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Capacity Building in forest policy and governance in Western Balkan region

TN1401 CAPABAL

FOREST POLICY AND GOVERNANCE STRATEGIC REGIONAL RESEARCH AGENDA

Editors:

Dijana Vuletić, Bernhard Wolfslehner, Mersudin Avdibegović, Silvija Krajter Ostoić, Špela
Pezdevšek Malovrh, Stjepan Posavec and Makedonka Stojanovska



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Preface

Forest Policy and Governance Strategic Regional Research Agenda (SRRA) is one of the main results of the CAPABAL TN1401 COST Action, which brings synthesized list of research topics relevant for the forest policy and governance research in the Western Balkan (WBs). Those topics were deliberated by wide group of forestry professionals, experts, decision makers and scientists from the WBs and are expected to be addressed by different national or regional research projects in coming two decades.

The fact that forest policy research is still not fully recognized as fundamental input for sustainable forest management and decision-making builds a main driver for developing the SRRA. This document will serve as a source of possible research topics and possible future issues to be solved by policy and practice and will help to overcome the existing gaps in knowledge and experiences in forest educational programs and impacts of forest-related policy, economics and governance in forestry. Additionally, it will help to raise awareness on needs for more forest policy and governance research and stronger involvement of forestry practice to improve mutual understanding of forestry communities, uptake of methodologies, and definition of system boundaries for better policy- and decision-making on how to manage, use and distribute natural resources of national, regional and global importance.

All of this has significant importance for the WBs: rich with forests and rich with experience in sustainable forest management, but at the same time aspiring a form of forest policy making in the context of international forest or forest related policies. On the long run, these developments will have a sincere influence on local planning and management on all possible levels. As we would like to change our position from passive policy followers to active policy drivers and decision makers we need more continuous forest policy and governance research. This SRRA will serve as good basis and direction for development of number of research projects, whose findings and results will be beneficiary for the forestry sector.

Dr.sc. Dijana Vuletić, Chair of the COST TN1401 Action

Executive summary

Forest Policy and Governance Strategic Regional Research Agenda (SRRA) as one of the main results of the CAPABAL COST Action represent a synthesized list of research topics which are now and will be relevant for the forest policy and governance research in Western Balkan countries. To fulfil the purpose of the SRRA, these topics need to be brought to the agendas of national and regional scientific financing agencies, which then should develop specific calls to enable financing of proposed research projects in this area of research. This is a demanding task, especially because the topics of forest policy and governance research are not fully recognized in the region as important area to be investigated, representing a solid foundation for sustainable forest management or any forest-related decision making. Its importance correlates with the growing influence of climate change and growing demands from society. These both influence the future role of forest management and request for new approach in research and implementation of international and national forest and forest related policies.

Problem recognition on knowledge and research needs to address upcoming demands from society and international developments stands vis-à-vis a traditional forestry very intensively represented in the Western Balkan countries. This gap leads to weak forest educational programs in area of forest policy and governance and lacking response to new approaches to forest management and decision making in light of climate and societal changes.

To overcome this problem, COST action CAPABAL has organized several stakeholder interactions to discuss about specific needs for research in this area of expertise. Topics and problems were jointly defined by forestry and nature resources administration, professionals and scientists, which led to the conclusions of this document.

The need for the SRRA in forest policy and governance in the WBs

Forests and natural resources are supposed to be among the key sources of potential economic development in the WBs. Strong EU regulations on forest trade in European markets as well as new efforts to reform and improve global governance of forests build a critical element for EU compliance and future accession. Numerous international processes created new policy frameworks and agreements to ensure sustainability of forests and natural resources simultaneously supporting economic development. While many of these agreements are reflected in policy documents and principles in the Western Balkan region, only few of them are actually implemented on the ground at the national and regional level. This is largely due to the lack of expertise related to forest governance, policy and sustainable multifunctional forest management among policy makers, managers, and researchers. The SRRA represents an instrument for answering this requirement for more expertise, research integration and science-practice uptake in forest administration rendering professionals fit to fulfil strong future roles in decision making in forest multifunctional management.

Challenges for the sustainability of forests in the WBs

Currently national policies in forest and natural resources are driven almost entirely by external initiatives under the pressure of changes at the international and EU level. The WBs, with the assistance of international donors and IPA funds, have incorporated the language of these policy agreements into national laws, but have not yet transformed forest management to achieve the terms of these new policy reforms. Thus, increased research and policy capacity in the WBs as well as new management expertise and commitment to implement new policies is urgent for the countries to comply with their own legal frameworks.

Strategic research priorities (rationale, research approaches, expected outputs)

Making this a more urgent priority is the 2013 EU Timber Regulation that prohibits the importation of illegally harvested timber products to the EU. Since one of the major challenges for the WBs lies in still often present corruption in forest enterprises, governments and societies, the solutions must be tackled at both governmental and enterprise levels. In addition, the FOREST EUROPE process to develop a Legally Binding Agreement on Forests in Europe may profoundly affect forest policy, economics, and governance in Europe. Thus, it is imperative that new research, policy, and management capacities integrate expertise to support legal enforcement of legality requirements for timber trade, eliminate corruption, and improve sustainable multifunctional forest management purposes.

Introduction

Based on the CAPABAL vision document on the future of forest policy in the WBs and results of stakeholder interactions, the Strategic Regional Research Agenda (SRRRA) describes the main research priorities in area of forest policy, governance and economics in the region for coming period of 15 to 20 years (2017–2035). This document has been coordinated by the COST CAPABAL TN 1401 COST action. The consultation process has involved a considerable number of researchers, forest owners, forest administration and forest managers from eight Western Balkan countries (Bosnia and Herzegovina, Bulgaria, Croatia, FYR of Macedonia, Greece, Montenegro, Slovenia and Serbia).

The SRRRA represents a continuation of efforts started with the FOPER project (Forest Policy and Economics Education and Research, financed by the Ministry of Foreign Affairs of Republic of Finland from 2003-2013) and continued with the European Commission's 7th Framework Programme ROK-FOR project (Sustainable forest management providing renewable energy, sustainable construction and bio-base products, 2009-2012). Rationale and approach to development of regional research agendas were different in each project. As consequence of the FOPER project, six projects were implemented as collaborative regional research projects. These

projects covered the following topics: (i) Protected areas governance, (ii) Marketing of non-wood forest products, (iii) Willingness of private forest owners to supply forest biomass as source of energy, (iv) Conflicts in forestry with other sectors, (v) Implementation of governance principles in forestry in the region, and (vi) Urban forest governance. These topics are still relevant for the region not only due to the short project period and due to complexity of the topics, but also the changing policy framework conditions in the region.

Within the scope of the ROK-FOR project the goal was to reveal ongoing projects and detect shortcomings in national research agendas to be able to propose new topics for the forest research in Croatia and Serbia related to sustainable forest management and sustainable use of wood for energy. In conclusion, there are many similarities in those lists of topics but we also need to stress that most of the already defined topics are still relevant and will find a place in this SRRA.

Methodology

The development of the SRRA consisted of three rounds of consultations with stakeholders and research community in respective countries during this COST action. The first round included discussions with stakeholders during the meeting in Podgorica, Montenegro (April, 2016). Secondly, an online questionnaire was sent to a wider stakeholder group based on the results of Podgorica meeting. The goal of the questionnaire was to get information on their priorities regarding proposed research topics and possibly to get new inputs for the SRRA. In the following, a small group of researchers synthesized all information and results from the consultation process and developed a list of topics which were presented to the wider group of stakeholders during second CAPABAL meeting (Skopje, Macedonia, April 2017). Stakeholders worked on prioritizing of these research topics, with possibilities to add new and clarify the existing ones. In the following chapter changes made during consultation process will be described.

The first round of consultation started with three pillars: Climate Change, Resource Use and Social Role of Forests. These were later changed into: Forest Related Policies, Multifunctional Use of Forest Resources and Social Role of Forests and we finally ended with wider titles for each pillar, as follows: Policy Development, Policy Implementation and Policy Communication..

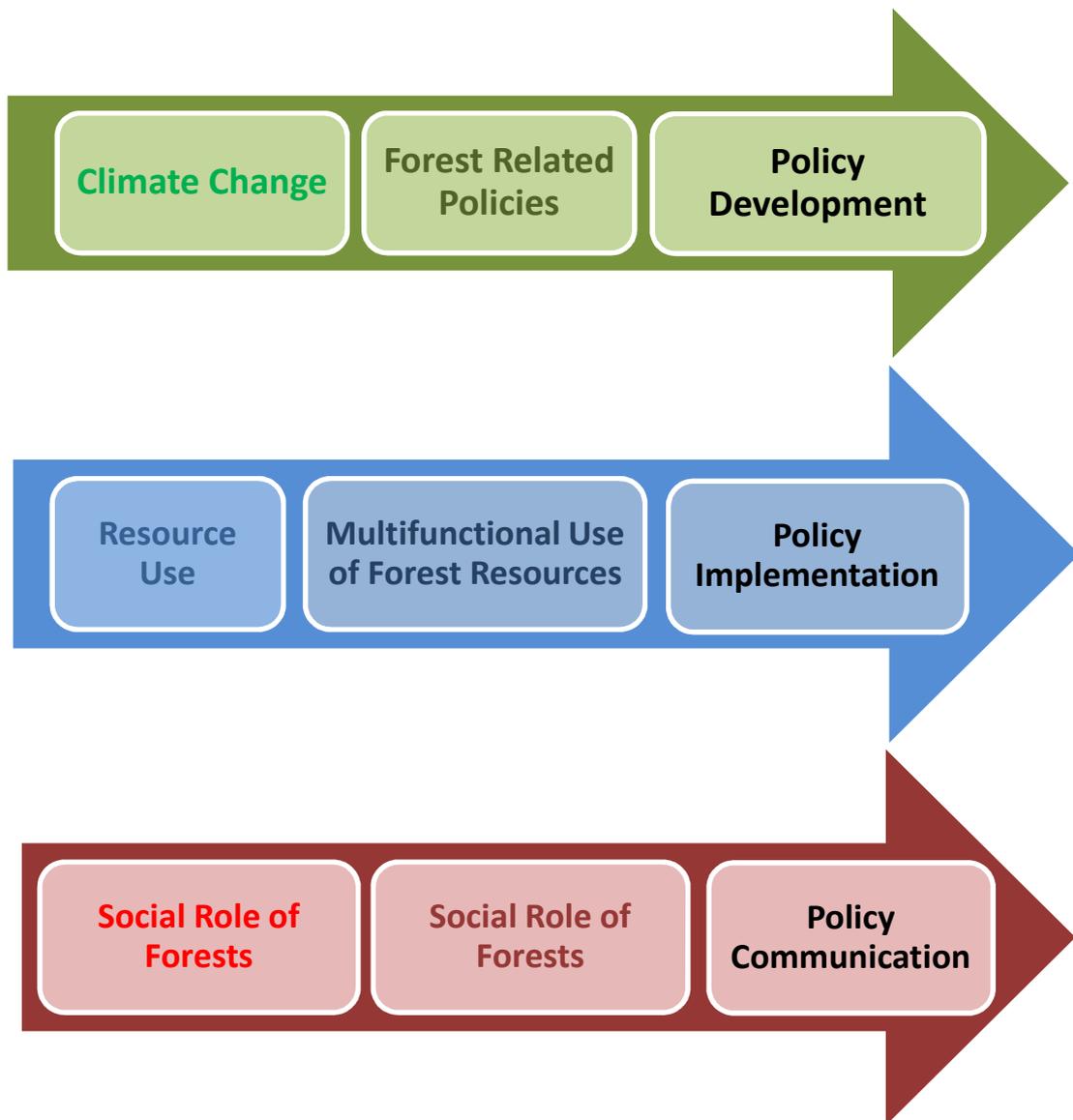


Figure 1. Changes of focus and development of the pillars'

Besides the research topics affiliated to different pillars three overarching topics have been defined which are important and relevant for the WBs and should be addressed by projects focused on all three pillars' approaches. Those topics are: (1) National Forest Programs; (2) Criteria and Indicators of Sustainable Forest Management and (3) Green Growth Indicators.

In the end a final list of research topics were sent to decision and policy makers in respective countries for last rounds of comments resulting in a common acceptance of approach and developed material should be considered as a foundation of the future national and regional forest and forestry related agendas. Implementation of the SRRRA is expected to contribute to better forest policy and better decisions for the future development of the sector and the region.

Need for a regional approach

Forest ecosystems in the WBs provide valuable multiple goods and services including exceptional biodiversity richness, which are crucial for the socio-economic development of rural areas as well as for the welfare of urban populations. Countries in the region underwent similar changes from state-planned economy to modern capitalism and share similar traditional approach to forests and forestry sector.

During last decades several challenges have emerged in a context of global change that needs to be addressed to ensure the sustainability of forests. Meeting these challenges calls for sound management practices based on improved and enlarged knowledge, targeted education and capacity building in order to bridge the knowledge and expertise gap.

Forest research in the WBs is fragmented, with limited resources and sometimes outdated from the global perspective and isolated from international research. Additionally, the low profits that forests in the WBs provide to forest-based industries - compared to other European forests - make it difficult to attract interest and funds from the private sector, also in absence of a strong private forestry sector. To overcome these forests related research needs more: research partnerships, networking, capacity building, higher education programmes, knowledge transfer and long-life learning. Research cooperation with the WBs and EU countries should be enhanced to share knowledge in order to address common scientific challenges and needs.

It is common sense that advancing science should be the backbone of a more structured knowledge-based society as a prerequisite for creating innovation and scientific expertise to develop more efficient policies that aim at reaching the objectives of the common vision. This implies joint research efforts in order to develop the (SRRA) that is based on commonly agreed priorities and valid for all countries in the WBs.

Need for more forest policy and governance research

Forest policy issues are currently gaining increasing importance, in particular in EU and international policies (e.g. bio economy, climate protocol). While forests are often at the core of broad interests, forest policy making tends to stay sectoral. Sectoral boundaries lead to a lack of broader context, of foresight on policy-relevant topics, and limited strategic thinking. While the WBs need to open and comply with the EU regulations, most activities in forest policy and research development come from outside, and only little inherent stimulus grows inside the region.

Forest policy research is still underdeveloped and underrated as such, although significant progress has been achieved in the past 10 years in terms of education and capacity building. While research is generally insufficiently prepared, transferred and used as critical input to policy

making processes, forest policy research is among the weak elements in this arena. This relates to both input of scientific knowledge and process guidance.

There is a gap between the gravity of topics and problems, and the uptake of scientific expertise, and hence the chances for young scientists. Human capacities in forest policy research have been built up, but are not fully recognized by research and administrative institutions to further mature. Consequently, a severe brain drain is ongoing from the region because of scarcity of development in forest policy research and other employment opportunities.

This document builds fundamentally on the belief that science-based policy making can lead to better, more consistent, and more transparent decisions. In the domain of forestry and natural resources management, smart decisions in a complex, multi-sectoral environment are particularly needed. Hence, it is aspired that policy research makes a difference by providing latest science-based findings and evidences to policy-makers. This transfer shall be multi-lateral, regionally specific, and problem-centered.

The role of science and policy research shall not only embrace the provision of information and knowledge, but also support procedural advancements based on insights on actors, institutions, instruments, and their interaction. Forest policy research is thus summoned to catalyze and act as a vehicle for a common dialogue on a science/policy agenda within and between sectors. It shall help develop new fora and platforms for better science uptake into policy decision making and inform on new processes and modalities in the science/policy interface.

It is important that forest policy research stipulates and carries new modes of knowledge exchange and training, both on transnational and international domains. Exchange and open communication among researchers and policy makers in the regions shall improve the long-time competitiveness of the forestry community. Since countries in the WBs hold different EU status, so there is space for mutual learning in the compliance processes in both research and policymaking.

One of the big opportunities of the region lies in capacity development. Activities of CAPABAL will foster the community to receive active support and acceptance by national policy makers, to stipulate the internal change of sectoral policy making, and gain better legitimacy in society and in cross-sectoral processes by building capacities of researchers and policy makers. Forest policy-making will follow a chain from science to policy in terms of recognizing, formulating, implementing, and evaluating policy-relevant issues.

Finally, these efforts will generate infrastructures in the forest policy arena. Forest policy research is deemed to understand analyses and recommend to policy makers new gates and instruments of information exchange in a science/policy interface, and deliberate on new structures and processes, new institutions, and new policy instruments. This will provide a mechanism to policy makers that allows for demonstrating the impacts of change, and the

impacts of new approaches in policy making to a wider audience, and give a strengthened voice to the regional policy making and research in the international community.

How to read the SRRA

For each research topic authors produced several lines of explanation how this topic can or should be addressed and what actually is understood under this specific line. This was needed as some research lines or topics can be addressed in the light of all three pillars and for that reason some general directions are given. These directions serve for better understanding and allow for a wide array of future ideas or project proposals.

The list of research topics is organized under three pillars where topics are listed according to its priority. Beside that there are three overarching topics: (i) National Forest Programs; (ii) Criteria and Indicators for Sustainable Forest Management; (iii) Green Growth Indicators.

The authors are aware of short coming of this type of presentation but main value of this SRRA is a process of its development and by that those pillars, overarching topics and research lines/topics under each pillar has specific weight and has to be addressed with all available methods, excellent scientific approaches and with high policy importance.

STRATEGIC REGIONAL RESEARCH AGENDA

Overarching topics

National Forest Programs (NFPs)

The initiative was started 1995 by a definition provided by the International Forum of Forests (IFF) which was 1997 recommended by the UN General Assembly as a generic expression covering a wide range of appraisals and actions. The NFP process is supposed to be inclusive of stakeholders and the public, managed by the public authority in a way that enhances criteria resulting from the international dialogue of forest. A second push was given again from UN General Assembly (2007) after accepting the non-legally binding instruments for all types of forests when all countries were formally called-upon to develop and implement such NFP processes. Active support from NFP facility was effective up to 2012th.

Recently, it is gaining importance again as one of the explicit and transparent strategic planning frameworks for forestry public action which provides space and tools for incorporating many of global and EU policies related to forests into strategic documents on national level. Especially if it is implemented as a process it can be revised continuously bringing in new directions and adjusting plans, actions and communication strategies to existing situations. In this document we find it of high importance for all 3 pillars.

Starting from policy development where the process can be looked up from the position of policy development, so proposed research topics covering all three pillars as follows:

- (1) Which policies are incorporated into the NFP?
- (2) Is the NFP implemented? How is it implemented? Who is leader of the process and who is involved in implementation?
- (3) Is multifunctionality of forestry taken into account?
- (4) Are forest functions balanced?
- (5) How it is communicated to the public, users, forest owners etc.?
- (6) Were the stakeholders involved in the process of development and/or implementation and/or monitoring of the process?

Each of these questions represents several research questions around which numbers of research projects should be developed.

Criteria and Indicators (C&I) of sustainable forest management (SFM)

Since the beginning of the 1990s, an enhanced view on SFM has entered the stage of forest policy, and the concept of C&I has developed as one means of SFM worldwide (Linser et al., 2018).

C&I for SFM have taken a prominent role since the Rio Earth Summit in 1992, as Chapter 11 of the Agenda 21 called for the formulation of scientifically sound criteria and guidelines for the management and sustainable development of all types of forests: *...indicators of sustainable development need to be developed to provide solid bases for decision-making at all levels and to contribute to a self-regulating sustainability of integrated environment and development systems* (Chapter 11, Agenda 21, UNCED, 1992b).

In Europe, the initiative to promote and officially commit to SFM is driven by the Ministerial Conference on the Protection of Forests in Europe (MCPFE). In the 1990s, a set of national-level indicators was established to initialize and standardize pan-European reporting. By now, the pan-European set has served as the basis for the State of Europe's Forests assessments in 2003, 2007 and 2011 for the reference years 1990, 2000, 2005, 2010.

Based on the three key pillars of SRRRA as they are suggested here, it is important to understand and thoroughly analyse:

- (1) How C&I for SFM are formulated and recognized by formal forest policy processes?
- (2) How are they used for data collecting and is the role of reporting fulfilled?
- (3) Whether C&I for SFM are integrated in day-to-day forest management/use?
- (4) Which set of indicators (horizontal, environmental or socio-economic) is more recognized?
- (5) What are roles and relations between several forest policy actors in designing and implementation of C&I of SFM?
- (6) How the process is lead and by whom?

The list comprises possible research topics for orientation purposes, while not limited to these only.

Green Growth Indicators

“Green growth is about fostering economic growth and development while ensuring that the natural assets continue to provide the resources and environmental services on which our well-being relies. Governments that pursue policies designed to promote green growth need to catalyse investment and innovation that underpin growth and give rise to new economic opportunities. They also need indicators that can help raise awareness, measure progress and identify opportunities and risks.” Rintaro Tamaki, OECD Deputy Secretary-General (Green Growth Indicators, 2017).

Green Growth Strategy – main steps as it was defined by OECD are:

- Align economic growth and environmental objectives
- Implement green growth policy frameworks

- Address the social implications of green growth
- Implement mechanisms to evaluate and monitor green growth process.

Top challenges in implementing policy frameworks for green growth defined in follow up document to foster Strategy implementation was about establishing an explicit price on greenhouse gas emissions through taxation or tradable permit system; using pricing instruments to change behaviour with respect to water, waste and transport: eliminating environmentally harmful discrepancies in tax systems; supporting the development of green infrastructure; orienting innovation systems to advance green growth priorities and accelerating improvements in energy efficiency.

The possible research questions could be:

- (1) Are we becoming more efficient in using natural resources and environmental services?
- (2) How does greening the economy generate opportunities for growth and development?
- (3) Is the natural asset base of our economies maintained?
- (4) Does green growth generate benefits for people?
- (5) Which are the policy instruments that encourage innovation?
- (6) How to assess values of the green growth indicators?

Pillar 1 – POLICY DEVELOPMENT

Harmonization of cross-sectoral policies

Forests and forest-related sectors are constantly under pressure due to many often-conflicting goals of different forest-related policies (e.g. nature conservation, increased wood mobilisation for bioenergy, food production etc.). In these circumstances, it is necessary to harmonise global and EU with national forest and forest-related policies. Hence, it is important to analyse forest-related policies and explore whether discrepancies are due to substantial, procedural or relational reasons. Apart of this, implementation of these policies is often vague.

Possible sets of research questions should be:

- (1) Explore which policies, on which levels and how strong they influence, and ask for national response?
- (2) Which are policy development related processes present in each country?
- (3) How those processes are developed and which stakeholders and institutions (sectors) are involved?
- (4) Who initiated processes on national level? Who is responsible for implementation?
- (5) How is the power distributed among actors involved?
- (6) Is there any monitoring of the process and which indicators are in use?
- (7) Is there any reporting framework established?

Role of forests as renewable energy sources in relevant policies and strategic documents on national level

Driven by climate change and increased industrial needs, production of energy from renewable sources become important issue in forestry. All Western Balkan countries have relevant strategic documents (strategies, policies, action plans, etc.) on national level where forests are recognized as an important source of biomass for energy. Analyses of these documents would contribute to transfer of experience and know-how among Western Balkan countries from political and legislative point of view.

Main themes and research questions:

- (1) Which strategies/policy instruments are most important in relation of use of wood for energy production?
- (2) How is the forestry sector positioned towards growing demand for renewable resources for energy production?
- (3) Are there any conflicts among actors or demands from energy and wood industry sector?
- (4) Are there any policy instruments to enhance use of renewable resources in energy production?

Bio-economy strategy

Bio-economies strategy formulation varies across Europe, but it is widely absent in Eastern and South-Eastern Europe. The role of forests and forestry need recognition in a bioeconomy concerning their provision of forest goods and services, their potential and limits of supply.

Possible research questions could be:

- (1) Is there a need for developing of Bio-economy strategy in WB countries?
- (2) How WB countries recognize and take into account bio-economy?
- (3) How the professionals, administration or managers perceived the Bio-economy in relation to forestry?

Effects of COP 21 Paris on forest related policies in WB countries

The Paris Agreement, as an international political initiative, aims to achieve global legally binding agreement on response to climate change. It requests from each country that ratifies the Agreement to set a target for emission reduction. How the WB countries will respond and what would be the effects on national forest related policies is a thought-provoking question, particularly in the context of EU accession and global integrations processes.

Main themes and research questions:

- (1) How are the COP21 goals perceived in the WB countries?
- (2) Are there any policies/instruments that show existing practise in emission reduction?
- (3) How these activities/policies are affecting the forestry sector?
- (4) Which are main actors in achieving the COP21 targets?

Forest policy response to climate change

Climate change is an indisputable fact. There is increasing scientific evidence of importance of forests in responding to climate change. The role of forests in climate change mitigation and adaptation has to be recognized by forest policy. The issues of risk assessment as well as adaptive forest management based on practical experiences and scientific findings are pertinent for WB countries and need to be addressed.

Main themes and research questions:

- (1) Does the forest policy recognized role of forests in climate change mitigation?
- (2) Is there a notion for development of adaptive forest management and what does it mean for the forest administration and professionals in WB countries?
- (3) Which risks are recognized in connection to climate change and how are they addressed by policy?
- (4) How recent experiences in natural hazards are reflected in present and future forest management and risk management?

Nature protection policies

Nature protection policies as a topic is very important due to the numerous EU or Global processes that take place also in the WB Countries.

Natura 2000 is only one of them, there are many other schemes of protection or conservation that can and should be investigated from a forestry point of view.

Possible themes and research questions:

- (1) How is the Natura 2000 framework developed and implemented on different levels from policy to practice?
- (2) How the process is developed and who is responsible for implementation?
- (3) Which are other nature protection policies and activities present at the WB countries?
- (4) What kind of conflicts are connected to nature protection pressure on forestry sector?
- (5) Examination of good practise cases as valuable source of information, methods and lessons learned in EU countries.

Policies that regulate Water management related to forestry

The relationship between forest and water is one of most important for solving sustainability of both resources and thus the policies should be harmonized and connected. Mutual understanding from both sectors is of crucial importance for its successful implementation.

Main themes and research questions:

- (1) Analysis of forest and water related policy documents searching for overlapping or connectivity of two resources.
- (2) How to raise awareness among professionals and administrators in both sectors on importance of harmonization and mutual understanding?
- (3) Which are the policy instruments related to both resources and how they can influence each other?
- (4) Which are main actors in this sectoral discourse and how are they power relations?

Policies that regulate Cultural conservation in forests and related to forests

Conservation policies are usually developed without consultation with the forestry sector and many cultural monuments are placed in the forest or forest land. How to take that into consideration when planning forestry work should be clarified together with forest managers and policy makers as definition of forests with special purposes is in domain of forest policy and planning.

Main themes and research questions:

- (1) Which policies are dealing with cultural role of forests and conservation of forests related to cultural values?
- (2) What is the responsibility of forest management towards preservation of cultural sites in managed forests?
- (3) Is there any dialogue between culture/conservation sector and forestry?
- (4) What is the connection with cultural and natural protection and conservation?

Relations between smart regulation principles and mix of forest policy instruments

If smart regulation in designing forest policy is considered as less use of regulatory instruments, appropriate combinations of multiple policy instruments as well as involvement of broader range of actors, it is interesting to analyse whether the mix of forest policy instruments in the WBs is "smart regulated" (what is the ratio between regulatory, economical and informational instruments of forest policy).

Main themes and research questions:

- (1) How is smart regulation perceived and recognized in forestry of WB countries?
- (2) What is the relation between smart regulation and existing mix of policy instruments in WB countries?
- (3) What is the ratio between regulatory, economical and informational instruments of forest policy?
- (4) Is there any monitoring process or indicators of success of implementation for each of instruments or policy in general?

Regional comparison/analysis of incentives for private forest owners

In comparison to many European countries, incentives for private forest owners in WBs are quite modest and insufficient. The percentage of private forest differ across the WBs (from 10% to 80%), but there is a potential for transfer of knowledge and experience among these countries in terms of purpose, modality and amount of these incentives.

Main themes and research questions:

- (1) Screening of changes in private forest sector in WB countries?
- (2) Analysis of existing incentives and other financial instruments related to private forestry?
- (3) Regional comparison of incentives for private forest owners concerning its purpose, modality and amount of these incentives?
- (4) Regional comparison of incentives for private forest owners concerning its effectivity?

Pillar 2 – POLICY IMPLEMENTATION

Economic valuation of forest ecosystem services

The concept of forest ecosystem services embraces a multitude of diverse services from forests providing benefits for society. It is of great importance for the WBs to recognize their contribution to human wellbeing and the society and economy in general. Any new information on economic values of forest ecosystem services will support the present concept of multifunctional and sustainable use of forests in the WBs. In the second phase, additional attention will be paid to design and development of payments for ecosystem services (PES) schemes, which should bring funding for provisioning of ecosystem services.

Main themes and research questions:

- (1) How are the forest ecosystem services defined in WB countries?
- (2) Which are economic values of forest ecosystem services for WB countries?
- (3) How to apply benefit transfer methods in order to obtain consistent and comprehensive measures of market and non-marketed forest values for WB countries?
- (4) Is there any policy instrument (among them, market-based instruments) which promotes the provision of market and non-market goods and services (e.g. user pays systems for the use of environmental services, by the forest managers or by public authorities)?
- (5) How the PES schemes are recognized in the WBs and is there any case study or example of good practise for it?
- (6) How to develop new marketing instruments and channels for the supply of forest goods and service?

Market analysis

Having the importance of forestry and wood-processing industry for national economies in some WB countries in mind, comparative forest market analysis is necessary. This region is rich with forests and with traditional wood industry present in most of the countries but under recent market changes and restructuring of industries there are many new actors in the sector. Also the shift towards diversification of new products coming from forest is observable which opens space for development of new jobs in the sector.

The interesting possible research themes and questions are:

- (1) Mapping and analyses of supply and demand side for main wood products
- (2) Which are the actors in the sector with analysis of recent changes?
- (3) Which marketing strategies are used by different actors?
- (4) Analysis of domestic and export market and comparison between WB countries.
- (5) Which kind of market-related data collecting and reporting systems are present in WB countries?
- (6) How big is impact of forestry sector on national economy?

Value chain analysis of forest products

The value chain development of forest products is in correlation with national legislation and market conditions. Value chain analyses will explore how businesses respond to the marketplace by linking production, processing and marketing activities to market demands. The WB countries implement different round-wood standards and certification schemes in wood assortments selling process.

The following research questions should be investigated:

- (1) Which global market trends are present in WB countries and which of them are most influential on forestry sector?
- (2) How forest companies respond to global trends from the primary production process (in the forest), through processing to the market?
- (3) Which certification schemes are present, and how they influence the production and market?
- (4) How wood and non-wood added value chains are represented in the forestry sector concerning actors, producers and added values?

Forest biomass for energy (Bio-energy)

In addition to the overarching topic of green growth, the specific role of forest biomass for energy should be investigated from both supply and demand points of view.

Several economic aspects of forest biomass for energy are relevant for the WBs and should be analysed, such as:

- (1) Analysis of available forest biomass for energy from supply side.
- (2) Analysis of demand for forest biomass for energy from domestic and international markets.
- (3) Which are the costs of supply, price trends, distribution channels, competitiveness of energy produced from forest biomass?
- (4) Are there any incentives for producers or other policy or/and market instruments (like for co-generation development, cascade use of wood or etc.)?
- (5) Which is the final marketing stage where consumers purchase a final product?
- (6) Analysis and development, and enhanced use of life cycle assessment for forest products.

Distribution of income from forestry

In this context, the term "income" refers to all financial means generated from state forest management, payments collected for ecosystem forest services and other revenues. How, to whom and for what purposes the "income" is allocated (formally and in practice) is one of the key issues in forest economics in the WBs.

- (1) How the incomes are generated, which are the sources of income and other funding of sustainable forest management?
- (2) How the distribution of income from forestry is regulated and organized, what is the legal frame, responsible institutions, actors, aims etc.?

- (3) What are the priority areas for investments; how is the monitoring process of effects of different funding/investments organised?

Microeconomic indicators of forest enterprises as a basis for benchmarking in forestry

Based on findings from previous studies, there is a clear need to determine a set of microeconomic indicators for public forestry companies in the WBs. These indicators may be used to support creating management instruments (for instance sustainable balanced score card) following the logic of benchmarking and strategic planning.

- (1) How to measure success of state and any other enterprise active in forestry sector?
- (2) Which microeconomic indicators can be used for monitoring of forest enterprises' performance?
- (3) Compare and analyse differences among WB countries concerning state forest enterprises and their performance?

Economic aspects of multifunctional coppice forest management

Coppice forests or similar types of low-intensity managed forests cover relatively large forest areas in the WBs. To be able to mobilize the economical potentials of these forests (but also of all other forest functions) it is important to discuss whether and how they should be managed – either to continue supporting coppice structures as they are now or convert them into high forests (directly or indirectly). Furthermore, best multifunctional management practices related to coppice forests should be analysed.

- (1) Which are the management goals for coppice forests in WB countries? (in terms of definition, mapping, analysis, comparison)
- (2) What is the situation with conversion of coppice forests to high forests stands? (in terms of general understanding of the role of coppice forests and how these should be managed, analysis of existing plans, sources of financing, etc.)
- (3) How can the management of coppice forest be improved from an economic point of view?
- (4) Is there any discussion or common understanding between nature protection and forest management sector considering bio-diversity situation in coppice forests?
- (5) Are there existing multifunctional management practices for coppice forest in the WB countries and how are they implemented?

Methodologies for assessment of forest damages caused by natural hazards

In recent years the WB region was affected several times by big natural hazards which heavily affected forestry and other natural resources. Slovenia and Croatia had a devastating ice break in 2014, followed by floods also in Serbia and Bosnia and Herzegovina. Windbreak has been overly abundant in several countries in combination with heavy rains and/or snow in the last years. Also, large forest fires followed by heavy rains and erosion are increasing problems. These natural hazards are often followed pests and diseases outbreaks, which render damages and negative influence to large forest areas even larger. Methodologies for economic assessment of these damages are not well known or even do not exist in some WB countries. Hence, it is of most importance to develop consistent evaluation methodologies and procedures in WB countries.

Main themes and research questions:

- (1) Which are existing practices, procedures and methods for evaluation of forest damages related to natural hazards?
- (2) To analyse already evaluated damages in recent years in WB countries from an economic point of view, with analysis of impacts on the forestry sector or/and national economy.
- (3) Identification of shortcomings of present practice, comparison with EU practice, and definition of pathways for improvement in the future.

Pillar 3 – POLICY COMMUNICATION

Cross-sectoral cooperation & coordination in forestry

Forest governance claims a paradigm shift from a top-down approach in forest policy development and implementation towards more transparent, participatory, and cross-sectoral decision-making. The traditional role of public forest administration founded on the primacy of technical authorities should be further developed to recognize potentials and interests of all forest-related policy actors, including those outside of forest sector.

In that context, several research themes and questions should be addressed:

- (1) Mapping and analysing of actors in forest related sectors according to their roles, interests, power, relationships, responsibilities, etc.
- (2) How are the communication processes organized among different sectors and who is responsible for initiating it in relation to forestry issues?
- (3) Which topics are prevailing in this communication, and which sectors are highly relevant in relation to forests?
- (4) Which strategic documents are considering forestry issues in different sectors?

- (5) Comparison of national coordination of different sectors between WB countries and with situation in EU?

Role of forests for rural development

WB countries are rich in forests, and their role in securing income and jobs in rural areas is very important despite many recent changes. Better understanding and sound recognition of the social role of forests in rural areas (employment possibilities, poverty alleviation, preventing migratory processes, etc.) is a crucial precondition for appropriate integration of forestry in rural development programs and policies. For WB countries, it is of particular importance in context of applying for EU funds.

The following research themes and questions are of importance have been identified:

- (1) Which is the social role of forests in rural areas of WB countries (in terms of contribution to employment rate and possibilities, poverty alleviation, preventing migration of local population, etc.)?
- (2) How is the process of development of forestry rural programs developed in relation to EU accession policies?
- (3) Which documents are taking the social role of forests into account, which institutions are responsible, which sectors are involved, and which are the aims of those documents?
- (4) Analysis of different EU accession status of WBs and follow-up processes of use of EU Rural Development Funds in Slovenia and Croatia with good practice examples to be shared with other WB countries.

Perception of forestry, forests and forest functions and use of wood

Some studies on general attitudes towards forests and forestry in the WBs show that there is a low level of understanding of forestry activities, and a negative perception towards cutting and active forest management as well as foresters. However, scientifically based studies on perception of forestry, forest functions (economic, ecologic and socio-cultural) and foresters by different actors (e.g. citizens, experts, NGOs) are largely missing in the WBs. Results of these studies shall focus on the changing role of forests, new patterns in demands towards forests, forest functions and products which will help formulating advanced forest policies.

In that context, the following research questions have been posed:

- (1) How different actors (citizens, NGOs and experts from other disciplines) perceive forestry and foresters?

- (2) How society and other forest related professionals/sectors perceive the role of forests and forestry in society?
- (3) How different actors recognize, understand and perceive socio-cultural, ecological and economic role of forest functions?
- (4) How the communication strategies can help promoting the use of wood in a broad set of applications?
- (5) How to improve, adapt and stipulate general attitudes of society towards forestry and foresters that are more positive?

Local administration involvement/participation in forest policy

As the results of serious changes in socio-political conditions in the last few decades, new actors have emerged and largely influenced forest policy processes in the WBs largely. Among them, local administration (municipalities) seems to be the most active and powerful driver of change, requesting from public forest administration a number of cessions of responsibility, varying from increasing financial compensation for forest management to changes in forest ownership pattern. Regardless of the validity of these claims, the most appropriate modality of involving local administration in forest policy processes still has to be negotiated.

Some of the important research questions are:

- (1) What is and/or should be the role of local administration in forest governance and/or management in different WB countries?
- (2) How much responsibility the local administration in WB countries has with regards to forests (similarities, patterns, comparison)?
- (3) Who are the main actors and leaders advocating the shift of responsibilities from national to local administration?

Innovative approaches in collaborative forest management and planning

Several approaches combining innovative organisational aspects and collaborative forest management/planning deserve to be tested and applied in forestry sectors of the WBs. Some of them are already known (for instance Model forest in Croatia, Machinery rings in Slovenia, High Conservation Value Forests in B&H, etc.), while others, particularly those built up on public-private partnership, still have to be explored.

Hence important research themes and questions would be:

- (1) Research, description and mapping of existing innovative approaches in collaborative forest management and planning in WB countries

- (2) Who are the main actors in existing innovative approaches in collaborative forest management?
- (3) How are those processes of collaborative forest management developed and what are the lessons learned to be shared with other countries?

Urban forest governance

With humanity becoming increasingly urban, the role of trees and forests in urban areas has gained importance. Urban forest governance could be defined as actors, rules, partnerships and processes that shape decision-making about urban and peri-urban trees and woodlands. It is particularly complex and differs from traditional rural forest governance as well as urban environmental governance, involves various stakeholders, is subject to a variety of policies and happens at multiple levels. Research on urban forest governance is still rather scarce, even globally, but also in the WBs.

Most important research themes and questions:

- (1) What are the main problems in Urban forest governance (underdeveloped, misunderstand, not recognized...) in WB countries?
- (2) Who are the main actors in governance and decision making in urban forestry in WB countries?
- (3) Which processes exist in urban forest governance in WB countries?
- (4) What are the main policies at various levels dealing with trees and tree based green spaces in WB countries?
- (5) Whether and how existing tree and urban forest related policies protect or fail to protect trees in urban areas in competition with other land uses (especially development)?
- (6) What is the role of civil society in urban forest governance in WB countries?
- (7) Participatory approaches in urban forest governance (Is there any, does it work and how it can be improved? Who is involved, what are the power relations between actors, etc. How to integrate perception studies of urban forests and its ecosystem services into planning and management?)
- (8) What is the position of urban forestry and urban forests in the wider context of urban planning?
- (9) What models of urban forest and green space management and maintenance exist in WB countries and what are the benefits and shortcomings of these approaches? (For instance, are there any examples of outsourcing of green space maintenance and whether it works in terms of quality of maintenance?)

Demands and characteristics of private forest owners (PFOs) and their property

Although this topic has been increasingly subject of scientific inquiries in the WBs, there is no significant improvement of the state-of-the-art neither in private forests and nor in private forestry. Furthermore, the role of PFOs has no strong recognition in forest policy processes. Understanding changing demands and characteristics of PFOs as well as their property should lead to a better perspective of private forest ownership in the WBs and in that way contributing to creation of better PFO related policies.

Most important research themes and questions:

- (1) Who are the PFOs in WB countries (in relation to their main characteristics, changes in attitudes, interests, management goals, education etc.)?
- (2) Which are main characteristics of private forest property in WB countries (recent changes in all aspects of private forests)?
- (3) What is the role of private forestry in the WB countries?
- (4) What type of organizational structure exists in WB countries concerning private forest owners (organization, aims, roles, power etc.)?
- (5) How to motivate PFOs to actively manage their forests?

Land use conflicts

In the WBs demand for land is high and land use conflicts inevitable. Better understanding of causes, types and actors of land use conflicts (both, within forestry sector and among different sectors) should lead to integrated policies founded on participatory approach.

Most important research themes and questions:

- (1) Which land use conflicts are present in WB countries related to forest land?
- (2) Who are the main actors and/or processes involved in conflict and conflict resolution?
- (3) How are existing conflicts taken from the administration level?

Higher education in forestry as precondition for forest policy and governance capacity building

Traditionally, forestry education in the WBs focuses significantly on bio-technological disciplines such as silviculture, forest protection, forest management and planning, and forest utilization. Lack of social, political and economic disciplines in the WBs was considerably compensated by the FOPER project. Still, there is a need to analyse current teaching programs at forestry faculties in WB region, compare them with European trends in forestry education and market demands, as well as to discuss what to do in order to strengthen FPE capacities in the long-term.

Improvement of university education and building a sustainable base of social capital should make the forest sector more proactive towards changing demands of the society on forests.

Most important research themes and questions:

- (1) Exploring, analysing and comparison of educational programs in the WB countries related to forest policy and governance?
- (2) Investigating and analyses of the existing capacities in the area of forest and other natural resource governance in the WB countries?
- (3) Define role of forest policy, forest governance and smart decision-making in forestry in WB countries
- (4) Is there a perceived need for the forest policy and governance related research by forestry practice and policy makers?
- (5) Mapping of existing good practices in forest policy and economics education and comparison between the WB and EU countries
- (6) Which are recent trends in forestry education in EU and the WBs in the area of forest policy and governance?

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