas. The concept of Green Care includes health services, education and employment on farms. "Green Care Forest" provides new ideas for forest-based products and services, including non-timber forest products. In Austria, it is a policy programme that encourages forest owners and managers to emphasise the social aspects of their forests and open them to social initiatives, projects and engagement.

IS FOREST-RELATED DECISION-MAKING IN EUROPEAN TREELINE AREAS SOCIALLY INNOVATIVE?

Maria Nijnik, Anatoliy Nijnik, Simo Sarkki, Jose Muñoz-Rojas, David Miller and Serhiy Kopiy

HOW CAN POLICY INFLUENCE TREELINE AREAS?

Treeline areas are rural landscapes where the altitude, latitude, relief and climate create special conditions that influence land use and related economies, societies and cultures. These areas provide a variety of ecosystem services of value to different stakeholders relating to forestry, agriculture and wider rural development. Key elements of policy-driven changes in such areas include land use changes, infrastructure development, renewable energy, recreation and landscape conservation. The changes create challenges and require effective decision-making at a local level, and ecosystem-based management practices to be implemented.

PREVAILING ATTITUDES TOWARDS FOREST RELATED DECISION-MAKING AND GOVERNANCE IN TREELINE AREAS

In this study, the Q method was elaborated and applied to untangle the heterogeneity of expert attitudes with respect to decision-making and governance in treeline areas in Europe. The key characteristics of the identified attitudinal groups are described below:

i)   Group 1 are 'robust policy-oriented' group. Respondents associated with this group express critical and rather pessimistic attitudes towards existing practices of treeline governance. They believe that decisions are made in such a way that those in power take advantage of their position.

ii) Group 2 experts are named pragmatists. They claim that the prosperity of local communities is the main policy objective in treeline areas and consider that stakeholders have opportunities to participate in decision-making.

iii) Group 3 experts believe in the role of science in treeline governance, which involves a continuous two-way knowledge exchange between scientists and policy actors.

iv) Group 4 support existing practices, considering them to be flexible to changes, and that governance instruments enhance ecological sustainability. They believe that stakeholders participate in land use planning in the full confidence that their views are taken into account.

FUTURE POLICY-MAKING PROCESSSES IN TREELINE AREAS

Knowledge of the similarities in attitudes of respondents which were identified could be helpful for reaching consensus amongst public and private local decision-makers on certain contentious issues. The differences in views among the attitudinal groups which were identified, including trust in public decision-makers and stakeholder opportunities to be involved in governance, have the potential to lead to conflicts amongst policy actors. Findings show that some key differences in the attitudes of experts may be caused by value-conflicts. A participatory decision-making process could raise awareness of such differences, and of the key problems which could arise in relation to the avoidance, management or resolution of conflicts. Knowing about such differences in attitudes could assist decision-makers to address the opinion of each attitudinal group on a case-by-case basis. It may also assist with the application of suitable solutions to problems where consensus is difficult to reach. However, the question remains as to whose values and preferences are most important.

☞ **SENSFOR COST Action**

Treeline ecosystems are important indicators of environmental change, because they are heavily impacted by environmental drivers, in particular changed climate and land use, resulting in land abandonment and reforestation of formerly treeless areas. For that purpose, the European Cooperation in Science and Technology (COST) organisation funded the creation of a research network related to the enhancement of the resilience capacity of SENSitive mountain FORest ecosystems under environmental change (SENSFOR).

IMPLICATIONS OF POLICY FRAMEWORK CONDITIONS FOR THE DEVELOPMENT OF FORESTRY-BASED SOCIAL INNOVATION INITIATIVES IN SLOVENIA

Todora Rogelja, Alice Ludvig, Gerhard Weiss and Laura Secco

SOCIAL INNOVATION & SLOVENIA

The European Union's conception of Social Innovation emphasises its market-economic features. In this vision, social enterprises, as ventures with both social and economic goals, are frequently associated with social innovation. As an EU Member State, Slovenia adjusted its policies to fit the EU's concept of social innovation. The main goal of this research was to investigate the policy framework conditions for the development of forestry-based social innovation initiatives in Slovenia.

WHICH ADAPTATIONS WERE NECESSARY IN THE SLOVENIAN FRAMEWORK?

The prevalent economic understanding of social innovation reflected in Slovenian policy documents was as social enterprises. The view of social innovation as both a growth engine and a way for solving societal problems translates into explicit statements on social innovation in Slovenian cohesion policy documents, and its operationalization solely through social enterprises. Within the regulatory framework on social entrepreneurship, social enterprise is defined strictly in terms of legal forms, activities, profit sharing, and governance, imposing barriers to registration and development. The Slovenian Rural Development Programme embraces a market-oriented understanding of social innovation and focuses explicitly on social enterprise,

whereas forest policy documents do not explicitly mention social innovation or social enterprise. Both the Rural Development Programme and forest policy documents contain measures that address cooperation and coordination amongst various actors. Yet, social innovation initiatives can be officially recognized as such if registered as a social enterprise.

RECONCILING THE FRAMEWORK FOR SOCIAL ENTERPRISES AND FORESTRY-BASED SOCIAL INNOVATIONS IN SLOVENIA

Due to the conditions of the policy framework, forestry-based social innovation initiatives have two possible ways for development. Market-oriented, forestry-based social innovation initiatives (i.e. initiatives that develop and offer new products or services) can register as social enterprises as well as enterprises and can mobilize resources through measures explicitly in support of social enterprise. Forestry-based social innovation initiatives that are not market-oriented will have to navigate policy framework conditions for resources which are available through the Rural Development Programme and forest policy instruments that target cooperation and networking.

☞ Charcoal Land, Slovenia – Oglarska dezela, Dole pri Litiji

In 1999, a group of dedicated local people in Dole pri Litiji, Slovenia, started working on the idea of contributing to the development of the area by reviving the almost extinct practice of charcoal making. For many of their families, charcoal was the single source of earnings until after WWII, due to an absence of other job opportunities. These local people developed the initiative "Charcoal Land" based in Dole pri Litiji. They developed and engaged in educational and tourism activities through which visitors can experience and learn about such traditional practices. Charcoal Land is cooperating with public and private actors and pursuing its aims through several projects. However, the Charcoal Land initiative is not registered as a social enterprise. As the regulatory requirements are very strict and would bring additional administrative burdens, the initiative chooses to pursue its aim through the creation of the local Charcoal Club of Dole, and the Slovenian Charcoal Society. In 2019, Slovenian Charcoal Society will join the European Charcoal Association.

Oglarska dežela
DOLE PRI LITIJI

CAN CARBON ACCOUNTING PROMOTE ECONOMIC DEVELOPMENT IN FOREST-DEPENDENT INDIGENOUS COMMUNITIES?

G. Cornelis Van Kooten, Maria Nijnik and Kimpton Bradford

THE IMPORTANCE OF FORESTRY TO FIRST NATIONS COMMUNITIES

In Canada, many rural communities depend on the forest industry, a significant number of which are reliant on forestry for more than 50% of household income. Forest-dependent rural communities often experience declines in populations and economic prosperity because technological changes relating to harvesting, transportation and processing of wood fibre have increased the capital investments required whilst reducing employment. Forests are imbued with cultural and spiritual values of indigenous peoples, and provide non-timber forest amenities (e.g. biodiversity, wildlife harvests for meat and fur). These values can be satisfied by maintaining a sufficient amount of mature tree stands. This is especially important when considering the health and sustainability of forest-dependent, indigenous communities but the strategy may be incompatible with timber exploitation.

MORE EMPLOYMENT AND/OR BETTER INCOME FOR ECONOMIC DEVELOPMENT?

The main goal of this research was to investigate a particular aspect of the role that forestry has in providing income, employment (e.g. logging and transportation jobs), and ecological-environmental services (perhaps of a cultural nature).

Income and employment are important to forest-dependent, indigenous communities, without which First Nations' peoples cannot satisfy minimal material desires and may not even be able to benefit adequately from other forest ecosystem services. By taking into account the potential benefits of carbon offset trading, the trade-off between employment and income is examined, and between these and ecosystem benefits. A secondary question relates to whether employment in the forest sector or net forest rents are sufficient to drive economic development and support population growth in remote forest-dependent communities.

Different scenarios of forest management were studied: i) the use of wood for burning instead of fossil fuel; ii) substituting wood for non-wood in construction; iii) substituting biomass for fossil fuels in electricity; and iv) wood for non-wood in construction.

BENEFITS TO FOREST-DEPENDENT INDIGENOUS COMMUNITIES

Knowledge of trade-offs helps to identify management options, which in turn can suggest ways to improve the use of the forest for employment and wealth creation, as well as the ecological health of the forest itself. For example, in some scenarios carbon sequestered in the ecosystem is maximized when employment is maximized. If cultural and other forest attributes considered important by indigenous peoples are related to in situ forest carbon, an indigenous decision-maker might wish to focus on maximizing employment rather than wealth, assuming that indigenous people benefit from enhanced employment opportunities.

☛ The Canadian Indigenous Forestry Initiative

The Indigenous Forestry Initiative (IFI) provides funding from the Ministry of Natural Resources to support Indigenous-led economic development in Canada's forest sector. The funding aims to increase Indigenous participation in forestry-related opportunities, businesses, careers and governance. In June 2017, the Government of Canada expanded the Initiative with an additional CAD 10 million in funding over three years (2017 to 2020). The Indigenous Forestry Initiative funds a broad scope of projects within three categories: Environmental Stewardship, Use and Management of Forest Resources, Participation in the Forest Bioeconomy (e.g. biomass for heat/energy, pellet manufacturing).

SOCIAL INNOVATION IN THE WELSH WOODLANDS: COMMUNITY-BASED FORESTRY AS COLLECTIVE THIRD-SECTOR ENGAGEMENT

Alice Ludvig, Maria Wilding, Adam Thorogood, Gerhard Weiss

COMMUNITY WOODLAND MANAGEMENT AS A SOCIAL INNOVATION

Common ownership of forests and common property regimes are types of forest ownership that exist in many European countries. In the United Kingdom, the principal type of common property regime is third sector ownership. These are social enterprises; environmental or other not-for profit organisations are increasingly acquiring forests for specific management objectives that are often in the public interest. Such enterprises strive to tackle social problems and to improve the living conditions in these regions. One important factor for their functioning is the role of volunteers. Volunteers are important for social connectedness, social inclusion and the enhancement of wellbeing within communities.

TWO CASE STUDIES IN WALES

Two social innovations in the forest sector which are run by community centres located in Welsh Woodlands provide examples of challenges faced and factors behind success: the Woodlands Skills Centre and Coppice Wood College. These are examples of social innovation as many of their activities and services have the explicit goal of meeting social needs, and their organisation is inclusive with the participation of civil society actors. Both of these community forestry enterprises have been successful in increasing levels of empowerment of rural communities and are improving the

livelihoods and income in their areas. They are relatively long-term, with complex governance structures, but with differences in ownership structures, financial maintenance, and conceptualisation of the services and goods they provide.

☞ **Woodlands Skills Centre**	☞ **Coppicewood College**
The Woodland Skills Centre has been developed to provide Social Forestry programmes and courses in traditional crafts. Located in the heart of the Clwydian range, the Centre has 18 hectares of woodland and 2 hectares of allotments, heritage orchard, arboretum, wildflower meadow, apiary, tree nursery, polytunnel, workshops and a new timber-frame building with full disabled access. The Woodland Skills Centre is owned by Warren Woods Ltd, a community-owned, not-for-profit Social Enterprise company.	Coppicewood College is an educational charity dedicated to the promotion of traditional woodland management through sustainable methods, including coppicing and the use of hand tools. Once a week, the College has a volunteer day, open to anyone keen to become involved with woodland conservation. Coppicewood College had a key role in the restoration of the 13-acre broadleaf woodland by laying the foundations for a coppice rotation system and creating a diverse habitat of plants and wildlife.
https://woodlandskillscentre.uk/	**http://coppicewoodcollege.co.uk/**

WHAT ARE THE MAIN SUCCESS FACTORS?

Over time, both social innovations have developed extensive cooperation with other not-for-profit organisations. Both depend upon volunteer work by engaged individuals as important drivers of their projects. Despite a continuous struggle for financing, both found solutions and financial stability: one developed a triangle of three diverse but complementary income streams, and the other secured a flexible grant agreement. The lessons learned from these examples are:

i. Social innovations have specific needs and do not follow regular business models
ii. Very small amounts of well-targeted funding can have big impacts on innovations
iii. Flexibility in funding enables Social Innovation to grow and fill gaps in society and markets
iv. Continuous cooperation and networking are necessities for collective engagement.

CIVIL SOCIETY ENGAGED IN WILDFIRES: MEDITERRANEAN FOREST FIRE VOLUNTEER GROUPINGS

Elena Górriz Mifsud, Matthew Burns and Valentino Marini Govigli

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SOCIALLY INNOVATIVE MEDITERRANEAN FOREST FIRE VOLUNTEER GROUPS

In fire-prone areas such as the Mediterranean basin, wildfire risk poses a societal challenge. Governments generally address this through a "zero fire policy", focusing on suppression of risk and professionalisation. Such an approach provides security for local populations, who may in turn detach from the socio-ecological phenomenon of wildfire and become passive actors. In the face of increasingly virulent wildfires, local communities are often not prepared to tackle the damage which can result. Yet, in some regions, pro-active local people are organising their efforts to tackle wildfires. These fire volunteer groups are a social innovation in rural communities which helps with their adaptation to climate change. The actions of volunteers range from supporting the efforts of firefighters to year-round fire prevention.

WHAT ARE THE PATTERNS OF COOPERATION?

The research has shed light on a seldom studied citizen movement with the potential to have a significant impact on the emergency management of forests. Evidence about these grassroots initiatives has been found in three Mediterranean countries: Spain, Portugal and Greece. The results show that their emergence is often in response to a catastrophic fire season, and their consolidation largely goes hand-in-hand with their

institutionalisation and public support. Their main activities relate to fire preparedness and suppression, with some differences across the cases studied. Often these grassroots initiatives also implement awareness actions within the municipality.

WHAT IF SOCIAL CAPITAL IMPACTED FIRE-RELATED ACTIVITES?

The authors analysed whether the strength of the social capital of the groups impacts upon their portfolio of fire-related activities. The finding was that stronger bonds within communities and with other bodies, as well as levels of trust, affect the activities of the groups and their perceptions about arson in the area. Based on these findings, the recommendations are for the establishment of, and/or increase in, communication and collaboration flows between official bodies and local citizens, and the creation of legal platforms for channelling initiatives such as the forest fire volunteer groups.

☛ Forest fire volunteer groupings in Southern Europe

Over recent decades, an exodus or rural people and the resulting abandonment of cultivated land led to former agricultural land being converted into forests. Because of this increase in forest area and the resulting fires, local residents and land-owners combined to create fire-fighting and immediate response groups.

In Catalonia (Spain), this process begun in the 1960s, when local communities started to help each other to protect their properties from wildfires. Since 1986, these groups have been regulated by the regional government, becoming official Forest Defence Groups or *Agrupacions de Defensa Forestal* (ADFs in Catalan). They are not-for-profit organisations preventing and fighting forest fires.

In Portugal, in the aftermath of the 2003 fires, the Portuguese Government invested in research on all aspects of forest management for the prevention of fires. One of the concerns raised was the need for landscape-scale management to prevent catastrophic wildfires, which required the coordination of those responsible for a fragmented pattern of land ownership. In 2005, the efforts of the government cumulated in the establishment of the *Zonas de Intervenção Florestal* (ZIF).

In Greece, volunteer groups have been present since the 1980s. Since 1998 there has been a large growth in the number of these groups due to a catastrophic forest fire that year, which was amplified again after the 2007 wildfires.

Innovation in the Use of Wood Energy in the Ukrainian Carpathians: Threats and Benefits for Rural Communities

Ihor Soloviy, Mariana Melnykovych, Astrid Björnsen Gurung, Richard Hewitt, Radmila Ustych, Lyudmyla Maksymiv, Peter Brang, Heino Meessen, Mariia Kaflyk

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INITIATING AN ENERGY TRANSITION IN UKRAINE

In line with global climate and energy policies, Ukraine is preparing a major shift towards renewable energy, although its economy relies strongly on fossil and nuclear energy. In addition to significant wind and solar capacity, the country has abundant bioenergy resources, mainly from agriculture and forestry. Energy wood is the most significant bioenergy source in the densely-forested Ukrainian Carpathians. It is used to meet the demands of households and public buildings for heating. However, despite the forest area and timber volume increasingly steadily in this region over the last 50 years, affordable bioenergy from forests remains scarce in many areas. At the same time, local communities suffer from energy scarcity and insecurity and high costs.

WHY IS AN AFFORDABLE BIOENERGY SCARCE IN UKRAINE?

Several reasons have been identified for the scarcity of affordable bioenergy. These include the export-oriented nature of the wood processing industry, the lack of forest road networks and machinery, the short-term character of national forest strategies in relation to bioenergy, and other institutional settings that limit access to forest resources. Illegal logging and corrupt and non-transparent timber markets add further

difficulties to land acquisition, planning approval, grid connection, and off-take agreements. Commercial funding for renewable energy projects is limited and domestic financial institutions are not equipped to assess these projects and their related risks. Domestic project developers are not experienced in the field of renewable energy. All these factors hamper the development of strong project proposals and lead to a distorted view of the viability of renewable energy investments.

WHAT SOLUTIONS HAVE BEEN IDENTIFIED?

To address these problems and to meet the challenges defined by international climate agreements, two key innovative instruments were identified. First, to enhance energy security in rural areas of Ukraine, a cluster of institutional and regulatory settings need to be improved at the governmental level, while diligent participatory processes and social innovations are required at the local level, e.g. in the form of Civil Society Organisations or Energy Cooperatives. Second, Wood Certification Schemes applied and adapted to the provision of fuel wood could be an appropriate measure to boost the energy transition, enhance energy security and generate income for rural communities. These approaches, ideally embedded in a local energy strategy developed by the communities themselves, have the potential to transform energy and benefit communities and the local economy.

☛ **Best Practice Contest for wood fuel use in the Ukrainian Carpathians**

A Best Practice Contest was launched in early 2018 to identify initiatives and best practices in the region, establish contacts with local actors, and to learn about opportunities and obstacles relating to the use of wood energy at the local level. The contest was run by the authors, seeking entries from individuals, households, legal entities, public institutions and communities. The 14 submissions received were assessed by an international evaluation committee which considered the thematic relevance, effectiveness, efficiency and transferability to other places, impact and sustainability. In summer 2018, five winners were awarded with innovation grants of between 700 Swiss Francs and 1,300 Swiss Francs. These grants were to enable further improvements in energy use, and support the efficiency measures the winners had proposed (e.g. devices, equipment).

THE ROLE OF SOCIAL INNOVATION IN NEGOTIATIONS ABOUT RECREATIONAL INFRASTRUCTURE IN FORESTS: A MOUNTAIN-BIKE CASE STUDY IN SWITZERLAND

Jerylee Wilkes-Allemann and Alice Ludvig

CHALLENGES ASSOCIATED WITH RECREATIONAL INFRASTRUCTURE IN FORESTS

Over the last two decades, public pressure for infrastructure provision, such as mountain-bike trails, has increased and led to illegal trail constructions in some Swiss forests. Social Innovation can play a successful role in negotiations (e.g. to legalise existing illegal mountain-bike trails) between the many interest groups of relevance. However, there can be significant challenges including how negotiating with stakeholders deals with issues of liability, financing, the maintenance of forests and their infrastructure, and environmental and landscape protection.

CASE STUDIES IN SWITZERLAND

Both cases involve officially registered and successfully operating mountain-bike trails in Switzerland: the Runca Trail (canton of Grisons) and the Schwanden-Brienz Trail (canton of Berne). The management of the Runca Trail follows a top-down leadership structure, in which the municipality takes charge of the negotiation process, whereas the management of the Schwanden-Brienz Trail has a bottom-up leadership structure,

in which the bikers' association has the responsibility for the finances, administration, marketing, organisational management and maintenance of the trail.

THE ROLE OF SOCIAL INNOVATION IN THE MANAGEMENT OF RECREATIONAL FORESTS

The findings suggest that in the forestry sector, social innovation plays a vital role in meeting social needs (e.g. forest-based recreation services). Additionally, they indicate that without social innovation, the trails would not exist thus increasing financial pressure on the region (e.g. high costs for managing recreational forests and the provision of recreational infrastructure). The conclusion is that social innovation brings benefits that go beyond established practices.

Common solutions have been found to societal problems through the joint efforts of public and private sector actors. Public actors played a crucial role in the facilitation of stakeholder involvement and conflict resolution. However, in future research there is a need to widen the concept of innovation beyond the traditional focus on technologies and products in order to unlock its full potential for the forest sector. The inclusion of consideration of intangible innovations (institutional, organisational, behavioural, social) is revealing insights into innovation processes that otherwise would be neglected.

☛ **The Swiss Forestry Context**

In Switzerland, the right to enter forests for recreational purposes, is protected in the Civil Code (1907). It states that entering forests and pastures by foot and the appropriation of wild berries, mushrooms and the like are permitted. Thus, forest roads are not only used for harvesting timber, but also serve as trails for hiking, biking, and access. However, although forests and forest roads are being used for recreational purposes, forest managers and (private or public) forest owners are responsible solely for the maintenance of forests and not for the provisioning of recreational infrastructure. Third parties such as communities and organised recreational users (e.g. bikers) add recreational infrastructure next to forest roads (e.g. BBQ and picnic areas) and inside the forest (e.g. mountain-bike trails, high-wire parks). This development poses a challenge for forest owners and managers. To date, legal interventions have not been successful.

LIST OF CONTRIBUTORS

Many thanks to the following authors who participated in writing the papers summarised in this brochure:

Carla Barlagne, The James Hutton Institute, UK
Astrid Björnsen Gurung, Swiss Federal Research Institute WSL
Kimpton Bradford, Edmonton, Alberta, Canada
Peter Brang, Swiss Federal Research Institute WSL
Stanislava Brnkaľáková, Institute of Forest Ecology, Slovakia
Rosalind Bryce, The University of the Highlands and Islands, Perth College, UK
Catie Burlando, University of Padova, Italy
Matthew Burns, Technische Universität München, Germany
Riccardo Da Re, University of Padova, Italy
Andrej Ficko, University of Ljubljana, Slovenia
Veronika Gežík, Institute of Forest Ecology, Slovakia
Elena Górriz Mifsud, European Forest Institute, Spain
Richard J. Hewitt, The James Hutton Institute, UK
Mikko Jokinen, Natural Resource Institute, Finland
Mariia Kaflyk, Ukrainian National Forestry University
Tatiana Kluvánková, Institute of Forest Ecology, Slovakia
Serhiy Kopiy, Ukrainian National Forestry University
Mária Kozová, Catholic University in Ruzomberok, Slovakia
Alice Ludvig, University of Natural Resources and Life Sciences (BOKU) & European Forest Institute (EFICEEC), Austria
Lyudmyla Maksymiv, Ukrainian National Forestry University
Valentino Marini Govigli, European Forest Institute, Spain
Mauro Masiero, University of Padova, Italy

Heino Meessen, Centre for Development and Environment, University of Bern, Switzerland
Mariana Melnykovych, European Forest Institute, Ukrainian National Forestry University & The James Hutton Institute, UK
David Miller, The James Hutton Institute, UK
Jose Muñoz-Rojas, Universidade de Évora, Portugal
Anatoliy Nijnik, Environmental Network Ltd, UK
Maria Nijnik, The James Hutton Institute, UK
Davide Pettenella, University of Padova, Italy
Elena Pisani, University of Padova, Italy
Nico Polman, Wageningen University & Research, The Netherlands
Todora Rogelja, University of Padova, Italy
Simo Sarkki, Thule Institute, University of Oulu, Finland
Laura Secco, University of Padova, Italy
Bill Slee, The Rural Development Company, UK
Ihor Soloviy, Ukrainian National Forestry University
Martin Špaček, CETIP Network
Tomáš Szabo, Slovak University of Technology
Adam Thorogood, Machynlleth Eco Park, UK
Radmila Ustych, Agency for Sustainable Development of Carpathian Region, Ukraine
Diana Valero, The University of the Highlands and Islands, Perth College, UK
G. Cornelis van Kooten, Department of Economics, University of Victoria, Canada
Gerhard Weiss, University of Natural Resources & Life Sciences (BOKU) & European Forest Institute (EFICEEC), Austria
Maria Wilding, Llais y Goedwig, Machynlleth Eco Park, UK
Jerylee Wilkes-Allemann, Natural Resource Policy Group, ETH Zurich, Switzerland
Ivana Živojinović, University of Natural Resources & Life Sciences (BOKU) & European Forest Institute (EFICEEC), Austria

SIMRA Partners

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simra-h2020@iamz.ciheam.org

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