

COST Action FP1203 - European Non-Wood Forest Products (NWFPs) Network

Application for Short Term Scientific Mission (STSM)

Applicant: Elena Górriz

Title: Social Capital among mushroom pickers and its relationships with the governance of forest resources based on the introduction of picking licenses: the case of Poblet (Catalonia, Spain)

Dates: 23 February - 13 March and 18 to 29 May 2015 (5 weeks)

Host institution: University of Padova. TESAF Department. Italy

Host person: Laura Secco

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1. Purpose of the COST STSM

The main objective of the visit was to analyse the data collected on Social Capital of wild mushroom stakeholders participating in a picking authorisation program in the protected area of Poblet (Catalonia), and the governance indicators of such policy instrument.

While the first idea was to focus on pickers, we finally swift into a broader perspective of agents around the mushroom picking activity, namely the governing body of the protected area, as well as the technical commission devoted to the assessment of the permit introduction.

2. Description of the work carried out during the STSM

Previous to the STSM, the grantee collected data based on a previously agreed interview guideline. The interview consisted of 40 semi-opened and closed questions, and the average duration was 80 minutes. 16 people were interviewed, whose contacts were provided by the Park director, after having his consent to conduct this research. Figure 1 exemplifies the data collection approach.

Firstly, the grantee and the host (Laura Secco) discussed about the general findings. Then, with Riccardo Da Re, the grantee was introduced to the use of UCINET (the Social Network Analysis software), especially to the main functions and how the database should be created. Hence, the grantee generated the different databases stemming from the interviews' data. A different database is required for the nodes' attributes (governing body/technical committee, administrative level, public/private body), and for each phase (general, design and implementation) different tables are to be built reflecting the two-ways relations (knowledge, information, agreement and collaboration) and node attributes given by others (influence). Figure 2 represents the 16 members of the Governing Body (*Junta Rectora*) of Poblet protected area, and the 8 members of the technical commission to follow-up the permit introduction (*Comissió de Seguiment*), where two also belong to the Governing body.

Tabla 2 - Relació amb altres membres de la Junta Rectora - GENERAL

Influència: 4 / 14

Intervista de: 14

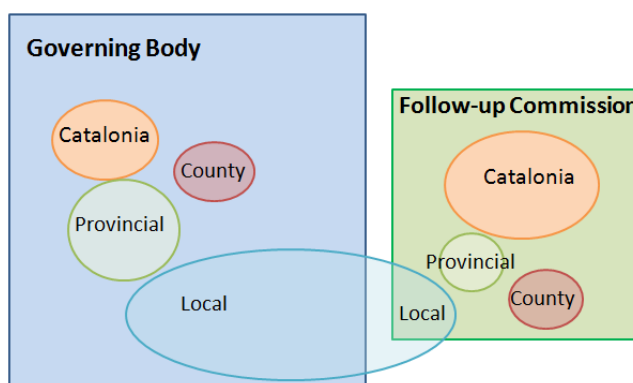
#	Identificació de la Junta Rectora	Influència general	Assentament	Contribució al projecte
1	Anna Sureda	100%	100%	100%
2	Enric Sureda	100%	100%	100%
3	Enric Sureda	100%	100%	100%
4	Enric Sureda	100%	100%	100%
5	Enric Sureda	100%	100%	100%
6	Enric Sureda	100%	100%	100%
7	Enric Sureda	100%	100%	100%
8	Enric Sureda	100%	100%	100%
9	Enric Sureda	100%	100%	100%
10	Enric Sureda	100%	100%	100%
11	Enric Sureda	100%	100%	100%
12	Enric Sureda	100%	100%	100%
13	Enric Sureda	100%	100%	100%
14	Enric Sureda	100%	100%	100%
15	Enric Sureda	100%	100%	100%
16	Enric Sureda	100%	100%	100%

No s'entrevista de 20 els contactes altres del parquí per fer-hi?

#	Identificació de la Junta Rectora	Influència general	Assentament	Contribució al projecte
17	Enric Sureda	100%	100%	100%
18	Enric Sureda	100%	100%	100%
19	Enric Sureda	100%	100%	100%
20	Enric Sureda	100%	100%	100%
21	Enric Sureda	100%	100%	100%
22	Enric Sureda	100%	100%	100%
23	Enric Sureda	100%	100%	100%
24	Enric Sureda	100%	100%	100%
25	Enric Sureda	100%	100%	100%
26	Enric Sureda	100%	100%	100%

Figure 1 - Extract of one of the tables of the interview guideline

Figure 2 - Scheme of interviewed actors representing the decision-making body of the Poblet mushroom picking permit.



We run the different analyses, checking a set of SNA indicators: density, average centrality degree, centrality In-degree and Out-degree, core-periphery, and normalised betweenness (Table 1). Results were interpreted, discussed, re-done when necessary.

Table 1 - Metrics used in the SNA

Indicator	Definition and Meaning
Network size	Number of ties. Relevant for weighting any comparability.
Density	Number of links that exist in a network divided by the maximum possible number of links that could exist in the network (aspect of bonding SC)
Clusters	local region in a network with relatively high density and relatively few links to other clusters
Average centrality degree	Number of links incident upon a node (i.e. the number of ties that a node has). It identifies the most important vertices within a graph, hence identifying the most influential people/nodes.
Centrality In-degree	It counts how many directed relationships point towards an individual. It identifies "hubs" or those individuals in a network holding the most influence, who are highly sought-after by other network members (representing someone's popularity).
Centrality Out-degree	It counts how many directed relationships that the node directs to others. It represents someone's gregariousness.
Core-periphery degree (Borgatti and Everett 1999)	For each node, its position is located either in the core (a dominant central cluster) or in the periphery (those with relatively few connections). Core members hold strong potential influence
Normalised betweenness	It sheds light on who are the "bridgers" or individuals in a network who connect different clusters (bridging SC)

Later, a descriptive statistical analysis of cognitive and relational SC data was conducted. Results were discussed with Laura Secco and Elena Pisani, on how they could be related to the structural findings.

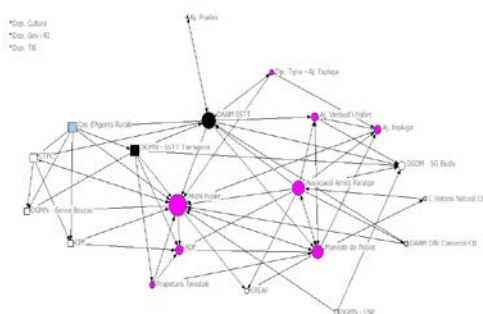
During the second stay, this relation was deepened, within a frame of governance analysis. Some published papers were reviewed (i.e. Paletto et al. 2012; Bushley 2014; Keskitalo et al. 2014), contrasting our results with theirs. Finally the grantee

started drafting an outline of a paper, which was discussed and scheduled how to continue in the coming months.

3. Description of the main results obtained

We find two central actors for the general functioning of Poblet park, who keep being influential in the mushroom-permit design phase, namely the Director of the Park and the Monastery. Both in the general park functioning and in the mushroom permit discussion, we find that locals (town hall representatives, park technical body, the Monastery, fire volunteers, landowners) are the most influential ones. Indeed, the core-periphery analysis with the flow of information shows that the regional-level actors present in the core when dealing with general park discussions, disappear from the core when debating over the mushroom permit (Figure 3). A new relevant actor from the civil society (an amateur naturalistic and cultural scholar association) emerges as gatekeeper due to its betweenness

Figure 3 - UCINET resulting graph of information flows during the picking permit design phase



centrality index in the information flows during the mushroom-specific discussion, while not being strongly influential. When moving to the implementation phase, locals notably diminish their relevance in information flows, while being crucial for formal collaboration mainly with the park. Instead, at that stage the technical commission becomes more relevant in the information flows across actors. The Director of the Park emerges as the key

person for the mushroom permit introduction and implementation, and the Monastery as facilitator (Table 2). As expected, the technical team and the governing body work as subgroups. The introduction of the permit has not lead to the establishment of new relationships so far. Asking about the completeness of the decision-making body regarding the mushroom picking permits, all respondents agree that no relevant stakeholder in the area has been left aside.

Table 2 - Core-periphery analysis results.

General situation	Permit design phase	Implementation phase
Final fitness: 0.500	Final fitness: 0.493	Final fitness: 0.630
Core: Park + Regional PA + Monastery + Province Agric. + County Forestry + Mayor3 + Province technician + Guard	Core: Park + Provinc. Agric + Monastery + Mayor2 + Mayor3 + Friends of Poblet	Core: Park + Province Agric. + Monastery + Mycologist + Guard + Province technician
Periphery: Mayor2 + Vice-mayor2 + Forest owner + Fire volunteers + ENGOs + Researchers + VV. Provinc.	Periphery: Vice-mayor2 + Forest owner + Fire volunteers + ENGO + Researchers + County Forestry + VV. Province + Guard	Periphery: Mayors + Vice-mayor2 + Forest owner + Fire volunteers + ENGOs + Researcher + County Forestry + VV. Provinc.

Regarding the cognitive SC dimension, we find that the governing body and the technical team show an extensive convergence in terms of problem perception and preferred solutions. Main convergences are in the preference of destining any permit-derived revenues towards the management of the forest area and the preference for commercial pickers asking for permission to landowners. Some divergences are, for example, in the perception of trash left by pickers and their rudeness (locals within the governing body complain more), in the treatment towards locals (having preferred permit conditions), or the trust towards commercial pickers' knowledge (the technical commission is more reluctant to consider them as experts).

Finally, in terms of relational SC, it is worth mentioning that the governing body members feared more negative reactions than the technical commission, mainly in form of complaints. This point is crucial insofar as arsons represent the typical menace that hinders different controversial decisions in Mediterranean forests. Since the launch of the permit, the technical commission members express an increase in trust in local pickers, contrasting to the governing body who do not perceive changes in this respect. In this line, governing body members convey the engagement of local pickers as expected, while the technical commission states that the permits sold exceeded their expectations. In terms of peer control, it is worth noting that the governing body states larger informal control than the technical commission. One possible explanation for these divergences could be that governing body members are more knowledgeable of Poblet forest and people than the technical commission.

Concluding, we have found an example where the decision-making network encompasses all relevant stakeholders, where key actors for influence and information flows in the decision-making network share in a large extent the problems regarding mushroom picking and also agree in the preferred solutions. This is likely to have had an effect in the large engagement of local pickers to the permit. Indeed, there was some threat perception, but the satisfaction has been large, with perceived peer control among local pickers. Trust in local pickers is perceived as increased in different levels.

4. Foreseen publications/articles resulting from the STSM

A scientific paper is planned from these findings, which will be part of the grantee's PhD. We believe it is of interest, given the low number of studies using SNA techniques, especially in the field of forestry and NWFPs. Its novelty also resides in the temporal frame used with regard to the governance reform (before any implementation, the design phase, and the implementation phase).

We identified as potential journals "Society and Natural Resources", "Human Ecology", "Forest Policy and Economics", i.a. A first outline has been drafted, as

well as an abstract which has been used for submission to a conference (CASTLE, Barcelona, October 2015). Further work on the paper will take place in the coming months.

5. Future collaboration with host institution

This STSM has strengthened the collaboration between my institute (CTFC) and University of Padova. The visit has grounded the basis for future cooperation and hence a special (and pragmatic) look was given to forthcoming project proposals, in order to identify opportunities (Horizon2020, INTERREG, or national funded calls). While no immediate call has been identified, it is probable that in the near future new calls will be opened where the topic may fit. The grantee commits to keep track to the opening calls.

6. References

Borgatti SP, Everett MG (1999) Models of core /periphery structures. *Soc Networks* 375–395. doi: 10.1016/S0378-8733(99)00019-2

Bushley BR (2014) REDD + policy making in Nepal : toward state-centric , polycentric , or market-oriented governance ? 19:

Keskitalo ECH, Baird J, Laszlo Ambjörnsson E, Plummer R (2014) Social network analysis of multi-level linkages: a Swedish case study on Northern forest-based sectors. *Ambio* 43:745–58. doi: 10.1007/s13280-014-0492-0

Paletto A, Ferretti F, De Meo I (2012) The role of social networks in forest landscape planning. *For Policy Econ* 15:132–139. doi: 10.1016/j.forpol.2011.11.007

7. Other comments

The visit was split in two periods as per the changes in the availability of the grantee to execute the visit. That changed was agreed with the host and with the COST Grant holder as shown in the following letter:

**DEPARTMENT of LAND, ENVIRONMENT,
AGRICULTURE and FORESTRY**

Prof. Laura Secco
Research unit: Forest Policy and Economics Unit

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Attention to

FP1203 COST Action
NWFP
STSM Coordinator
Dr. Tina Greber

Padova, 28th January of 2015

Object: Acceptance of STSM changed dates

As Associated Professor at the Department of Land, Environment, Agriculture and Forestry (TESAF) - University of Padova, Italy, I welcome the Short Term Scientific Mission requested by Elena Góriz, from the Forest Sciences Centre of Catalonia, Spain in the context of COST Action FP1203.

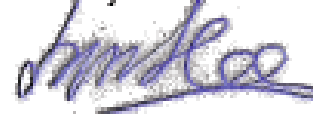
Hereby I express my agreement with the change of dates. The 5-weeks' visit will be carried out in Padova (Italy) in the following periods:

- from the 23rd of February until 13th of March of 2015
- from the 18th to the 29th of May of 2015

During the proposed visit, Elena Góriz will collaborate specifically with the research staff of TESAF Department on the relationship between Social Capital of mushroom pickers with the governance of picking licenses. Taking the case of Foblet (Catalonia, Spain), we will help her in the analysis of the data she has collected previously on pickers. We count with expertise in network analysis, governance assessment, and social capital; therefore previous to her visit we would have agreed on a questionnaire and will guide her for the analysis and interpretation of results. This work will serve to empirically test some of the relationships suggested by the literature on Social Capital and governance of natural resources, what is rather innovative. Hence, we plan to publish a scientific article with the results of the analysis conducted during her stay. This work will contribute also to exploration of economic aspects (Task Force 4) on mushroom (Working Group 1) within the COST Action FP1203.

With best regards,

Prof. Laura Secco
Forest Policy and Economics Unit



8. Confirmation letter

TESAF



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To whom it may concern

Laura Secco, Associate Professor at the Department of Land, Environment, Agriculture and Forestry (TESAF) at the University of Padova, Italy, hereby informs that the Short Term Scientific Mission by Elena Gómez, from the Forest Sciences Centre of Catalonia, Spain in the context of COST Action FP1203, has been successfully completed. She have been working at our Department, under my direct supervision, during the periods of:

- from the 23rd of February until 13th of March of 2015;
- from the 18th to the 29th of May of 2015.

Padova, 29th May of 2015



Laura Secco

TESAF Department – University of Padova