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*COST Targeted Network 1401 CAPABAL*

*Implementing Criteria and Indicators for Sustainable  
Forest Management in countries of former Yugoslavia*  
*Short Term Scientific Mission report*

*Francesca Ferranti, Nature&Society*

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## 1. Aim and scope of the report

This report is aimed at describing the Short Term Scientific Mission (hereafter STSM) carried out by Francesca Ferranti at the Department of Forestry (Biotechnical faculty) of the University of Ljubljana. Francesca is a researcher and editor in the field of forest and nature conservation policy and management. She is the founder of [Nature&Society Consultancy in Research and Publishing](#) and she is a PhD candidate at the [Open University of the Netherlands](#).

The STSM here described took place between 8 June and 8 July 2015 and it was funded by a grant awarded to Francesca Ferranti by [COST Targeted Network 1401 CAPABAL: Capacity Building in Forest Policy and Governance in Western Balkan Region](#). The STSM consisted in organizing a workshop for researchers which would support the study of the implementation of Criteria and Indicators (C&I) for Sustainable Forest Management (SFM) in the countries of former Yugoslavia.

In terms of geographic definition and political denomination, the scope of the STSM as well as of this report slightly departs from the focus of COST Targeted Network 1401, insofar as it regards the countries of former Yugoslavia rather than those included in the definition of "Western Balkans". The countries of former Yugoslavia are: Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Montenegro, Kosovo and Macedonia. With respect to the commonly applied definition of Western Balkans, the study includes Slovenia which is normally not considered by this definition and it excludes Albania which is instead part of the Western Balkans countries. This geographic scope was chosen for the study because, already from the beginning of the experience carried out in the study region during the STSM, it became clear that the denomination "Western Balkans" was perceived as having a negative connotation by the population (Bakić-Hayden 1995) and by the stakeholders which were relevant for the research project. This justified the search for a different term with which naming the study area during the research project and in communications with stakeholders. The choice of focusing on countries of former Yugoslavia was determined by the common recent political history characterizing the countries under analysis and by the possible interesting consequences for forest policy and management which could be studied during the STSM.

## 2. Purpose of the STSM: overview on objectives and approach adopted

SFM is a widely employed concept in forest policy and governance (Hickey 2008). International processes dealing with forest policy and management, EU documents as well as national forest legislations and policies all refer to SFM as the way forward (European Forest Institute 2013). Yet, SFM has been variously defined in the above-mentioned contexts, and a definition universally valid has not yet been developed (Winkel et al. 2011). Several policy and governance processes have attempted a definition of SFM, some of which relied on the C&I approach for this definition (e.g. the Montreal process and the FOREST EUROPE process- see ref).

The STSM described in this report was concerned with a twofold objective:

- 1) capacity building: building capacity in the context of the C&I for SFM among scientific researchers from academic and non-academic arenas in countries of former Yugoslavia and
- 2) scientific research: researching the implementation of C&I for SFM in countries of former Yugoslavia (Slovenia, Croatia, Bosnia-Herzegovina, Serbia, Montenegro, Kosovo and Macedonia).

In order to achieve the two objectives, the STSM was performed during a month stay at the University of Ljubljana. Spending time in close contact with researchers affiliated to the Department of Forestry of the Biotechnical Faculty proved to be essential for the achievement of the first objective of the STSM. The actions performed during the STSM which facilitated the building of capacity in the context of the C&I for SFM were:

- joining formal and informal meetings with researchers
- organizing a workshop for academic and non-academic researchers dealing with SFM and the C&I
- involving researchers in the development and distribution of a questionnaire to collect data on the C&I implementation and in the development of a guideline for data analysis
- fostering the continuation of a voluntary collaboration among researchers to put in place after the end of the STSM and consisting in publishing a peer reviewed article on the data retrieved through the questionnaire

In order to achieve the second objective the STSM addressed the implementation of the Pan-European C&I for SFM developed by the FOREST EUROPE process (Liaison Unit Vienna 2002). FOREST EUROPE, previously known as Ministerial Conference on the Protection of Forests in Europe, is an international policy process involving 46 signatory states and the European Union in the definition of SFM through the C&I approach (European Forest Institute 2013). C&I form part of a hierarchy of assessment tools and are designed to collect and organize information and to make this information useful in conceptualizing, evaluating and implementing SFM (Stork et al. 1997). In particular, Criteria are standards and principles according to which the sustainability of policy and management options for forests are judged by, while Indicators are variables or component of the forest ecosystem or the relevant management systems used to assign attributes to the sustainability of forest resources and of their utilization (ref). For example, the Pan-European Criterion of SFM " Maintenance and Appropriate Enhancement of Forest Resources and their Contribution to Global Carbon Cycles" is measured through the Indicators (Liaison Unit Vienna 2002):

- " Forest area", defined as area of forest and other wooded land, classified by forest type and by availability for wood supply, and share of forest and other wooded land in total land area
- " Growing stock", defined as growing stock on forest and other wooded land, classified by forest type and by availability for wood supply "
- "Age structure and/or diameter distribution" defined as age structure and/or diameter distribution of forest and other wooded land, classified by forest type and by availability for wood supply

- " Carbon stock" defined as carbon stock of woody biomass and of soils on forest and other wooded land.

To be effective and accepted by their users as well as by society, C&I must be straightforward to understand and simple to apply, as well as they must provide relevant, scientifically sound and cost-effective information to forest managers and policy makers (Stork et al. 1997).

The actions performed during the STSM which facilitated the achievement of the scientific research objective were:

- Getting familiar with social, cultural, historical, economic and political factors affecting the forest sector and the processes taking place
- Carrying out a stakeholder analysis of the forest sector
- Identifying potential governmental and non-governmental actors as potential interviewees whom to ask information about the implementation of C&I for SFM
- Creating, distributing and collecting answers to a questionnaire developed to enquire information about the implementation of C&I for SFM
- Analyzing retrieved data on the implementation of C&I for SFM
- Setting a peer reviewed publication on the implementation of C&I for SFM in the Western Balkans

As the implementation of C&I for SFM in countries of former Yugoslavia has not been frequently reported on by previously released peer reviewed scientific publications, reports of scientific projects and policy or informative documents produced by institutions dealing with forest policy and management in the region, the scientific research carried out during the STSM took an exploratory approach. In other words, the STSM aimed at making available information which is not currently available in international scientific, policy or management arenas. In order to do this, it had to start from unveiling basic data on the implementation of the C&I which would shed light on the forest sector in the region (e.g. the main processes going on, the stakeholders involved in and affected by the implementation of the C&I for SFM and their roles and interests). The mission then concentrated on studying familiarity, use and perceived usefulness of the C&I approach applied to the SFM context and in particular of the Pan-European C&I developed by FOREST EUROPE. It did so by analyzing literature as well as first hand information collected from governmental and non-governmental actors involved in or affected by the C&I implementation. Influenced by its exploratory character, the study treated the C&I and their implementation as one possible definition of SFM and as a possible path to follow for the achievement of SFM goals. However, the study employed the C&I for SFM as a prompt to explore also other SFM related processes and other tools to achieve SFM principles. Moreover, in this study the implementation of the C&I is approached by considering all forms of implementation like those informal and unofficial processes taking place in governance settings others than governmental and institutional arenas (Santopuoli et al 2015).

Always in name of the exploratory approach adopted, the STSM employed different methods which did not simply consist in gathering and analyzing data on the C&I implementation, but made use of stakeholder participation and of qualitative approaches. Some of the methods used to achieve the objective of the study dealing with scientific research often overlapped with methods used for the capacity building objective of the STSM. In most of the cases, the scientific research activities relied on the informed participation of stakeholders in the study. To create informed participation processes, stakeholders were first instructed about issues which would make their participation meaningful, such as the social science approach of the STSM, the use of the C&I approach in the context of SFM and the content of the C&I for SFM designed by FOREST EUROPE.

### 3. Description of the work carried out during the STSM: activities, methods and results

Timetable	Activity	Capacity building	Scientific research
1st week	Literature review		x
	Networking		x
2nd week	Workshop for researchers	x	x
	Stakeholder analysis	x	x
	Creation and distribution of a questionnaire	x	x
3rd week	Creation of a guideline for data analysis	x	
4th week	Analyzing retrieved data	x	x
	Setting a peer reviewed publication	x	x

Table 1: timeframe of the STSM with an indication of the activities performed and the objectives to which the activities contribute

#### 3.1 Literature review

The literature review aimed at providing general data on social, cultural, historical, economic and political factors affecting the forest sector in countries of former Yugoslavia, as well as on the processes taking place within this sector. Moreover, information was retrieved on SFM and on the implementation of C&I for SFM in the studied countries. These data were then used as background information for designing the consultation of stakeholders in the other activities of the STSM, for the capacity building objectives, as well as for setting the peer reviewed publication. Data reliability limited the choice of sources to institutionally recognized ones, but the informal character of some of the information retrieved allowed anyway pursuing the objectives of the literature review for example with respect to capacity building. Being aware of unpublished information on the forest sector and on the implementation of the C&I for SFM was essential for the networking activity described in the next section of the report.

Data sources were very diversified, as an exploratory approach to scientific research demands. Not only peer reviewed publications (e.g. Posavec et al. 2015; Glück et al. 2010; Nestorovski et al. 2009), PhD theses (e.g. Petrovic 2012 ), monographs (e.g. Posavec et al 2006) and scientific reports (e.g. Glück et al. 2011; European Forest Institute 2013; Krajter Ostoić et al. 2015; Nonić et al. 2015) were considered, but also:

- journalistic and historical reports and books (e.g. Pirjevec 1995; Little and Silber 1996)
- files of power point presentations given by institutional representatives at international meetings (e.g. <https://doniblagojevic.files.wordpress.com/2013/01/govor.pdf>; [http://www.ci-sfm.org/events3/CI-SFM-regional\\_workshop\\_in\\_zagreb\\_\\_croatia\\_26-27\\_march\\_2013.html](http://www.ci-sfm.org/events3/CI-SFM-regional_workshop_in_zagreb__croatia_26-27_march_2013.html) )
- reports by local institutions (e.g. Association of Slovenian Forest Society 2008; Slovenia Forest Service 2005)
- websites (e.g. <http://en.gozdis.si/home/>; <http://www.zgs.si/eng/events/news/index.html>)

Results of the literature review show that countries of former Yugoslavia are characterized by a very complex political setting which underwent and is still undergoing fundamental changes with respect to its internal organization (Little and Silber 1996). Ethnic, religious and cultural differences exacerbated by little communication among societal groups characterize the single states, as well as different areas within states (Pirjevec Jože 1995). The population of former Yugoslavia countries has mixed feelings about nationality due to the very recent constitution of nation states (Little and Silber 1996). These factors made interesting as well as difficult the analysis of processes such as those occurring in the forest sector and those related to the C&I implementation, as information on the topic was not well organized at national level and much of the information needed to be "dug out" from unofficial sources.

Two important milestones characterized the recent history of the countries of former Yugoslavia: the period which followed 1945 at the end of the Second World War when Yugoslavia started to develop as a federation and the 1990s when the Yugoslavian federation broke down (Little and Silber 1996). During the first milestone the countries under study experienced a common path of development characterized by their belonging to a socialist federation governed and held together by a very charismatic prime minister, Josip Broz Tito (Pirjevec 1985). Tito governed Yugoslavia from 1943 to 1980s and he was considered as an upfront political figure due to his highly estimated diplomatic and economic policies, as well as an independent thinker in the philosophical and practical road to socialism. He was also considered as "a man in between" the Eastern and the Western worlds, as his diplomatic actions brought him to be at the same time near to Russian and American politics and economics (Pirjevec 1985). Tito's socialistic approach had important consequences for the forest sector in countries of former Yugoslavia. During his government, forests lands underwent a process of centralization and of partial nationalization in which property rights of owners were not completely withdrawn but seriously limited (it was only allowed to own a certain amount of hectares of land while the exceeding land surface was nationalized). These processes affected especially large forest owners and families of foresters who relied on the commercialization of forest products for their livelihood. Also commercial exploitation of forests was strongly regulated and limited by setting private rent levels and forcing foresters to deliver quotas at fixed prices (Unruh and Williams 2013). During this period, competition in forest market grew weaker and weaker and it was mostly directed towards export of wood (Unruh and Williams 2013). Forest owners' responsibilities in deciding upon the management of their forests were strongly reduced.

After Tito's death in the 1980s, a collective presidency of the republics constituting the federation and of the autonomous provinces characterizing some of the republics was established (Lampe 2000). The new governmental structure was inspired by feelings of self-determination and independency of the republics and constituted a new federal government with little control over economy, culture, and policy (Unruh and Williams 2013). During this period, internal ethnic, religious and political conflicts started to characterize the federation of Yugoslavia, and the republics constituting this federation started to engage in wars dictated by the thirst of expanding national influence over the politics of Yugoslavia. In the 1990s, Yugoslavia broke down (Lampe 2000). Threatened by the nationalistic approach of Serbia towards the management of these internal conflicts and stimulated by the national elections giving power to non-socialist parties, Slovenia and Croatia declared "sovereignty" in 1990 and Bosnia-Herzegovina readily followed their example and their interest in making the federal state of Yugoslavia a confederation (Little and Silber 1996). While in Slovenia the declaration of independency caused relatively low opposition by the Yugoslav army, in Croatia and Bosnia-Herzegovina a long period of war devastated the countries. Also in Macedonia the path towards independency resulted rather peaceful (Lampe 2000). Since these episodes, the area of former Yugoslavia has been characterized by (still ongoing) political reconfigurations driven by



ethnic issues (Lampe 2000). For example, Bosnia-Herzegovina is nowadays constituted of two political entities: the Federation of Bosnia and Herzegovina where mostly Bosnians and Croats live and the Republic of Srpska with mostly Serbs. As other examples, Montenegro which was originally part of Serbia obtained its independency from Serbia in 2006 and in 2008 Kosovo declared its independency even though not recognized by the Serbian state. Slovenia declared formal independence in 1991.

After the braking of Yugoslavia, the forest sector was affected by a new process of decentralization and denationalization of rural properties (Unruh and Williams 2013). Forests were given back to their owners with a process through which heirs of the owners to whom the land was expropriated could apply for the restitution of their lands (Lampietti et al. 2009). This, together with the splitting of forest holdings due to inheritance of properties by younger generations, caused a very fragmented ownership structure which nowadays is strongly and negatively affecting the organization of forest management activities at the level of the nation states (Unruh and Williams 2013). A new generation of forest owners grew up, including active and inactive owners, some of whom were still interested in exploiting the forest economically while others were more interested in the potential value of the land after an eventual reconfiguration of its land use category and a possible transformation of the rural property into an area where rural development will be possible (Lampietti et al. 2009). These internal differences of forest ownership types contribute to complicate the overview on the forest sector in countries of former Yugoslavia. Moreover, after the socialist era, forest owners lost most of their managerial and marketing skills due to an almost absent internal market during the previous 45 years (Avdibegovic et al. 2010). With the braking of Yugoslavia and the interest of the nation states to enter the EU They found themselves projected in a world of liberalism and self-determination which they could hardly deal with. The result is a weak forest sector where wood is mostly used for heating and exported. Even though forestry remains one of the most important economic pillars of region (Stojanovska et al. 2009; Vuletic et al. 2010), wood processing industry is very limitedly developed in the area (Glavonjic et al. 2009).

Results of the literature review show that SFM is a broadly employed concept in the study region- see for example Association of Slovenian Forest Society (2008) and Slovenia Forest Service (2005). Slovenia, Bosnia-Herzegovina, Croatia and Serbia have embraced the concept of SFM through the implementation of forest certification schemes (PEFC and FSC- see <http://www.ci-sfm.org/uploads/Documents/2012/Marina%20Miovska-EFI.pdf>). Data retrieved make clear that the countries of former Yugoslavia have differently approached the implementation of C&I for SFM, some of them being more advanced and some lagging behind. For example, as of 2013, Croatia, Montenegro and Slovenia had developed a national set of C&I for SFM partly or completely inspired by the C&I of FOREST EUROPE, while Bosnia-Herzegovina and Serbia were in the process of developing one (<http://www.ci-sfm.org/uploads/Documents/2012/Marina%20Miovska-EFI.pdf>). During the creation of national C&I sets, the C&I of FOREST EUROPE were adapted to national circumstances, for example by adding or eliminating Indicators. In the countries of former Yugoslavia, the C&I were widely used as a tool to support dialogue between policy and decision makers and for communication and dialogue with other sectors, but less as a tool to support dialogue and communication within the forestry sector and with the general public. The C&I were broadly used for international reporting on the state of forests and of the forest sector, but less in national reports, mostly because a consistent number of the countries included in this study did not yet significantly incorporate the C&I in the national reporting system. The C&I were moderately used for the national assessment of progresses towards SFM. This moderate use results from averaging down the existence of strongly institutionalized C&I sets in some of the countries, and the weak recognition of the role of the C&I for this purpose in other countries. The C&I were moderately used also for the

development of forest policies and programs especially in the formulation phase, but less in the implementation, monitoring and evaluating phases. Finally the C&I were limitedly to moderately used to provide information to other sectors like sustainability climate change and biodiversity (<http://www.ci-sfm.org/uploads/Documents/2012/Marina%20Miovska-EFI.pdf>).

### **3.2 Networking**

Networking was performed with two main objectives:

- 1) Getting in touch with researchers interested in joining the workshop described in section 3.3
- 2) Acquiring informal data on the forest sector and SFM in the countries of former Yugoslavia

The first objective was pursued by getting in touch with academic and non-academic researchers both in Slovenia and in other countries of former Yugoslavia. Researchers were selected because they deal with forest management and policy issues in their everyday professional activity. For the Slovenian researchers, face to face meetings were organized to present the goals of the STSM and of the peer reviewed article which would be developed. Emphasis was put on the possibility for workshop participants to join the team of authors of the abovementioned article. Researchers were also asked to provide contacts of other researchers in Slovenia and in other countries of former Yugoslavia. Some researchers were even asked to disseminate the flier of the workshop through their networks. Moreover, formal and informal meetings organized by researchers of the host institution were joined and personal relations were established with researchers. With respect to researchers of other countries, contacts were established by email and the workshop for researchers was advertised by including the event in the newsletter of Nature&Society of July 2015. Results of the networking activity were very positive. Some of the researchers with whom professional and personal relations were established during the networking activity participated to the workshop for researchers and agreed to join the team of authors of the peer reviewed article (see sections 3.3 and 3.8).

To achieve the second objective, information was collected through unstructured and informal oral communications with researchers of the Forest Department at the Biotechnical Faculty of Ljubljana University and of the Slovenian Forest Institute. Researchers were enquired about historical facts, political consequences and social changes affecting countries of former Yugoslavia. They were asked to report both on facts and opinions. Information retrieved confirmed the complex picture drawn by the literature review, and put particular emphasis on the still ongoing influence of the socialist thinking in rural activities like forestry and in the organization of the forest sector. In particular, the hegemonic role played by governmental institutions in forest policy making and in the development of forest management plans was highlighted. Low involvement and information of forest owners (also linked to their limited interest in joining associations) as well as fragmented ownership structure are two problematic realities characterizing the forest sector in countries of former Yugoslavia.

### **3.3 Workshop for researchers**

The workshop was advertised starting from the 1st week of the STSM during the networking activity and by sticking fliers in the various locations of the Biotechnical Faculty at the University of Ljubljana. I created a strategy for the dissemination together with researchers at the Forest Department of the Biotechnical Faculty. As we realized that for relevant researchers from countries of former Yugoslavia

other than Slovenia it would have been impossible to join the workshop mainly due to budget reasons, we focused on contacting researchers located in Ljubljana. In particular, we put emphasis on inviting at the workshop researchers of the Biotechnical Faculty, of the Slovenian Forest Institute (<http://en.gozdis.si/home/>) and of the Slovenian Public Forest Service (<http://en.gozdis.si/home/>; <http://www.zgs.si/eng/events/news/index.html>).



Figure 1: the room of the workshop



Figure 2: the room of the workshop

The workshop had the following goals:

- 1) Building capacity among researchers of former Yugoslavian countries about the study of environmental issues through the employment of participative and qualitative approaches taken from the social sciences
- 2) Building capacity among researchers of former Yugoslavian countries on the implementation of C&I for SFM
- 3) Consulting researchers on the characteristics of the forest sector in countries of former Yugoslavia and involving them in the analysis of forest related stakeholders as well as in the selection of potential interviewees
- 4) Creating a team of authors for the publication described in section 3.8

Despite the period in which the workshop was organized was not the most suitable (June is holiday time in Slovenia) and another event was organized in the day of the workshop at the Biotechnical Faculty, a satisfying number of researchers agreed to join the workshop as well as the team of authors for the publication. Both academic and non-academic researchers participated. Researchers proved to be very prepared on the topics which were treated at the workshop as well as interested to increase their capacity in the context of the C&I for SFM. Table 2 lists the participants to the workshop.

Name	Surname	Institution
Špela	Pezdevšek Malovrh	Biotechnical faculty
Majda	Cernic Istenic	Biotechnical faculty
Lidija	Zadnik Stirn	Biotechnical faculty
Vasja	Leban	Biotechnical faculty
Domen	Gajšek	Biotechnical faculty
Andrej	Breznikar	Slovenia Forest Service
Marko	Kovac	Slovenian Forestry Institute

Table 2: participants to the workshop

The workshop started with a presentation session aimed at informing participants on the goals of the STSM and at showing the importance of social science methods for the study of environmental issues. The presentation then proceeded by deepening the analysis of SFM and its contested meanings as an environmental issue which can be studied with interpretative, qualitative and social science methods (Jennings 1983; Forester 1993). It then presented the C&I approach as a way to define SFM, and the Pan-European C&I for SFM developed by FOREST EUROPE as an internationally agreed definition of SFM. The importance of studying the implementation of the C&I of FOREST EUROPE in a moment close to their update (<http://www.foresteuropa.org/news/general-support-start-updating-pan-european-indicators-sfm>) was highlighted during the seminar. The presentation session concluded with informing participants on the results of a project carried out by the European Forest institute and ended in 2003 on the implementation of the C&I for SFM developed by FOREST EUROPE (<http://www.ci-sfm.org/>). During this project, countries of former Yugoslavia were studied among the other Pan-European countries with respect to the implementation of the C&I. During that project, a workshop was organized

in Zagreb to deepen the issue of the C&I implementation in the Western Balkans ([http://www.ci-sfm.org/events3/CI-SFM-regional\\_workshop\\_in\\_zagreb\\_croatia\\_26-27\\_march\\_2013.html](http://www.ci-sfm.org/events3/CI-SFM-regional_workshop_in_zagreb_croatia_26-27_march_2013.html)). At that workshop, recommendations were put forward for improving the implementation of the C&I in the region. The project by the European Forest Institute has been a source of inspiration for the whole STSM as will be shown in the next sections of the report. While the European Forest institute project enquired implementation of the C&I among official correspondents (mostly government representatives) of the states which formally agreed to adopt the C&I of FOREST EUROPE, the STSM focused on a broader variety of stakeholders including also non-governmental actors.

The workshop proceeded with a consultation session in which researchers were involved in carrying out an analysis of the forest sector in their country, as well as a stakeholder analysis. Slovenia was used as case study where to start the study of the implementation of the C&I, which would then be replicated for the other countries of former Yugoslavia. For the analysis of the forest sector, researchers were asked to provide information on selected topics which raised questions or doubts during the literature review and the networking activity. These topics included i) the role of forest owners in deciding upon the management of their forests, ii) the process of developing forest management plans, iii) the importance of forest owners associations, iv) the differences between management in public and private forests and v) the general forest policy vision in Slovenia. Researchers reported on the limited role of Slovenian forest owners in deciding upon forest management, as forest management in private lands is determined by the Public Forest Service which prepares territorial management plans in which different forest properties are included. Forest owners are not consulted or meaningfully informed about the decisions concerning their lands, but they are controlled by authorities which verify if they comply with forest management plans. Forest owners are limitedly represented in forest owners associations. this is one of the reasons why they are not very influent in policy making. Forest policy making in Slovenia takes place at national level with little public or stakeholders' consultation

For the stakeholder analysis, researchers were involved in the dynamic process of creating stakeholder groups and coding them according to whether they represented one (or more) of the three pillars of SFM: ecology, society and economy (see Figure 3). The picture below shows the results of this exercise. As categorizing stakeholder groups according to the three pillars of sustainability proved to be rather hard (participants to the workshop defined most stakeholder groups as belonging to more than one category), it was finally decided that stakeholder groups would be categorized according to their belonging to the governmental or the non-governmental category. This was seen as a suitable choice also because it would facilitate the comparison of the STSM's results with results of the project by the European Forest Institute on governmental actors. Table 4 shows the results of the stakeholder analysis.

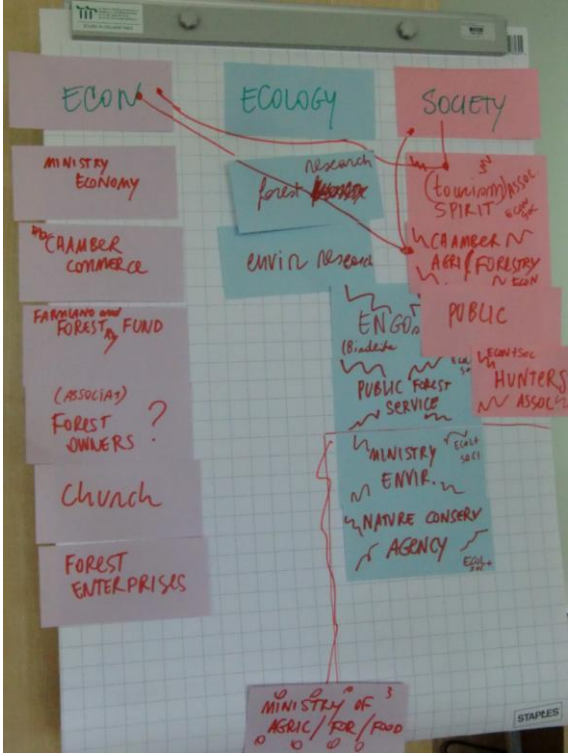


Figure 3: stakeholder analysis exercise

Slovenian stakeholder groups
Ministry for Economic Development and Technology
Chamber of Commerce
Farmland and forestry fund
Forest owners association
Church
Forest enterprises
Forest research
Slovenian Forestry Institute
Environmental research
Ministry of Agriculture, Forestry and Food
ENGOS
Public Forest Service
Ministry of the Environment and Spatial Planning
Institute of the Republic of Slovenia for Nature
Tourism associations
Chamber of Agriculture and Forestry
Hunters association

Table 3: Slovenian stakeholder groups. The table uses colors to categorize governmental (red) and non-governmental (green) stakeholder groups

As last, researchers were requested to provide possible contacts of representatives of the stakeholder groups they contributed to identify, both in their country and in other countries of former Yugoslavia. Researchers brainstormed in native language for about half an hour and successfully completed the exercise. The exercise provided a complete list of contacts for the stakeholder groups of the Slovenian pilot study, and a satisfying number of contacts for the other countries. The workshop interrupted at lunch time for one hour brake, in which a food catering was offered to participants. The lunch break has been a perfect occasion for participants to exchange ideas about the topics treated during the workshop. Moreover, during lunch break the team of authors for the publication treated in section 3.8 was formed. Participants expressed their willingness to support data analysis and the drafting of a peer reviewed article. The pictures below show the setting of the lunch brake



Figure 4: food catering at the workshop

The last session of the workshop included instructing workshop participants for the development of questionnaires including questions which would raise both quantitative and qualitative answers, and for the analysis of these data in light of a peer review publication. It moreover included employing participation of researchers to the finalization on the questionnaire to send around during the STSM. A preliminary version of questions to include in the questionnaire were displayed to the workshop's participants for discussion. Researchers forwarded suggestions which concerned most of all the complex formulation of the questions. According to their view, involving a broad variety of stakeholders required reshaping the questions in order to make them understandable also by "non-experts". Moreover, they suggested to use the Likert scale for the formulation of some specific questions.

### **3.4 Stakeholder analysis and selection of interviewees**

The stakeholder analysis for Slovenia was completed during the workshop and then deepened through an internet search of the websites of the selected institutions which provided in-depth information on the stakeholders selected. The selection of interviewees for Slovenia was performed during the workshop by using purposive sampling, a technique used when specialty of an authority can select a more representative sample that can bring more accurate results than by using other probability sampling techniques. The process involves purposely handpicking individuals from the population based on the authority's or the researcher's knowledge and judgment.

After the workshop, the stakeholder analysis was carried out also for other countries of former Yugoslavia other than Slovenia, in order to proceed with the selection of interviewees to whom distributing a questionnaire. The analysis consisted in identifying stakeholder groups comparable to the ones identified for Slovenia in terms of roles, responsibilities and tasks. In order to do this, two methods were applied: internet search and consultation of researchers. Through the internet search information was retrieved on the main institutions dealing with forests and forestry in the countries. Researchers

participating at the workshop as well as other researchers with whom contact was established during the mission were asked to provide information on the forest stakeholders. The complexity of the forest sector in countries of former Yugoslavia, together with the difficulty of retrieving information in English language on the internet, made clear that it was not possible to complete the analysis for all countries during the duration of the STSM. Therefore, another case study was selected on which to concentrate efforts: Serbia. The choice was made on the base of the availability of information and of the availability of contacts by the consulted researchers.

It was not possible to identify completely comparable stakeholder groups in Serbia, due to the differences characterizing the Slovenian and Serbian forest sector. This made that the stakeholder groups differ in Serbia and Slovenia. For example, in Serbia less stakeholders were identified than in Slovenia (e.g. there was no public forest service) and one stakeholder group which in Slovenia belonged to the non-governmental category was instead a governmental group in Serbia. A satisfying list of stakeholder groups was created for Serbia and, through purposive sampling, an almost complete list of interviewees was drafted (it was not possible to find a contact person for the forest owners group). The Serbian list of interviewees would be completed (together with that of the other countries of former Yugoslavia) after the end of the STSM through a voluntary collaboration among researchers involved in the workshop. This will be supported by the application of snowball sampling techniques for the selection of interviewees which will be applied with the support of the questionnaire described in section 3.5. **The table below** shows the list of stakeholders for the Serbian case study.

Serbian stakeholder groups
Chamber of Commerce
Forest owners association
Ministry of Trade, Tourism and Telecommunication
Church
Forest enterprises
Forest research
Institute of Forestry
Environmental research
Ministry of Agriculture and Environmental Protection-
ENGOS
Ministry of Mining and Energy
Institute for Nature Conservation of Serbia
Tourism associations
Hunters association

Table 4: Serbian stakeholder groups. The table uses colors to categorize governmental (red) and non-governmental (green) stakeholder groups

### 3.5 Creation and distribution of a questionnaire



After all precedent phases of the STSM allowed getting a good knowledge of the forest sector and of forest stakeholders and after the consultation with researchers at the workshop, an English text for the questionnaire was created to distribute to forest stakeholders in Slovenia and Serbia, the two pilot studies. After the end of STSM and the completion of the interviewees' list for the other countries of former Yugoslavia, the questionnaire will be distributed to interviewees of other countries through a voluntary collaboration among researchers who joined the workshop and Francesca Ferranti. The questionnaire was kept purposely short, insofar as distributed to a broad variety of stakeholders some of which not acquainted with carrying out demanding paperwork. The questionnaire included an introduction which aimed at creating an informed audience of respondents, by instructing them on the use of the SFM concept and on the Pan-European C&I for SFM. Examples were used to make the C&I approach to SFM understandable. Interviewees were asked to reply to the questions not with their person opinion but rather through answers representative for the stakeholder group they were selected for. The questionnaire included both close ended and open ended questions, which could provide both quantitative and qualitative data. The questions then addressed the following items:

- 1) Familiarity with the C&I approach used in the context of SFM
- 2) Perceived usefulness of the C&I approach used in the context of SFM
- 3) Acquaintance with international, national and local processes applying C&I for SFM
- 4) Use of the C&I in five contexts: i) Talking about SFM; ii) Monitoring the forest and describing its conditions; iii) Verifying the achievement of SFM goals, iv) Formulating, implementing, monitoring or evaluating instruments of forest policy and planning and v) providing information on forests and on their management to other sectors like sustainability, nature conservation, climate change, energy, agriculture and tourism<sup>1</sup>.
- 5) Use of tools other than the C&I in the five contexts mentioned above

Finally, interviewees were asked to provide contacts of actors holding their same responsibilities with respect to forests and forestry in other countries of former Yugoslavia. This snowball sampling technique is aimed at contributing to the further developments of this study which would take place after the end of the STSM.

The questionnaire was translated in native languages by native speakers and then distributed to the selected Serbian and Slovenian interviewees through a strategy which involved Slovenian researchers well known in the forest sector of the two countries in the preparation and distribution of an email. 17 questionnaires were sent around for Slovenia (one for each stakeholder group of Table 3) and 14 for Serbia (see Table 4- 2 actors for the Forestry Enterprise group were contacted and no contact was found for the Forest Owners group). The fame of these researchers in the sector was perceived as a factor which could increase the rate of response. The email asked interviewees to answer the attached questionnaire within 10 days to allow their responses to be considered in the pilot study performed within the terms of the STSM. If this was not possible, the email asked interviewees to reply by end of July 2014. This would set the basis for continuing the work with the team of authors built up during the workshop after the end of the STSM.

Five filled in questionnaires were retrieved during the pilot study period: 3 questionnaires for Slovenia (Chamber of Agriculture and Forestry, forest owners association and Farmland and Forestry Fund) and 2 for Serbia (2 public forest enterprises).

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<sup>1</sup> The five contexts are a simplified version of the five applications of the C&I for SFM developed by the European Forest Institute project on implementing C&I for SFM (European Forest Institute 2013)

### **3.6 Creation of a guideline for data analysis**

This action had the goal of formalizing the strategy for the analysis of the data retrieved with the questionnaires. It aimed at supporting the researchers who joined the workshop and form the team of authors of the upcoming article in the analysis of the data that would be retrieved after the end of the STSM. The guideline was prepared and then distributed to the researchers by email. The guideline treated the following topics:

- 1) Extracting the information of the questionnaire to an Excel sheet. Researchers were provided with Excel sheets where to extract information that the various stakeholders provided answering to the various questions. Researchers are required to translate the information in Slovenian into English and find support for the translation of the other languages.
- 2) Analyzing quantitative data. Close ended answers to the questionnaire can be analyzed as quantitative information through statistical analysis. The analysis should aim at comparing data retrieved for the various countries as well as comparing data on governmental and non-governmental actors within and across countries. The guideline listed actions to carry out for the analysis of quantitative data retrieved for each one of the closed ended questions. An Excel file has been made available to researchers, where to report the results of the statistical analysis performed on the quantitative data. In this excel file, the various sheets are numbered according to the sections of the questionnaire and report tables listing the types of statistical analyses. researchers are requested to fill in cells with the results of the statistical analyses. Examples of the statistical analysis performed include: the average answer per country, the average answer per governmental actors per country, the average answer per non-governmental actors per country, the average answer per governmental actors cumulative for all countries and the average answer per non-governmental actors cumulative for all countries
- 3) Analyzing qualitative data. The answers to some close ended and to all the open ended questions can be analyzed qualitatively. The qualitative information should be analyzed looking for similar or comparable answers among countries, among respondents belonging to the governmental and non-governmental groups of stakeholders- and even among specific stakeholder groups within and across countries. Also differences are interesting when comparing the qualitative information collected in the various questionnaires. If one country or group of stakeholders sticks out for the peculiarity of their answers, this should be highlighted in the analysis. Examples are given for each question for how data can be interpreted. For example, data can be used to discuss positive aspects of the C&I approach as perceived by the respondents, or to explain a missing recognition of the usefulness of the C&I. Data can also be used to define which national or local processes stakeholders think of when asked about C&I for SFM or which other processes are going on with respect to SFM other than the implementation of the C&I.

### **3.7 Analyzing retrieved data**

The data retrieved during the pilot phase of the study were too few to be statistically analyzed and to allow the application of the standardized guideline for data analysis in a complete way, but following the principles adopted in the guideline to a general extent allowed bringing to light interesting information on the implementation of the C&I in Slovenia and Serbia. For example, in Serbia the two interviewed actors were both familiar with and found useful the C&I approach in the context of SFM. They were also

both aware of international and national processes dealing with the C&I, but not of local ones. They declared that the institutions they represent use the C&I for almost all analyzed context (one no was expressed for the context "monitoring the forest and describing its conditions" for which economic parameters were rather used). In Slovenia data were more diversified, as were the stakeholders who answered. Forest owners in Slovenia are not very familiar with the C&I for SFM and they are not aware of processes dealing with the C&I. They experienced use of the C&I only in i) Talking about SFM; ii) Monitoring the forest and describing its conditions and iii) Verifying the achievement of SFM goals. As tools other than C&I, roundtable were used to talk about SFM, while workshop were used to monitor the forest and describing its condition. Differently from the forest owners, at the Farmland and Forestry Fund familiarity with the C&I approach is higher, but awareness of C&I related process is as low for national and local processes dealing with the C&I than is for the forest owners group. At the Farmland and Forestry Fund the C&I are used in all the five contexts enquired. At the Chamber of Agriculture and Forestry, awareness of the C&I and related processes is rather high and as for the forest owners use of the C&I was experienced only in i) Talking about SFM; ii) Monitoring the forest and describing its conditions and iii) Verifying the achievement of SFM goals.

### **3.8 Setting a peer reviewed publication**

The peer reviewed publication has been set during the STSM, and will be developed after the end of the project as voluntary collaboration between Francesca Ferranti and the researchers who joined the workshop described in section 3.3. Setting the peer reviewed publication required creating a draft to share with the team of authors before the end of the STSM, so that researchers could start to work on the paper in the following months. General agreements on the tasks to perform within the group were made by email, even though much will depend on the data retrieved and the future needs of the research.

The drafted publication has the following preliminary title: *Criteria and Indicators for Sustainable Forest Management in Slovenia and Serbia: an exploratory study*. If sufficient data will be collected after the STSM, the focus of the paper will be broadened to include more countries of Former Yugoslavia. The following sections were drafted: Introduction, Analytical Framework and Methods. After the first revision round among the team of authors, some comments were already received and will be incorporated in the next section of the paper. The paper will then include an analysis of the data retrieved, a Discussion and a Conclusion sections.

## **4. Future collaboration with hosting institution**

As described in section 3 of this report, future collaboration with researchers of the Department of Forestry at the Biotechnical faculty of the University of Ljubljana will consist in finalizing data collection, analysis and publication. The time frame is expected to proceed as follows:

- End of July 2015: collection of filled in questionnaires
- End of August 2015: follow up the missing questionnaires
- End of December 2015: data analysis
- End of June 2016: final publication

Tasks for completing the publication were subdivided among the team of authors

## 5. Foreseen publications/articles resulting or to result from the STSM

See the section above

## 6. List of acronyms

Acronym	Meaning
STSM	Short Term Scientific Mission
C&I	Criteria and Indicators
SFM	Sustainable Forest Management

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**Annex**

**Confirmation by the hosting institution on successful execution of the STSM**

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**To whom it may concern**

I undersigned Janez Krč confirm that Francesca Ferranti has been successfully carrying out her Short Term Scientific Mission funded by COST Targeted Network 1401 Capacity Building in Forest Policy and Governance in Western Balkan Region-CAPABAL. During her staying at the Biotechnical Faculty of Ljubljana (8 June to 8 July 2015), Francesca has performed a capacity building and consultation workshop as well as she has drafted a questionnaire to enquire the implementation of Criteria and Indicators for Sustainable Forest Management in the region. She successfully collected contacts of possible interviewees and started the distribution of the enquiry. She also prepared a first draft of the peer review publication that will be prepared using the results of the data collection and analysis. For this reason, I consider the Mission of Francesca Ferranti accomplished.

With best Regards



dr. Janez Krč, PhD  
Vice Dean for Forestry

