

1

## 2 **1 Introduction**

3 Forest management, and more specifically sustainable forest management, [is no simple task](#)  
4 [since forests are complex ecosystems and their management relates to manifold societal](#)  
5 [needs](#). Because of this, several authors (e.g. Allen and Gould, 1986; Lachapelle et al., 2003;  
6 Carroll et al., 2007; Duckett et al., 2016) [classify forest management as a](#) wicked problem.  
7 The concept of wicked problem refers to unconventional and complex problems, which are  
8 difficult or impossible to solve because of incomplete, contradictory, and changing  
9 requirements that are often difficult to recognise (Rittel and Webber, 1973). Likewise, the  
10 successful implementation of sustainable forest management is often disputable, and  
11 requires intensive and continuous dialogue and cooperation between the interested parts,  
12 which might include [landowners](#), natural and social scientists, policy makers and citizens  
13 (Buizer et al., 2011). Since wicked problems are complex and intertwined, defining and  
14 understanding them requires collaboration between scientists and practitioners, [and](#)  
15 [consequently participatory research approaches](#).

16

17 Fortmann & Ballard (2011) considered that collaboration between conventional scientists  
18 and non-experts produces more accurate and policy relevant knowledge than the  
19 collaboration of conventional scientists without the inclusion of people with an interest or  
20 those affected by the policies at stake (stakeholders). The inclusion of “lay persons” or  
21 interested citizens is usually motivated by three possible types of arguments, namely, the  
22 democratic right of citizens to be included in decision processes, better effectiveness in the  
23 design of solutions, and better outcomes (normative, instrumental or substantive rationale)  
24 (Stirling, 2006; Scherhauser, 2014). Transdisciplinary and interdisciplinary approaches have  
25 gained considerable attention over the past few decades with the development of  
26 sustainability science (Jantsch, 1972; Schophaus et al. 2004; [Hirsch Hadorn et al. 2006; Lang](#)  
27 [et al. 2012; Ruppert-Winkel et al., 2015](#)). Transdisciplinarity is a process of collaboration  
28 between academics and non-academics on specific real-world problems (Walter et al.,  
29 2007). Interdisciplinarity integrates perspectives, information, data, techniques, tools,  
30 concepts, and/or theories from two or more disciplines (Cronin, 2008). Inter- and  
31 transdisciplinary research has focused on the role of institutional framework conditions

32 (e.g., Weingart and Stehr, 2000; Gibbons and Novotny, 2001; Maasen et al., 2006) and on  
33 methods and principles to ensure successful implementation (e.g., Schophaus et al., 2004;  
34 Bergmann et al., 2005). Institutional settings predefine which actors, research questions,  
35 methods and types of results can be included in the research, and through this provide  
36 important limitations for project management (Weiss et al. 2011). There are also  
37 advantages to investigating land use and management issues in geographically distinct areas  
38 as it allows for the examination of a wider variety of behaviours and their cultural meaning,  
39 which in turn improves the probability that their meaning is related to the performance of  
40 the behaviour itself rather than local historical identities (Burton et al., 2008).

41

42 A fundamental issue of sustainable forest management is land ownership, which relates  
43 directly to the management of forests and the provision of forest ecosystem services (Weiss  
44 et al., this issue). In Europe, around 60% of forests are owned by several million private  
45 owners (EU, 2013) and private forest ownership is still increasing, due to restitution  
46 processes in Eastern European countries, community buy-outs in Western Europe (e.g.  
47 United Kingdom), and afforestation of agricultural land (e.g. Portugal) (Zivojinovic et al.,  
48 2015). The European Union (EU) has no common forest policy, but it promotes sustainable  
49 forest management since the late 1990s in its forest strategies (e.g. European Forest  
50 Strategy). However, measures affecting the use of forests are under the responsibility of  
51 individual Member States and therefore covered by national sectoral policies (Winkel et al.,  
52 2013).

53

54 Forest owners also have their own objectives, which may not align with European, national  
55 and local policy objectives. Wallace et al. (2016) consider that inadequate knowledge of  
56 forest owners' values may severely undermine the effectiveness of natural resource  
57 management strategies, including sustainable forest management. In order to design a  
58 policy framework that effectively converts policy objectives into practice, European and  
59 country-level policy-makers need to understand forest owners' behaviours, attitudes and  
60 motivations towards forest ownership and management as these are very diverse and  
61 changeable (Weiss et al., 2017). Researchers have the important role of deciphering local  
62 contexts and communicating their findings with decision makers (Brown and Everard, 2015)  
63 so that policies can be better designed and implemented. While there is a growing body of

64 research on landowners' behaviours and attitudes towards policy, there is still a need to  
65 understand the challenge of sustainable forest management from a transdisciplinary  
66 perspective and to understand how it varies across countries. This matter was explored by  
67 COST Action FP1201 – Forest Land Ownership Change in Europe: Significance for  
68 Management and Policy” (FACESMAP)<sup>1</sup>.

69  
70 In Europe, the longest-running framework supporting trans-national cooperation among  
71 researchers and stakeholders is COST - European Cooperation in Science and Technology<sup>2</sup>.  
72 Actions funded by COST allow European researchers to develop their own ideas in any  
73 science and technology field in collaboration with stakeholders over a period of 4 years. The  
74 aim of COST is to close the gap between science, policy and society throughout Europe and  
75 beyond by taking advantage of advanced multidisciplinary research. COST Actions support  
76 pan-European networking of nationally funded research activities through the financing of  
77 conferences, meetings, training schools, short scientific exchanges or other networking  
78 activities around specified topics. The specific nature of COST Actions lies in the bottom-up  
79 principle that allows any researcher interested to join the network and undertake  
80 collaborative research activities on a voluntary and unpaid basis. Main outputs are usually  
81 joint state-of-art reports, joint review articles, joint comparative analyses and other joint  
82 publications. COST Actions typically include an extensive network of scientists from all  
83 across Europe and from a wide background of disciplines (e.g. agronomy, ecology, forestry,  
84 hydrology, geography, geology, soil science, sociology, human geographers, and  
85 economists) and research approaches (e.g. interdisciplinary, transdisciplinary). The Actions  
86 under the theme “Forests, their Products and Services” usually involve bi-annual meetings  
87 of scientists in different European countries, which also include trips to the field. This  
88 constitutes an excellent opportunity for collaboration, engagement and integration of  
89 knowledge between scientists and regional and local stakeholders.

90  
91 The COST Action FP1201 - FACESMAP, carried out between 2013 and 2016, aimed to analyse  
92 forest ownership changes in Europe and their significance to management and policy.  
93 Around 70 researchers from about 25 European countries participated in the activities

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<sup>1</sup> [http://www.cost.eu/COST\\_Actions/fps/FP1201](http://www.cost.eu/COST_Actions/fps/FP1201)

<sup>2</sup> [http://www.cost.eu/COST\\_Actions](http://www.cost.eu/COST_Actions)

94 established by FACESMAP. In order to ensure an effective collaboration between FACESMAP  
95 participants and regional and local stakeholders, i.e., those with an interest in the problem  
96 being studied and/or who might be impacted by a potential policy change resulting from the  
97 research findings, an inter- and transdisciplinary approach named Travellab was specifically  
98 developed within this COST Action.

99

100 The Travellab aimed to replace casual field trips with more structured stakeholder  
101 engagement activities based upon the topics covered by FACESMAP, with the objective of  
102 enhancing joint learning and triggering formulation of relevant research questions for policy  
103 and practice, and thus better utilising the field visits embedded in the framework of the  
104 COST Action FACESMAP. The management of the Action allocated specific time to develop  
105 the whole methodology in order to ensure improved learning while meeting and visiting  
106 field sites in different European countries. This is an add-on when compared to traditional  
107 COST Actions in the field of “Forests, their Products and Services”, and possibly to other  
108 Actions in other fields. This basic concept of “learning while travelling”, which originated the  
109 name of the approach as Travellab, can be adapted to similar scientific networks or research  
110 projects where field visits are embedded in the project meetings agendas. Effective  
111 communication and stakeholder engagement have a central role in knowledge production  
112 and exchange and this suggests the adoption of participatory research methods based on  
113 the social learning theory and on action research (Black 2000; Scherhauser 2014;  
114 Schauppenlehner-Kloyber and Penker 2015; Fleming and Vanclay 2010).

115

116 International projects in the fields of forestry or land management often foresee regular  
117 project meetings, fieldtrips and stakeholder discussions in order to build a strong and  
118 effective collaborative group with a common understanding of the research problems and  
119 project goals. However, these projects usually fail to address the statements included in the  
120 project proposals and do not allocate time and resources to develop joint learning methods,  
121 including all project participants, with a specific research focus (Zscheischler and Rogga,  
122 2015). The COST Action FACESMAP addressed this gap by establishing the Travellab with the  
123 specific objective of developing joint learning processes for improved learning, which can be  
124 replicated in future projects on sustainable land management. In addition, the Travellab also  
125 aimed at assessing the effectiveness of joint learning in its implementation.

126 Insights from action research guided the development of the Travellab, in which scientists  
127 *"engage with participants in a collaborative process of critical inquiry into problems of social*  
128 *practice in a learning context"* (Argyris et al., 1985). The Travellab is therefore a  
129 collaborative, iterative and reflective approach that includes the joint development of  
130 learning methods, systematic **joint reflection**, and constant readjustment of the approach  
131 based on this reflection, and throughout the time of the Action.

132

133 This article aims to describe the development of the Travellab so this can guide others in the  
134 implementation of similar projects in the future on how to apply the approach successfully  
135 in order to stimulate joint learning about forest ownership and management issues in  
136 Europe. In addition, this article also aims to assess the value added by the Travellab in  
137 regards to improve joint learning. Therefore, section 2 describes the development of the  
138 Travellab and the concepts that inspired the approach, including the choice of participatory  
139 research methods. Section 3 presents the methods and materials used to assess the  
140 strengths and limitations of the approach. Section 4 presents the results of the reflection  
141 and evaluation of the Travellab and more specifically the value added by the Travellab to  
142 improve joint learning, and presents the current limitations of the approach. Section 5  
143 discusses the results in relation to the assessment of the effectiveness of the Travellab, and  
144 Section 6 provides recommendations for future implementation. This article does not  
145 undertake an in-depth analysis of the knowledge and information obtained during the  
146 implementation of the Travellab as this is the object of another article.

147

## 148 **2 Development of the Travellab**

149

### 150 **2.1 Conceptual approach**

151

152 There is increasing demand from several research councils (e.g. H2020, Swedish Research  
153 Council Formas, United Kingdom Research Councils), development funders (e.g. DFID<sup>3</sup>,  
154 SIDA<sup>4</sup>, World Bank) and Government agencies for effective stakeholder interaction which

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<sup>3</sup> <https://www.gov.uk/government/organisations/department-for-international-development/about/recruitment>

<sup>4</sup> <https://www.sida.se/English/>

155 may require their inclusion as partners or advisors in research and development projects  
156 (Weiss et al., 2011; Slunge et al., 2017). Several authors (Armitage et al., 2008; Folke et al.,  
157 2005; Pahl-Wostl, 2007) consider that network governance and processes of social learning  
158 should be emphasised. [Social learning, suggests that behaviour is learnt from the](#)  
159 [environment through the process of observational learning \(Bandura, 1977\). Its philosophy](#)  
160 [considers stakeholder participation and the integration of knowledge from different](#)  
161 [perspectives, and it involves critical thinking, interactions, dialogue, and questioning](#)  
162 [assumptions that underline individual concepts \(Leeuwis et al., 2002\).](#) Social learning is a  
163 process of transformative social change in which participants critically question and  
164 potentially discard existing norms, values, institutions, and interests to pursue actions that  
165 are desirable to them (Keen et al., 2005). In natural resource management, social learning is  
166 gaining increasing attention as a fundamental process to coping with complexity and  
167 uncertainty (Lee 1993; Ison and Watson, 2007; Pahl-Wostl et al., 2009) and providing  
168 support to participation, collective action, and decision-making (Pretty 1995; Daniels and  
169 Walker 2001; Measham, 2009). Rodela (2012) considers that social learning advances the  
170 critique of the command-and-control approach to resource management and is generally  
171 regarded as an outcome of deliberative processes (Daniels and Walker, 1996) that go  
172 beyond the individual to include the social units and networks in which individuals interact  
173 (Reed et al., 2010).

174

175 To address these demands, and after considering that ordinary field trips embedded in the  
176 project meetings produce informal discussions but do not lead to deeper reflection, action  
177 and effective learning, the Steering Committee of COST Action FACESMAP [suggested the](#)  
178 [development of the Travellab approach](#) to strengthen stakeholder interaction in a  
179 systematic way. The objectives of establishing an approach to ensure effective stakeholder  
180 interaction for [successful joint learning](#) were to:

181

- 182 - Provide opportunities for the researchers to learn about regional issues affecting  
183 forest ownership and management;
- 184 - Assure that the research questions and information collected were relevant to policy  
185 and practice;

- 186 - Feed existing scientific knowledge and results of the Action back to the relevant  
187 stakeholders;
- 188 - Enhance the effectiveness and impact of the Action.

189

190 The Travellab also aimed at assessing whether, and to what extent, learning is actually  
191 taking place. Several authors (Garmendia and Stagl, 2010; Reed et al., 2010; Cundill et al.,  
192 2012) consider that the way learning can be better facilitated is often not very clear, and  
193 measuring the learning and knowledge production that results from the interaction  
194 between researchers and stakeholders has been described as a critical gap in the literature  
195 (Schwilch et al., 2012). Inquiring more broadly into the nature of learning in a complex  
196 system is also promoted by [action research approaches](#) such as design-based research. This  
197 research methodology aims at improving educational practices through systematic, flexible,  
198 and iterative review, analysis, design, development, and implementation, based upon  
199 collaboration among researchers and practitioners in real-world settings (Wang and  
200 Hannafin, 2005).

201

202 Reed (2008) derived best practice guidelines for successful stakeholder involvement through  
203 reviewing the literature available on stakeholder participation in environmental  
204 management. This author recommends favouring stakeholder empowerment, equity, trust  
205 and learning as early as possible in the project. This allows the researchers to engage  
206 relevant stakeholders systematically throughout the process, to have clear objectives for  
207 stakeholder participation, to apply tailored methods, to involve skilled facilitators that help  
208 the group of people to understand the common objectives and to assist them to plan how  
209 to achieve these objectives, and to integrate both local and scientific knowledge.

210

211 [By following an action research approach, the Travellab subsumes two main types of](#)  
212 [methods: the methods for quality stakeholder interaction and the methods to assess the](#)  
213 [effectiveness of joint learning due to the implementation of the Travellab. The wider range](#)  
214 [of participatory research methods available in the literature supplied the methods for](#)  
215 [Travellab and adapted to its own context and characteristics \(Bryson, 2004; Wang and](#)  
216 [Hannafin, 2005; Roux et al., 2010; Chevalier and Bluckles, 2011; Evans and Jones, 2011;](#)  
217 [Durham et al., 2014; HarmoniCOP, 2015; Slunge et al., 2017\). The development of the](#)

218 Travellab approach also took into consideration four factors that enhance group interaction  
219 (Johnson and Johnson, 1987; Schauppenlehner-Kloyber and Penker, 2015). These are 1) the  
220 fact that every single person has their own interests and needs; 2) the interaction and  
221 relational pattern between all participants; 3) the purpose of the interaction, and; 4) the  
222 physical, social and temporal environment in which the interaction takes place.

223

224 The literature on inter- and transdisciplinary research, social learning, action research and  
225 stakeholder participation informed, therefore, the design of the Travellab. Its main  
226 characteristics are similar to those attributed to design-based research by Wang and  
227 Hannafin (2005), namely: 1) Pragmatic; 2) Experiential; 3) Interactive, iterative and flexible;  
228 4) Integrative; and 5) Contextual.

229

## 230 **2.2 Pragmatic**

231

232 The Travellab approach followed a pragmatic approach because its goals were to explore  
233 and solve real-world problems (The Design-Based Research Collective, 2003) through  
234 stakeholder interactions at the national, regional and local level. During the Travellab,  
235 specific topics were selected in each of the host countries (e.g. restitution in Eastern  
236 European countries, advisory services in Finland and Scotland), which were related to the  
237 main topics of the Action (forest ownership and management), and aimed to achieve in-  
238 depth analysis and reflection. Open-ended questions were favoured to allow realistic  
239 stakeholder interaction. The practical dimensions of the Travellab, which also relate to its  
240 alignment with the COST Action framework, are as follows:

241

- 242 - COST Actions are open for all researchers in the participating countries interested in  
243 the topic; In the case of FACESMAP, 50-70 researchers from various social and  
244 natural science disciplines participated in the meetings;
- 245 - The participants had varying experience with qualitative research methods and  
246 participatory approaches;
- 247 - During the Action lifetime (2013-2016), one or two annual meetings are organised,  
248 preferably in different countries across Europe and depended on the interest and  
249 willingness of the participating researchers to contribute and to be the hosts;

250 - Field trips embedded in the project meeting agendas and stakeholder interaction  
251 activities.

252

253 Usually, participants of forest-related Actions are very interested in visiting and experiencing  
254 local forests and meeting stakeholders, who themselves are usually willing to interact with  
255 visitors. The Travellab took advantage of the structure of conventional COST Actions to  
256 improve effective learning and to record systematically how effective learning occurred. It  
257 assumed the learning that arises through knowledge exchange between researchers with  
258 various disciplinary backgrounds (interdisciplinary), and between researchers and  
259 practitioners (transdisciplinary) is more effective and it is essential to solving real world  
260 problems.

261

### 262 **2.3 Experiential**

263

264 Fazey et al. (2005), for example, acknowledges the importance of experiential knowledge  
265 for effective environmental-related research and practice. The concept of the Travellab is  
266 the combination of the words 'travel' and 'lab'. The word "travel" represents the interaction  
267 between researchers and non-researchers (stakeholders) that occurred while travelling to  
268 the regions that include the cities of Sopron (Hungary), Solsona (Spain), Helsinki (Finland),  
269 Freiburg (Germany), Zagreb (Croatia), Krakow (Poland) and Inverness (Scotland), during the  
270 COST Action FACESMAP. The word 'lab' represents the fact that the field visits were  
271 undertaken in a living laboratory (i.e. the forest) where the researchers could experience  
272 the socio-environmental context of the sites visited, interact, and discuss with regional and  
273 local stakeholders. The researchers involved in the FACESMAP had various disciplinary  
274 backgrounds with research interests related to forest ownership research, forest policy,  
275 forest economics and forest management with a range of theoretical approaches ranging  
276 from sociology and political sciences to economics and management. A significant share but  
277 not the majority of the researchers had specific interest and experience in participatory  
278 research methods or qualitative methods of empirical social research. [The Travellab, was  
279 therefore, grounded in both theory and the real-world context \(Wang & Hannafin, 2005\).](#)

280

281 The coordination of the Travellab was assigned to one Steering Group member (1st author  
282 of this article) with the support of a smaller group of FACESMAP participants (Travellab task  
283 group). The Travellab stimulated interaction with stakeholders in order to improve the  
284 researchers' understanding of the main themes of the three working groups (WGs) that  
285 constituted COST Action FACESMAP, namely, forest ownership types, motives and related  
286 changes (WG1), new forest management approaches (WG2), and the existing policies  
287 supporting forest owners and new management approaches (WG3). Stakeholders were  
288 selected through stakeholder analysis, which is the process of determining whose interests  
289 should be considered when developing and/or implementing research (Reed, 2008).  
290 Stakeholders were selected by local hosts of the meetings in consultation with the Travellab  
291 task group, in order to ensure that the stakeholders invited to participate in the Travellab  
292 were those most affected by changes in forest ownership, management, and policy and  
293 those with influence over the same factors at the local and national levels (after Freeman,  
294 1984). The main questions asked to the stakeholders were formulated within the working  
295 groups of the Action on the day before the implementation of the Travellab (see appendix 1  
296 for a non-exhaustive list of questions). The approach also encouraged spontaneous follow-  
297 up questions if time allowed.

298

299 Stakeholders varied in each host country, depending on the specific issues of each region  
300 visited. The main requirement included to meet traditional and non-traditional forest  
301 owners in each country. The following types of stakeholders participated in the Travellab  
302 between 2013 and 2016:

303

- 304 - Policy-makers – Members of governmental organisations that directly influence  
305 policy formulation;
- 306 - Advisory services – Representatives of non-government organisation (NGOs), forest  
307 owner associations (FOA), and consultant companies;
- 308 - State extension services – Representatives of the national and regional government  
309 forest services;
- 310 - Private forest owners – Individuals, families or private companies, including their  
311 interest organisations who own forests;
- 312 - Researchers – From universities and research institutes;

- 313 - Community forests - Representatives of common/communal/community ownership
- 314 forests;
- 315 - Contractors - Forest managers and anyone contracted by forest owners to undertake
- 316 forest work.

317

318 Fifty-three stakeholders (including 20 forest owners) participated in the Travellab between  
319 2013 and 2016. Of these, 27% were female and 73% were male. Figure 1 shows the  
320 stakeholders types involved in the Travellab.

321

322 [Figure 1 here]

323

#### 324 **2.4 Interactive, iterative and flexible**

325

326 The Travellab consists of interactive collaboration between researchers and other  
327 stakeholders. It assumes that collaboration is required so interventions can trigger [changes](#)  
328 [in the real world context \(The Design-Based Research Collective, 2003; Wang & Hannafin,](#)  
329 [2005\)](#). The [main principles of the Travellab were set](#) in a collaborative two-day workshop in  
330 Solsona, Spain, in 2013. This collaborative workshop was steered by an expert in  
331 participatory research methods [who trained a core group](#) of FACESMAP participants,  
332 established as the Travellab task group, which included early career and established  
333 researchers. The main principle of the Travellab was to prioritise exchange of information  
334 between researchers and local stakeholders during field visits to forest sites, named as  
335 outdoor interactions [with walking interviews \(also employed by Bowditch et al., this issue\)](#),  
336 combined with subsequent stakeholder carousel workshops, named indoor interactions  
337 [with flexible, semi-structured interviews](#). Note takers (at least six per working groups) wrote  
338 about the topics learnt [and answers to the questions made](#) (content notes), and about [the](#)  
339 [effectiveness of the participatory research methods to improve the quality of the](#)  
340 [information exchanged and learning](#) (observation notes). The main objective of having  
341 multiple note takers was to capture different dimensions of the same phenomenon, to  
342 enhance validity and reliability of the findings and to trigger individual reflection. Having  
343 multiple note takers also allowed the division of the large group of FACESMAP participants  
344 (always between 50 and 70 researchers) into smaller groups and parallel field visits in order

345 to enhance the quality of the stakeholder interaction and of information captured during  
346 the interaction. After each Travellab session, researchers met within their working groups to  
347 reflect jointly on what was learnt and to summarise their main reflections. These working  
348 group summaries were presented in plenary for further discussion and reflection, favouring  
349 constant interaction among participants and joint development of the method. The  
350 reflections arising from the discussions were used to refine the Travellab method from one  
351 meeting to the next in order to ensure the comparability and continuity of the learning  
352 process. The individual [observations](#) and group reflections were, therefore, systematically  
353 recorded (in writing) in order to better understand how learning occurred. This iterative  
354 process happened successively until the end of the COST Action, and last Travellab  
355 (Inverness, Scotland in 2016).

356

357 [The Travellab also comprised](#) keynote presentations delivered by local experts before the  
358 outdoor interactions and the carousels who introduced the main forestry issues of the  
359 region and a booklet presented the forest owners, forest holdings, and other stakeholders  
360 was distributed to the researchers with the objective of facilitating the learning experience  
361 and triggering the reformulation of the pre-established questions. Two evaluation  
362 workshops, the first in Solsona in 2013 and the second in Inverness in 2016, were also held  
363 as part of the approach. The objectives of these workshops were to assess the effectiveness  
364 of the Travellab to improve joint learning and [to collect recommendations for future](#)  
365 [implementations of the approach.](#) The possibility of adjustment according to local  
366 characteristics and recommendations emerged from the evaluation workshop undertaken in  
367 Solsona in 2013 contributed further to the flexibility and interactivity of the approach.  
368 Figure 2 below illustrates the structure of the Travellab.

369

370 [Figure 2 here]

371

## 372 **2.5 Integrative**

373

374 The Travellab is integrative because it employs a variety of research methods and  
375 approaches. [The integrative use of multiple methods in the research process results in data](#)  
376 [from multiple sources, which serves to confirm and enhance the credibility of findings](#)

377 (Wang & Hannafin, 2005). The Travellab included on-site interactions with the forest owners  
378 (outdoor interaction) and an indoor interaction activity adapted from the “carousel”  
379 technique. During the indoor and outdoor activities, the whole group researchers in  
380 FACESMAP were divided into three smaller groups. During the carousel sessions, the three  
381 groups of researchers were allocated to three meeting rooms (‘stations’) with three  
382 different groups of stakeholders. Each ‘station’ had a facilitator and a fixed time to ask  
383 questions, discuss and take notes before moving to the next ‘station’. Researchers entering  
384 a new ‘station’ were briefed about the questions that were asked during the previous  
385 session(s) in order to allow them to build their discussion upon previous contributions. The  
386 facilitation and interviewing roles were often taken by researchers with experience in  
387 participatory approaches, however early-career researchers were also encouraged to take  
388 on the role of facilitating the carousels and asking stakeholders questions. Qualitative data  
389 generated by the observation and content notes ensured the credibility of the results.

390

## 391 **2.6 Contextual**

392

393 Many researchers consider that the best way to understand a phenomenon is to view it in  
394 its context (Atieno, 2009). Therefore, the Travellab aimed to contribute to a better  
395 understanding of forest ownership and management issues across Europe by taking into  
396 account contextual differences between countries. The approach was implemented in  
397 regions surrounding the cities where the COST Action FACESMAP meetings took place,  
398 namely, Sopron (Hungary), Solsona (Spain), Helsinki (Finland), Freiburg (Germany), Zagreb  
399 (Croatia), Krakow (Poland) and Inverness (Scotland). The regions visited were selected in  
400 order to ensure diversity in terms of political (e.g. post socialist, Western governments),  
401 social (e.g. employment in forestry, forest ownership types), economic (e.g. importance of  
402 forest in Gross Domestic Product), institutional (e.g. share of private ownership) and  
403 geographical (Western, Eastern, Northern, Southern, Central European) characteristics.

404

405 Given the differences in national and regional contexts and topical *foci*, the Travellab was  
406 adapted to be appropriate to the setting of each region visited (e.g. selection of country-  
407 relevant topics and stakeholders for in-depth discussion, introductory activities, location and  
408 order of field visits and stakeholder interaction meetings). The Travellab task group

409 supported the hosts in the implementation of the Travellab approach in each country and  
410 the hosts suggested the stakeholders, field sites, facilities and dates. Subsequently, the  
411 background information provided to participants before each Travellab (e.g. introductory  
412 presentations, booklets) was adapted according to the local context and characteristics of  
413 the regions visited, and the pre-established questions were modified.

414

### 415 **3 Methods and materials to evaluate the effectiveness of the Travellab**

416

417 The Travellab approach aimed at encouraging joint learning through stakeholder interaction  
418 and it stimulated researchers' joint reflection to support the improvement and the  
419 implementation of the approach throughout the period (2013-2016) of the COST Action  
420 FACESMAP. In order to assess whether the Travellab was successful or not, its  
421 implementation was monitored through field observations and group reflections. These  
422 observations and reflections were recorded by designated note takers, and captured the  
423 answers to the questions asked during the discussions in the field and in the carousels  
424 (content notes), their observations about the implementation of the methods (observation  
425 notes), and their joint reflections about the effectiveness of each Travellab session within  
426 the working groups. The methods to assess the effectiveness of the Travellab are part of the  
427 methodological approach of the Travellab (as described in section 2.5). This assumes that  
428 researchers should keep detailed records during the design research process on whether  
429 the design outcomes (e.g. principles) have worked or not, how the approach has been  
430 improved, and what kind of changes have been made, as suggested by Wang & Hannafin  
431 (2005).

432

433 In addition, two specific evaluation workshops were held with FACESMAP researchers who  
434 participated in the stakeholder engagement activities and joint reflections established by  
435 the Travellab (as mentioned in section 2.4). The first workshop was held in Solsona in 2013,  
436 and involved the whole group of FACESMAP participants (approximately 50-70 people), to  
437 discuss the question *What did you learn with the Travellab?* The workshop lasted 1.5 hours  
438 and was facilitated by one researcher with experience in participatory research methods.  
439 The second workshop was held in Inverness 2016 and consisted of three rotating sessions of  
440 30 minutes each running in parallel, lasting a total of 1.5 hours. In this workshop, the whole

441 group of FACESMAP participants was divided in three smaller groups of around 22 people to  
442 discuss two main questions: *How did the Travellab improve your understanding of forest*  
443 *ownership issues in Europe?*, *Which was the best Travellab session and why?* And *What*  
444 *would be your recommendations if we were to implement the Travellab again?* The sessions  
445 were moderated and led by three researchers with experience in participatory research  
446 methods, who set the agenda and posed the initial question(s) to the workshop participants,  
447 and who ensured that ideas and experiences of all participants were captured successfully in  
448 writing (notes).

449

450 In order to investigate the effectiveness of the Travellab to improve learning a content  
451 analysis of the qualitative data recorded during individual observations and joint reflections  
452 within the working groups, stakeholder interaction, and the specific reflection workshops  
453 with researchers in Solsona and Inverness, was undertaken. Content analysis is a research  
454 method for studying documents, which might be texts of various formats, pictures, audio or  
455 video to explore patterns in communication in a replicable and systematic manner (Bryman,  
456 2011). The content analysis aimed at answering the two main questions: 1) What did  
457 researchers learn from the Travellab? And 2) What was the added value of the Travellab to  
458 enhance researchers' learning and to trigger behaviour change in the real-world context?  
459 The qualitative data used in the analysis consisted of the compilation of the written notes  
460 classified as followed:

- 461 - Observation notes taken by designated researchers (three per working group per  
462 Travellab) allocated with the task of taking notes during the field visits and carousels in  
463 the seven regions visited. These notes narrate the stakeholder interaction dynamics, the  
464 strengths and shortcomings of the interaction methods and the researcher opinion  
465 about the effectiveness of the methods employed during the Travellab to improve  
466 learning;
- 467 - Content notes taken by designated researchers (three per working group, per  
468 Travellab), who recorded the answers to the questions asked during semi-structured,  
469 flexible, and often walking interviews to local stakeholders in the field sites and the  
470 carousels as well as the main topics discussed during stakeholder interactions;
- 471 - Summaries of the joint reflections within working group on the topics learnt during  
472 the fieldtrips and carousels, and of the reflections on the effectiveness of the method,

473 compiled by self-nominated working group representatives, and presented and  
474 discussed in the FACESMAP plenary sessions. These summaries provided information on  
475 how joint learning occurred and about the groups' views on the strengths and  
476 shortcomings of the Travellab, and recommendations for further refinement of the  
477 approach;

478 - Notes recorded during the specific reflection workshops (Solsona in 2013 and  
479 Inverness in 2016), which were set up to understand the views of the researchers  
480 involved in the Travellab about its effectiveness to improve their learning about forest  
481 ownership issues in Europe, and their suggestions for further refinement of the  
482 Travellab.

483

484 The whole set of written notes were compiled and entered into NVivo qualitative data  
485 analysis software (NVivo 10), and coded to reflect the main topics related to the  
486 effectiveness of the Travellab and also the main topics discussed in the field trips and  
487 carousels with local and regional stakeholders. Textual codes (keywords) were used to  
488 identify specific pieces of data corresponding to recurrent themes such as the main topics  
489 discussed during the interactions, the quality of the interaction with stakeholders, the  
490 quality of information exchanged during the interactions, or evidence that suggested that  
491 researchers were going to do something different as a result from their experience in the  
492 Travellab.

493

## 494 **4 The effectiveness of the Travellab**

495

### 496 **4.1 What did researchers learn, and what was the added value of the Travellab?**

497

498 Quotes taken directly from observation and content notes (see appendix 2) illustrate the  
499 main topics that emerged in the discussions with local stakeholders in the different regions  
500 visited. The main topics that researchers learnt about were:

501

- 502 - Characteristics of the local context surrounding the field sites;
- 503 - Forest owners' attitudes towards forest ownership;

- 504 - Forest owners' perceptions of traditional forest owners and non-traditional (or
- 505 new) forest owners;
- 506 - Knowledge systems used by traditional and/or old and new forest owners;
- 507 - Forest owners' perceptions on forest policy and the role of incentives;
- 508 - The needs of new forest owners;
- 509 - Gender perspectives;
- 510 - Old and new forest management approaches;
- 511 - Challenges (e.g. threats, risks) faced by forest owners.

512

513 More specifically, the analysis of the qualitative data showed that the Travellab ensured the  
514 quality of stakeholder interaction since it increased the amount and value of the  
515 information exchanged, the continuous flow of information between researchers and  
516 stakeholders, researchers' enjoyment from interactions, and the reflection about the  
517 methods employed and the questions posed to the stakeholders (see appendix 3). During  
518 the workshops in Solsona (in 2013) and Inverness (in 2016) researchers recognised that they  
519 had become aware of forest owners' "real opinions" when talking to them about their  
520 problems, and that they could link these perspectives to forest owner types (i.e. traditional  
521 and non-traditional). In the workshops, researchers also mentioned that learning about the  
522 regions they were visiting prompted them to contemplate further forest management  
523 practices implemented in their own countries, which in turn further improved their  
524 understanding of forest management. The interaction with forest owners also exposed the  
525 relevance of traditional knowledge, and researchers highlighted the need to acknowledge  
526 this in their future research. Researchers mentioned that it was "really interesting" to meet  
527 local stakeholders and to understand their relation with forests and forest-related policies.  
528 Furthermore, this allowed researchers to acquire a comprehensive picture of the forest  
529 sector in the regions visited, and across different scales, namely, the local level through  
530 forest owners, and the regional level, through policy-makers. In the workshop in Solsona,  
531 researchers recognised that the topics learned due to the interaction with stakeholders  
532 were relevant to the work undertaken within the FACESMAP working groups (see appendix  
533 4). Given its interactive, iterative and flexible characteristics, the Travellab evolved from site  
534 to site through the adoption of the recommendations provided by the group reflections.  
535 Researchers recognised that "collectively designing and reflecting upon the process is

536 *valuable*” and that it *“helped the group to have joint focus”*. In general, researchers  
537 considered the Travellab to be *“a distinct improvement compared to other COST Actions”*  
538 and that it was *“the most important part of such a meeting”*. These quotes provide good  
539 evidence that researchers who participated in the Travellab activities have taken the  
540 learning obtained during the Travellab and changed their behaviour in terms of setting more  
541 relevant research questions and of adopting transdisciplinary and action research  
542 approaches instead of conventional (e.g. disciplinary) approaches, as a result of their  
543 participation in the Travellab. This is essential when dealing with wicked environmental  
544 problems such as the implementation of sustainable forest management.

545

#### 546 **4.2 Shortcomings of the Travellab**

547

548 The observation notes showed recurrent recommendations, suggesting these were not  
549 implemented throughout the process (Table 1). The observation notes also showed  
550 researchers’ concerns about methodological shortcomings such as poor interviewing  
551 techniques (e.g. asking closed questions instead of open questions) or the participation of  
552 powerful stakeholders who might have prevented the participation of other less powerful  
553 stakeholders.

554

555 [Table 1 here]

556

557 Some researchers considered that the *“The learning lab idea [was] unnecessarily*  
558 *complicated”*, and that it would be better to have *“honest excursions with free questions, as*  
559 *we do not have coherent given questions in the WGs!”* and *“to embrace [difference] rather*  
560 *than to keep to a limited and quackery developed frame!”* Some researchers also perceived  
561 that the approach was *“forced and over-controlled”* and felt that the amount of time  
562 dedicated to the Travellab activities was too limited - *“at times beaten by the clock”*.

563

564 Some researchers thought there were no opportunities for individual reflection, including  
565 the preparation of individual summaries as well as the exchange of ideas between working  
566 groups. Researchers noticed that the Travellab needed *“a system that allows/facilitates*  
567 *prompt feedback”* to better support the development of the method. There were concerns

568 about the quality of the data collected and some suggested recording the discussions with  
569 the stakeholders in the future to ensure the quality of the data collected. Researchers  
570 proposed that all parties involved (researchers and stakeholders) should have the objectives  
571 of the Travellab clarified beforehand and should have a common understanding of the  
572 approach. Researchers also considered that it would be *“important not only to extract*  
573 *information from the stakeholders but also to give them something”*.

574

## 575 **5 Discussion**

576

577 The main objective of the Travellab was to enhance knowledge production by creating a  
578 shared learning space where researchers from various research backgrounds and  
579 nationalities interacted with stakeholders and worked as a community of practice to co-  
580 design research questions, which can be relevant to the development of future forest-  
581 related policies. This differs from the traditional one-way approach of knowledge and  
582 technology transfer from researchers to agricultural and forestry advisors, and then to land  
583 users, which is still practiced in many areas but considered obsolete by many authors (e.g.  
584 Fry et al., 2003; Gabathuler et al., 2011). Such top-down ventures, which do not properly  
585 integrate stakeholders’ interests, are common in the context of Swedish forestry, for  
586 example (Wallin et al., 2016). In fact, there is an increasing recognition that research related  
587 to tackling wicked problems such as sustainable forest management should take into  
588 consideration those closest to the land, namely individuals, land managers, communities  
589 and businesses, in order to reflect local needs and circumstances (Duckett et al., 2016;  
590 Wallin et al., 2016) and the Travellab followed this idea. According to Schwilch et al. (2012),  
591 there is an immediate need for practical tools that enable stakeholder learning and foster  
592 sustainable forest management. Schneider et al. (2009) suggests that that social learning,  
593 which comprises co-production of knowledge by stakeholders and researchers through a  
594 shared learning space, is essential to ensure the implementation of sustainable land  
595 management. The Travellab approach developed and implemented within the COST Action  
596 FACESMAP, created this shared learning space and imprinted structure and rigour to the  
597 interaction between researchers and stakeholders, maintaining the same thematic *foci*

598 across countries over a period of several years (2013-2016). This article ascertains the main  
599 advantages of the Travellab:

600

- 601 - It favoured a conscious selection of the field sites to visit through liaison with local  
602 hosts and of the stakeholders to interact with via stakeholder analysis;
- 603 - It structured field visits co-organised by the Travellab task group and the local hosts;
- 604 - It established a link between the FACESMAP research questions and the questions  
605 asked to stakeholders during the Travellab activities;
- 606 - It used diverse stakeholder interaction techniques;
- 607 - It adjusted to local contexts and in response to suggestions from participants, and;
- 608 - It allowed time for group reflection about the Travellab approach, the information  
609 acquired and the learning process.

610

611 Observation notes confirmed that quality of interaction between researchers and  
612 stakeholders was enhanced by the implementation of the Travellab. Campbell et al. (2006)  
613 found out that learning capability of groups increase through facilitation, which is a way of  
614 structuring and supporting interaction and communication. Splitting the whole group into  
615 smaller subgroups was also an essential part of achieving higher quality interactions. Bailey  
616 et al. (2006) suggested that the optimal number of participants in a discussion group is  
617 between 15 and 20. *In the Travellab the whole group of FACESMAP participants was divided  
618 into smaller groups of no more than 20 people in order to stimulate participants' attention  
619 during the discussions with stakeholders and to promote quality interaction.*

620

621 Researchers from different *disciplinary backgrounds learned* about several topics during the  
622 field visits such as local context, management approaches, forest threats, knowledge  
623 systems, the role of incentives and forest policies and forest owners' values. The  
624 effectiveness of the Travellab in contributing to increase the awareness *of a relevant  
625 number of researchers (~70 people)* about the diversity of circumstances across Europe  
626 (from different forest owners' perceptions, to different forest management styles in Europe)  
627 might have a positive impact on policy development *in their own countries*. Pohl (2011)  
628 *considers that "ideal" transdisciplinary approaches should relate to socially relevant issues,  
629 transcend and integrate disciplinary paradigms, involve participatory research, and search*

630 [for a unity of knowledge](#). Understanding diversity is extremely important and it might  
631 discourage researchers from advocating a “one-fits all” solution to policy-makers.  
632 The Travellab allowed scientists to learn through experience and to reflect upon the gained  
633 knowledge both individually, through the notes taken and in a group setting during the  
634 working group meetings, plenaries and specific workshops to evaluate the effectiveness of  
635 the Travellab approach (Solsona, Inverness). Individual views challenged other members of  
636 the group and this contributed to greater joint learning. According to Prager and Creaney  
637 (2017) learning from experience can be based on the researchers' own experience, but can  
638 also be based on observing someone else’s experience. Experiential learning was maximised  
639 by a combination of visiting forests sites, discussing with the forest owners on-site, and  
640 interacting with the wider range of stakeholders.

641  
642 Although the Travellab was dynamic and constantly being adapted according to the  
643 specificities of each region visited, a set of recurrent recommendations from the  
644 participants (see Table 1) indicates that reframing was not always possible. This was mainly  
645 due to time constraints within the structure of the COST Action and resource limitations in  
646 the host countries. However, even though some recommendations were not implemented,  
647 the Travellab approach triggered individual and collective reflection about these  
648 recommendations. According to Harris (2014), summarising information improves learning  
649 since it makes individuals think about the information obtained, which parts are more  
650 important, and forces them to rewrite in their own words the main points or ideas.  
651 Therefore, learning also happened during note taking in the field visits and carousels, when  
652 researchers were summarising the main opinions generated during reflection and discussion  
653 within each working group, and further, when these summaries were presented to the  
654 plenary. Nevertheless, some researchers believed that the Travellab approach should have  
655 allocated more time for individual reflection, preparation of individual summaries and more  
656 exchange of ideas between working groups. Evans (1990) considers that a lack of self-  
657 reflection is a barrier for societal learning and hinders the transition to more sustainable  
658 resource management. On the other hand, this would have required more documentation  
659 on the process, which would have further increased the already large amount of data  
660 collected, leading to a greater allocation of time and resources being committed to data  
661 analysis (Collins et al., 2004).

662

663 The specific workshops that took place in Solsona in 2013 and Inverness in 2016 provided  
664 the groundwork for a critical discussion about the effectiveness of the method to improve  
665 researchers' learning. Researchers mentioned that the Travellab worked as an anchor, i.e.  
666 an image they could connect to certain insights (cp. *"Got a picture of how the forest sector  
667 works in this part of Europe"*, see appendix 4) that immediately transported the participants  
668 back to their experience in each region. According to Behrendt & Franklin (2014),  
669 experiential learning is authentic, first-hand, sensory-based learning. The Travellab  
670 facilitated, therefore, a more memorable experience in comparison to listening to oral  
671 presentations or reading research results. For Haider et al. (2017), skills in facilitation,  
672 participatory approaches and the ability to see 'the big picture' are valuable skills in  
673 sustainability science.

674

### 675 **5.1 Limitations of the Travellab approach and recommendations for future** 676 **implementation**

677

678 As the primary objective of the Travellab was to enhance researchers' learning about forest  
679 ownership and management issues, the quality of data collected during the Travellab might  
680 be questionable and to undertake further analysis for scientific publication purposes might  
681 be challenging. This highlights the fact that there are clear trade-offs between designing the  
682 process for high quality data collection and designing the process to encourage the  
683 involvement of more researchers in data collection activities. The former would require  
684 professional facilitation assigning the roles to more experienced researchers but it would  
685 risk disengagement of the remaining group and consequently lower levels of joint and  
686 individual learning and participation.

687

688 Such as other inter- and transdisciplinary approaches, the Travellab should have promoted  
689 knowledge exchange, i.e. continuous exchange between researchers and local stakeholders  
690 (Brandt et al., 2013; Zscheischler and Rogga, 2015). However, the pressure from the project  
691 goals and time constraints in delivering the scientific targets limited the capacity to favour  
692 two-way communication. One-way, question-answer interaction was favoured instead. The  
693 delivery of feedback to local stakeholders was left to the initiative of the local hosts, their

694 own resources and own methods outside the Travellab framework. Nevertheless, many  
695 stakeholders expressed that they enjoyed the experience and that the questions triggered  
696 new insights about forest ownership, management, policy and their own work.

697

698 Another potential limitation relates to power relations among the stakeholders and  
699 researchers. The implementation of the Travellab relied on the local hosts as translators,  
700 which might have distorted the answers provided by stakeholders. Local hosts were often  
701 researchers themselves and potentially incorporated their own views or beliefs into the  
702 translation process, which might have contributed to answer bias. Thurmond (2001) names  
703 this the holistic fallacy, which occurs when the researcher believes inaccurately that the  
704 beliefs of the individual are similar to the beliefs of the researcher. In order to avoid such  
705 biases, the engagement of professional or otherwise independent facilitators is advisable.

706

707 Furthermore, in some situations, different types of stakeholders, with different power and  
708 influence were in the same room (e.g. advisory services, state authorities, forest owners)  
709 and might have prevented less powerful stakeholders to express their opinions. Even  
710 though stakeholders were usually divided into different groups in the field trips and  
711 carousels, it was not always possible to separate stakeholders due to time or other  
712 organisational constraints. Furthermore, it may be insightful to organise panel discussions  
713 purposely including different stakeholder groups. Such situations need to be explicitly  
714 considered in the interpretation of results.

715

## 716 **6 Conclusions**

717

718 The Travellab approach is a problem-driven process of inquiry that put interaction between  
719 researchers and stakeholders at the centre of COST Action FACESMAP. The Travellab was  
720 designed as an inclusive process of continuous learning and exchange between FACESMAP  
721 participants and different regional and local stakeholder types in several European  
722 countries. Throughout the implementation, individual observations and joint reflections  
723 were systematically documented for further refinement and analysis of the benefit of the  
724 approach to improve researcher's learning and to trigger change. The Travellab allowed  
725 project participants to experience the physical environment as well as the socio-economic

726 and cultural contexts surrounding the cities where the project meetings took place, during  
727 the field trips and carousels with stakeholders. The Travellab created a space for FACESMAP  
728 participants to learn more in depth about the implications of ownership and policy changes  
729 on sustainable forest management in Europe and this might have a positive impact in  
730 dealing with this wicked problem in the future. Since local context matters in the design of  
731 solutions to wicked environmental problems, such as sustainable forest management, this  
732 learning space favoured quality engagement with stakeholders in their physical and social  
733 environment and consequently joint learning about relevant research questions to  
734 investigate in the future. Duckett et al. (2016) considers that given the scale of challenges  
735 such as the implementation of sustainable forest management, any positive impact resulting  
736 from strategies to tackle wicked problems, even where it may exist, is extremely difficult to  
737 assess. The Travellab, and this article, made a substantial effort to assess impact by  
738 systematically recording and analysing evidence on how learning was occurring during the  
739 process of implementation of the approach. This evidence indicates that the Travellab  
740 favoured joint learning and researchers' behaviour change, which may positively contribute  
741 to the implementation of successful strategies that support sustainable forest management,  
742 in their countries, in the future.

743

744 The Travellab triggered researchers to rethink the underlying assumptions and norms  
745 associated with conventional research (e.g. disciplinary). The Travellab strongly encouraged  
746 the adoption of a combination of participatory research methods, which included the  
747 dissemination of introductory materials (handouts/presentations), the use of a  
748 comprehensive, iterative and interactive format, walking interviews, carousels and the  
749 inclusion of joint reflection sessions. The Travellab favoured inter- and transdisciplinary  
750 research approaches, which are key-approaches to deal with wicked environmental  
751 problems, but often undervalued in academia.

752

753 The Travellab was developed specifically for a large COST Action (FACESMAP), carried out  
754 over four years, and incorporated an international network of around 70 participants with  
755 different disciplinary backgrounds from 30 European countries. The approach added greater  
756 value to casual stakeholder interaction, and its implementation in similar research projects  
757 is highly recommended. The process is particularly suited to large, longer term (multi-year),

758 collaborative, international and interdisciplinary projects with the aim of connecting  
759 research, [policy](#) and practice. The Travellab approach may also be suitable [for](#) smaller  
760 national projects, with fewer researchers involved and without the language barrier to limit  
761 interaction quality to such an extent. The basic set of interactive methods integrated within  
762 the Travellab can also be adapted to scientific excursions/field trips organised within one-off  
763 conferences for a diverse range of participants. Furthermore, the approach can also be  
764 adapted to any research topic(s) in or outside the forestry field.

765

766 [Unlike many research projects, the Travellab did not fall short in applying the basic](#)  
767 [principles and up-to-date methods for inter- and transdisciplinary research \(Brandt et al.](#)  
768 [2013; Zscheischler and Rogga 2015\) as it considered stakeholder participation seriously. The](#)  
769 [Travellab addressed most of the requirements for effective participation, such as early and](#)  
770 [fair involvement, transparency and openness of the decision-making process \(Newig, 2007\).](#)  
771 [Similarly to other inter- and transdisciplinary research projects and experiences, the](#)  
772 [Travellab approach also faced many content-related and organisational challenges, namely](#)  
773 [those related to the integration of different knowledge types \(from practice and research](#)  
774 [and from different disciplines\) and disincentives from the science system \(e.g. universities\)](#)  
775 [for researchers to invest time in inter- and transdisciplinary research.](#)

776

777 [Some limitations of the Travellab are related to two typical challenges, which are often](#)  
778 [found in inter- and transdisciplinary research: First, the limited resources led to research](#)  
779 [dominance over capacity building and mutual learning. A review study found that in many](#)  
780 [transdisciplinary research projects scientists and practitioners do exchange knowledge but](#)  
781 [real stakeholder empowerment is rare \(Brandt et al. 2013\). Second, more attention should](#)  
782 [be paid into how different interests and power relations between stakeholders may](#)  
783 [influence the interaction patterns \(Maasen et al. 2006; Weiss et al. 2011\). Therefore, it is](#)  
784 [recommended to engage experienced facilitators, consider stakeholders' interests when](#)  
785 [planning field visits and carousel discussions, and to consider their power relations when](#)  
786 [interpreting the discussion results. One specific challenge found during the Travellab was](#)  
787 [the trade-off between a more scientifically oriented process \(Wallin et al. 2016\) versus the](#)  
788 [aim of successful joint learning of the whole group of researchers and the stakeholders](#)  
789 [involved in the process \(Schauppenlehner-Kloyber and Penker 2015\). In order to ensure](#)

790 joint learning amongst researchers and stakeholders, the planning of future Travellabs  
791 should prioritise [the following points](#):

792

- 793 - Clarification of the aims of the Travellab approach at the start of the project,  
794 [allocation](#) of sufficient time and financial resources, strong leadership and ensure  
795 adaptive project management. If possible, dedication of a whole Work Package to  
796 the approach;
- 797 - Engagement of researchers with experience in facilitation techniques or professional  
798 facilitators to assist stakeholder interaction (experienced researchers may also train  
799 researchers with less experience in participatory methods so these can facilitate the  
800 interactions);
- 801 - Involvement of researchers and stakeholders at the different stages of the process,  
802 including the development of the methodological set-up, [simultaneous](#) reflections  
803 and the [discussion of](#) final conclusions;
- 804 - Summary and iterative assessment of the results at the end of each Travellab and  
805 provision of space for group and individual reflection at regular intervals and  
806 whenever suitable;
- 807 - Favouring knowledge exchange between researchers and stakeholders instead of  
808 one-way interactions by allocating appropriate time resources and considered  
809 multiple formats.

810

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818

819

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## **Learning about forest ownership and management issues in Europe while travelling: The Travellab approach**

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## **Abstract**

Forest management, with its diverse land-use and institutional pressures, can be considered a “wicked problem”. Transdisciplinarity and social learning are considered relevant approaches of investigating “wicked problems” because they favour creative solutions, stakeholder involvement and the reframing of problems. Taking this into account, participant researchers in the COST Action FACESMAP developed the Travellab approach to enhance their understanding of forest ownership, management and policy across Europe. The Travellab favours interaction in a structured way, collection and analysis of the information discussed, reflection about the process and the topics learnt, and reframing of the discussion topics and of the interaction techniques. This article explores the effectiveness of the Travellab to enhance researchers’ learning during interactions with stakeholders. The evidence presented indicates that the Travellab improved joint learning among researchers and enriched the quality of knowledge transferred, but did not effectively support knowledge exchange. Nevertheless, the Travellab added greater value to FACESMAP field visits when compared to ordinary field trips embedded in project meetings. The implementation of the Travellab approach in research projects of all sizes and international networks to improve group and individual learning is, therefore, highly recommended.

**Keywords:** wicked problems, transdisciplinarity, social learning, stakeholder, forest management

## **Highlights**

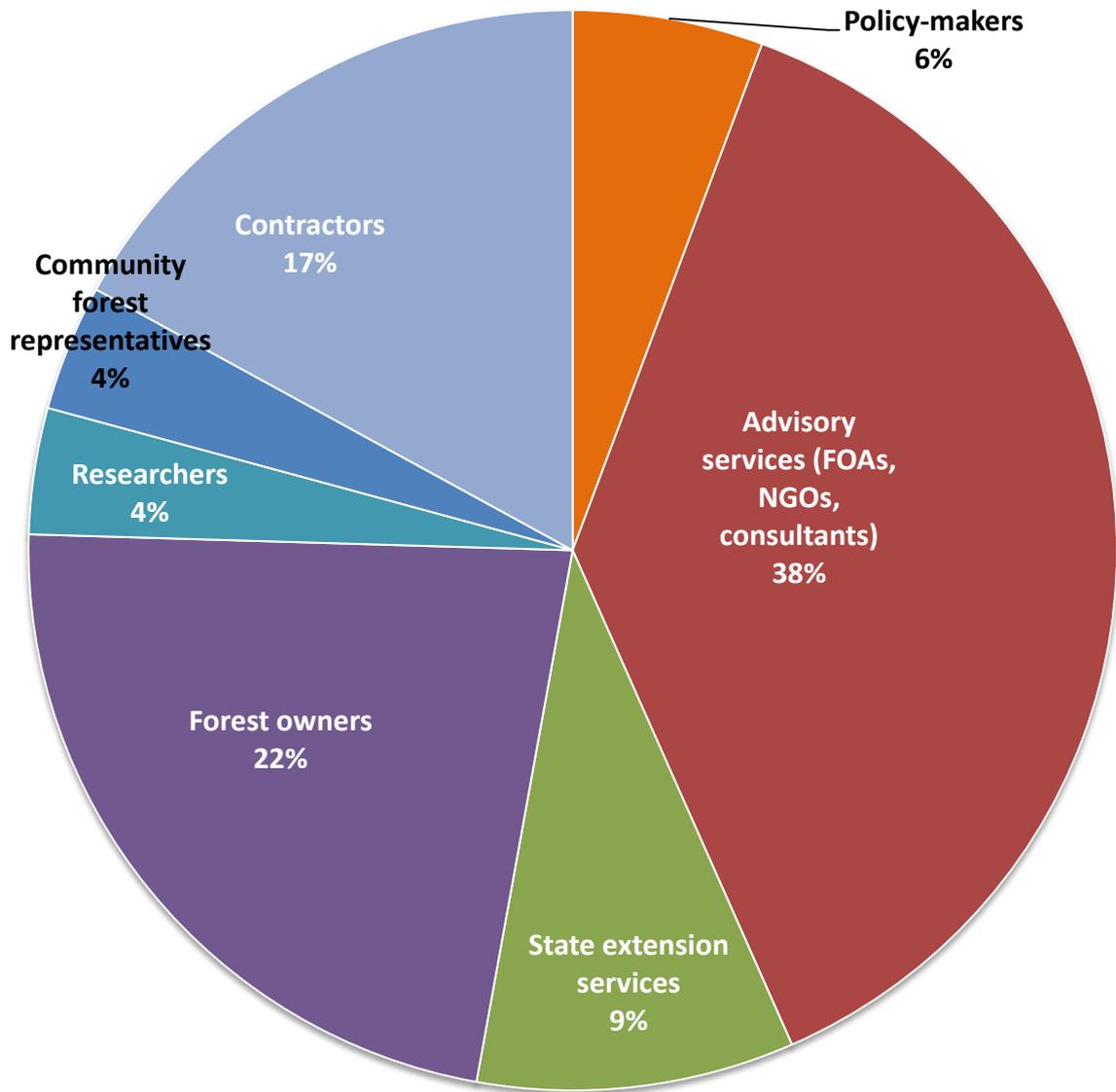
The Travellab is a transdisciplinary approach for stakeholder interaction

The Travellab exposed the diversity of forest issues across Europe

The Travellab improved joint learning

The Travellab added value to ordinary field trips embedded in COST Actions

The Travellab can adapt to research projects, one-off conferences or networks

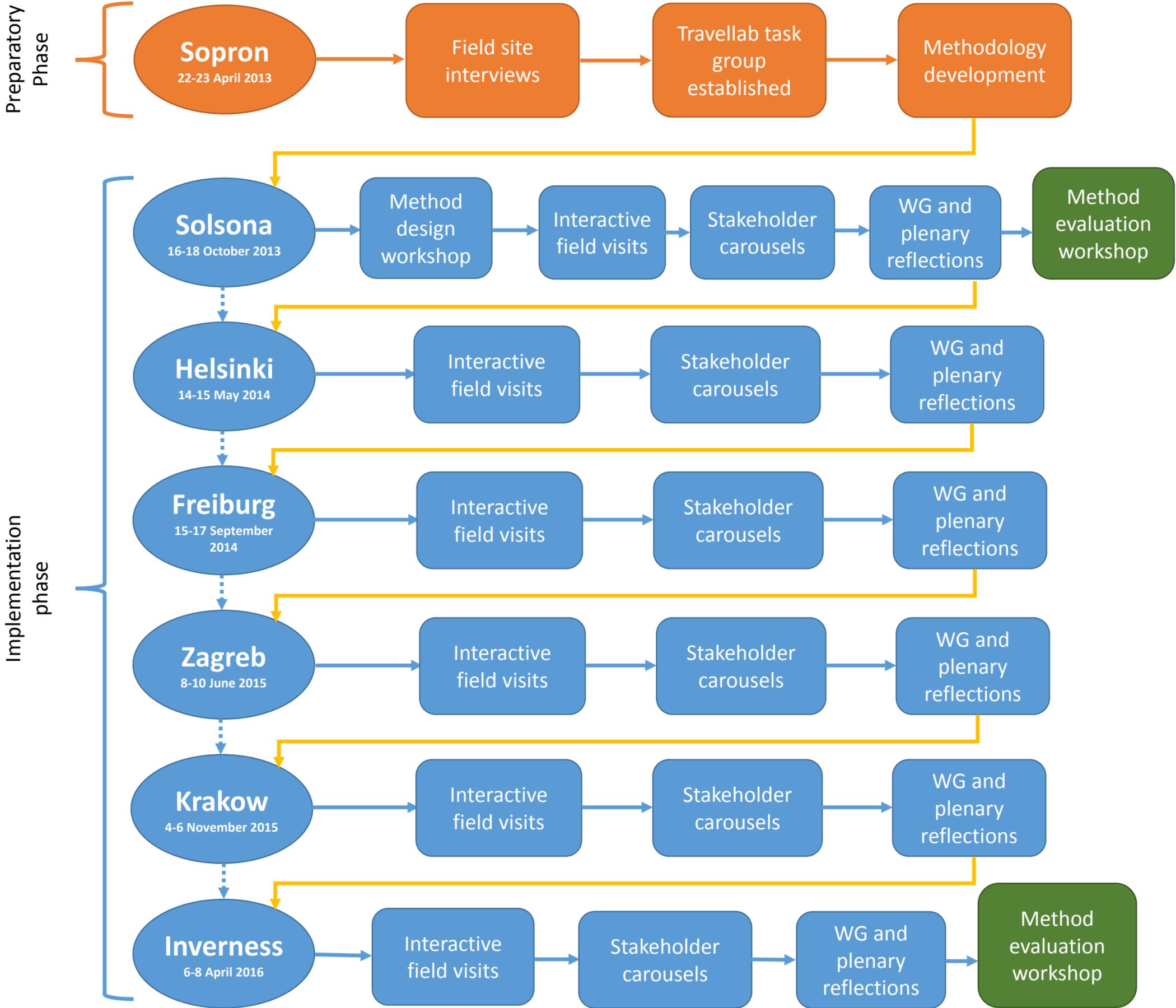


**Figure 1** Stakeholders types involved in the Travellab

**Note:** FOAs – Forest Owners Associations, NGOs- Non-Governmental Organisations

**Table 1:** Recommendations from note takers (observation notes)

<b>Site</b>	<b>Recommendations</b>	<b>Implementation status</b>
<b>Solsona</b>	Exchange knowledge about the situation in other countries with local stakeholders	Not implemented
	Allow all participants to ask questions	Implemented
	Discuss the “Travellab” and summarise the findings within each working group	Implemented
	Structure better the method	Attempted
<b>Helsinki</b>	Present the context of the country, map the stakeholders, prepare handouts before the “Travellab”	Implemented
	Formulate questions according to the Working Group topics	Implemented
	Choose themes to explore instead of questions to ask	Not implemented
	Do not join together forest owners and institution representatives	Attempted
	Have a moderator	Implemented
<b>Freiburg</b>	Learn interview techniques (avoid closed questions)	Attempted
	Avoid repetition of questions	Attempted
	Find comfortable venue to undertake the interviews	Attempted
	Everybody should know their roles beforehand	Implemented
	Have someone responsible for management of the interview (moderator)	Also recommended in Helsinki
<b>Zagreb</b>	Have a facilitator/moderator	Recommended in Helsinki and Freiburg
	Avoid having all parties together as this creates tensions	Also recommended in Helsinki
	Inform local hosts they should keep information short	Attempted
	Improve interaction between the “Travellab” Task Group and the local hosts	Attempted
<b>Krakow</b>	Have a moderator	Also recommended in Helsinki, Freiburg and Zagreb
	Use questions in a sensible way	Also recommended in Freiburg
	Present the stakeholders (who is who) beforehand	Attempted
	Have a good translator, who is not biased but neutral	Not applicable as following meeting to happen in Inverness (UK)
<b>Inverness</b>	Allocate roles to participants	Also recommended in Freiburg
	Allow for people who are really interested in the topic or have a good “knowhow” ask questions so the conversation is sustained	For future



## Appendix 1

### List of questions asked during the Travellab

#### *Questions for private forest owners:*

- What are your feelings towards your forest property?
- What are your sources of income?
- What does being the forest owner mean to you?
- What are the property rights restrictions now and how do they compare with those in the past?
- What type of forest owner do you consider yourself (traditional/non-traditional)?
- If you had 3 wishes to improve forestry in the region, what would they be?
- What changes related to your forest or your business occurred in the past 5 years?

#### *Questions for other stakeholders types:*

- What do you consider to be the differences between traditional forest owners and non-traditional forest owners?
- What role do incentives play in regional forest management?
- What is your role in in policy making?
- What are the biggest challenges that you face in your job/role related to forestry?
- What are the biggest challenges faced by PFOs in this region/country?

## Appendix 2

### Main topics learned during the Travellab

Topics learnt	Typical quotes extracted from content notes illustrate well the topics discussed	Site
<b>Local context</b>	“The forest has declined in terms of importance on the farm, agriculture now more profitable (...) it is not profitable any more. Thirty years ago they introduced cattle (...) this is their main income at the moment.”	Solsona
<b>Forest attitudes towards forest ownership</b>	„There is a strong connection with the forest, especially with the community. The members of the forest community are willing to help/support the forest technician in his work.“	Krakow
<b>Forest uses</b>	„Due to good prices for wood and the combination of the revenues from the agricultural production they lived well after the war (forestry and farming are closely connected)“.	Freiburg
<b>Perceptions of “traditional”vs „non-traditional“</b>	„Traditional forest owners live locally and derived their income from agricultural and forest land.“	Helsinki
<b>Management approaches</b>	“The main goal of the father was to develop the diverse portfolio of services (farming, forestry, wooden chips, thermic and hydro plants, restaurant). They have already achieved a lot of these goals”.	Inverness
<b>Challenges</b>	„He sees the greatest challenge the communication with buyers and operators but feels that his proximity to the forest made this easier for him than others“.	Krakow
<b>Advisory/knowledge systems</b>	“The Centre Tecnològic Forestal de Catalunya (CTFC) is important to keep the management knowledge alive.”	Solsona
<b>Forest policies and role of incentives</b>	“He finds the environmental policies are very restrictive. His land would have been a good site for wind turbines but he isn't allowed to build them.”	Freiburg
<b>Gender</b>	“There are not many female forest owners in the area and it feels good to be a woman owning a forest as the traditional male foresters like to help her.“	Zagreb

### Appendix 3

#### Observations about the effectiveness of the Travellab

Effectiveness theme	Typical quotes extracted from observation notes	Site
<b>High level of attention by participants during discussions</b>	„Some participants sat down to make notes and were very concentrated.“	Solsona
	„Very interested and attentive audience when explaining the local forest advising practices“	Freiburg
	„In this group some contradictions became visible what made the discussion more interesting for the audience.“	Krakow
	„high attention still when near 20 minutes passed (...)“	Inverness
<b>High quality of the interaction with stakeholders</b>	„I think with this process stakeholders became more engaged and enjoy more the process.“	Freiburg
	„Stakeholders' workshop has very good and deep knowledge.“	Helsinki
	„Great choice of stakeholders“	Zagreb
	„the differing viewpoints of the stakeholders make the discussion vivid.“	Inverness
<b>High quality of the information exchanged</b>	„Information of stakeholders was structured.“	Helsinki
	„Introduction was perfect - led by person who is familiar with situation.“	Freiburg
	„Questions keep coming and even interesting experiences are revealed. Some questions include reflections, making questioning more interactive and fostering dialogue-mode.“	Zagreb
<b>Individual and joint reflection about the questions posed to stakeholders</b>	„It seems that the interviewees will tell their story regardless of the question asked.“	Solsona
	„Sometimes questions became too technical.“	Helsinki
	„The three wishes question (It was new to me in that context, I found it revealing and liked it!)“	Freiburg
	„the lady is cheerful and people listen, questions are asked and eagerly answered, saw people sitting close and writing.“	Zagreb
	„They expressed their astonishment about the questions the Working Group was asking them. The first time in the Cost-Action the stakeholder turned the tables and asked questions back.“	Krakow
	„The questions were asked “naturally” – each other rise from answer given to the previous question or leads to nice negotiations – nice conversation not examination.“	Inverness

## Appendix 4

### Researcher's views about the effectiveness of the Travellab in the specific workshops

Solsona (October 2013) – Typical quotes from researchers	Inverness (April 2016) – Typical quotes from researchers
<ul style="list-style-type: none"> <li>• “Most useful: Got a picture of how the forest sector works in this part of Europe, from the small private owner to policymaker.”</li> <li>• “Very interesting day putting theory into practice. Great to meet forest owners at the site. Stakeholder session gave me a lot of new insight in Catalanian forestry.”</li> <li>• “(...) the perspectives and future trends for PFOA's<sup>1</sup> were very well explained and useful for our work within Working Group.”</li> <li>• “In my opinion Travellab is the most important part of such a meeting.”</li> <li>• “More structured approach to hold excursions and meet with stakeholders in workshop helps group to have joint focus.”</li> <li>• “Travellab is a good technique to getting into real context.”</li> </ul>	<ul style="list-style-type: none"> <li>• „Constructive process: Framing, field visit, intermediaries.“</li> <li>• „We did something more relevant than comparing countries.“</li> <li>• „We saw exceptional, model examples in field trips, - Not complex, messy cases“</li> <li>• „A distinct improvement compared to other COST Actions.“</li> <li>• „Collectively, designing and reflecting the process is valuable.“</li> <li>• „Repeated interaction has value.“</li> <li>• „Good method for us as a group but who is going to synthesise?“</li> <li>• „Travellab is not a new “method” rather it is an “approach” for case study research.“</li> <li>• “People opened up in such a small group.”</li> </ul>

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<sup>1</sup> PFOA's – Private Forest Owners' Associations