

What We Wood Believe – Societal Perceptions of the Forest-based Sector (W3B)

FINAL REPORT

Title of the research project	What We Wood Believe – Societal Perceptions of the Forest-based Sector
Coordinator of the project	Tobias Stern

BASIC PROJECT DATA

Project period	01.05.2014-31.01.2017
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URL of the project	http://wood-w3b.eu/de/

FUNDING

Total budget in EUR	737,790
Public funding from WoodWisdom-Net Research Programme: 570,203	Total funding granted in EUR by source:
<u>Austria</u> Federal Ministry of Agriculture, Forestry, Environment & Water Management (BMLFUW)	202,500
<u>Finland</u> Tekes – the Finnish Funding Agency for Innovation	105,203
<u>Germany</u>	



Agency for Renewable Resources (FNR) 105,000

Slovenia

Ministry of Education, Science and Sport (MIZS) 157,500

Other public funding:

none

Other funding:

The Central Union of Agricultural Producers and Forest Owners, Finland 10,000

Finnish Sawmill Association, Finland 5,000

Austrian Federal Forests, Austria 5,000

Association of the Austrian Wood Working Industry, Austria 5,000

European network of Forest Entrepreneurs, Germany 5,000

Association of Forest Owners (AGDW), Germany 5,000

Timber Association (AGR), Germany 25,000

German Wood Working Association (VHI), Germany 5,000

PROJECT TEAM (main participants)

Name, degree, job title	Sex (M/F)	Organization	Country
Tobias Stern, Prof., Professor	(M)	University of Graz	Austria
Anne Toppinen, Prof., Professor	(F)	University of Helsinki	Finland
Bernd Wippel, Dr., Managing Partner	(M)	Unique Forestry Consulting	Germany
Andreja Kutnar, Dr., Associate Professor	(F)	University of Primorska	Slovenia
Manja Kitek Kuzman, Prof., Professor	(F)	University of Ljubljana	Slovenia

DEGREES (if relevant)

Degrees earned or to be earned within this project.

Year	Degree	Sex (M/F)	Name, year of birth and year of earning M.Sc., D.Sc., etc. Degree	University	Supervisor of thesis, supervisor's organization
2017	Dr.	F	Lea Ranacher	University of Natural Resources and Life Sciences, Vienna	Tobias Stern
2016	DI	F	Julia Huber	University of Natural Resources and Life Sciences, Vienna	Peter Schwarzbauer
2016	DI	F	Kathrin Höfferer	University of Natural Resources and Life Sciences, Vienna	Peter Schwarzbauer
2016	DI	F	Marina Luggauer	University of Natural Resources and Life Sciences, Vienna	Peter Schwarzbauer
2016	DI	M	Johannes Urschitz	University of Natural Resources and Life Sciences, Vienna	Peter Schwarzbauer
2015	MSc	F	Elina Korhonen	University of Helsinki	Anne Toppinen
2016	MSc	F	Hannele Suojanen	University of Helsinki	Anne Toppinen

PROJECT SUMMARY REPORT

A summary of the project, preferably one page only

The objective of the W3B-project was to create and demonstrate innovative and cost-efficient ways for communicating towards stakeholders the relevance of the European forest-based sector and its products for a sustainable bio-economy.

Therefore, the project mapped the state of communication analyzing the website content of 80 companies and industry associations with a focus on eight “core topics of interest” (TOI) formulated at an international stakeholder meeting. The most commonly communicated topic was Forests and economy (FEC), particularly within large companies and especially in Finland and Austria. Instead, Added Value (AVA) was emphasized especially within family businesses and SMEs operating in Slovenia. In comparison, the least emphasized topics were Wood-based innovations (WBI) and Forest ecosystem services (FES).

An online survey with 2500 participants mainly from Germany, Austria, Slovenia, and Finland investigated the state of attitude towards the eight TOI. Measured in levels agreement, the state of attitude varies between TOI with some TOI showing higher levels of agreement than others. Furthermore, the level of agreement is influenced by respondents’ connection to the forest based sector. For certain topics, respondents without sector connection more often disagree or are indecisive. For example, Added Value (AVA), Building With Wood (BWW), and Forest Ecosystem Services (FES) are less affected by sector connection, than Conservation by Production (CBP), Wood based innovation (WBI), and Forest and the Economy (FEC).

The project identified respondents without sector connection as target group and topics with a high share of indecisive answers as key topic requiring further attention. Living Labs and focus groups were introduced to create narratives. They were used individually by all project partners for selected topics. To transmit the messages of the sector, we suggest to either provide targeted information at a point of emotional concern or to package the content in an entertaining way e.g. a quiz, game, short movie or comic. We used cognitive response experiments to assess the narratives efficiency in influencing respondents’ attitudes.

After being exposed to the narrative, respondents without sector connection have similar attitudes as the respondents with sector connection. Thus, the narratives have the potential to level out differences between these two groups. However, long-term effects of the experiments remain unknown. Four demonstration activities were developed and introduced at the final stakeholder workshop on the 22nd of September 2016 in Brussels:

- Online quiz game
- Digital version of the information boards
- Machine learning (market segmenting tool)
- Animation movie

1.1 Introduction

1.1.1 Background

Describe the background of the project and the basic problem that it sought to address.

Over the last few decades, crucial changes have taken place in the views and demands on forests by society at large with the increase in environmental awareness and at the urge to re-orient societies towards “sustainable”, “green” and/or “bio-based” economies. The forest sector’s actual contribution, however, is dependent on policymakers as well as on European citizens and how they perceive, accept and promote forest-based products and the activities carried out to produce these products. In the light of these developments, the overall objective of the W3B-project is to create and demonstrate innovative and cost-efficient ways of communication towards stakeholders the relevance of the European forest-based sector and its products for a sustainable bio-economy.

1.1.2 Objectives

Describe the project objectives.

The project therefore investigated the state of attitude and social perception of the forest-stakeholder-system. Based on these investigations, living labs and cognitive response experiments were used to develop stakeholder-oriented narratives and assess their efficiency towards comprehensive communication. The results of the project enable the forest-based sector to develop customized communication strategies to transport the relevant information, stimulate public discussion and achieve societal acceptance and support regarding its contribution towards a sustainable society. Overall the project provided an applied understanding of the current status and the role of knowledge in the public perception of the sustainability of the forest-based sector.

1.2 Results and discussion

Main achievements of the project, quality, innovativeness, industrial relevance and contribution to competitiveness, environmental and societal impact.

- The state-of-the-art literature scientific review shows, that the communication in the sector lacks fundamental communication principles.
- Communication efforts of our sample organizations heavily focused on distributing information (e.g. supplying facts or by mentioning use of environmental certificates or standards).
- The general public strongly recognized the role of forests in providing fresh air and having a positive impact on the global carbon balance, whereas it is insecure whether forest area is increasing and is critical whether forest companies act responsibly concerning their environmental impacts.
- Sector connection through formal education, work or forest ownership has a strong influence on the public perception of topics pursued by the sector. However, this influence depends on the topic.
- Our experiments show, that when being exposed to tailored information forest visitors attitudes transform from ecological concerns and negative visual perception towards economic considerations.

1.3 Conclusions

The most important contributions to the state-of-the-art, derived from the results and discussion.

The general public lacks interest in certain forest-based sector related topics. They do not actively inform themselves about wood supply or forest management practices. To communicate these topics, we advise to provide this information at a point of emotional activation.

Overall, the project contributed to an improved understanding of communication mechanisms in the forest-based sector. Besides concluding remarks we added recommendations based on each finding (see Report on Major Results). They are aimed to guide future communication activities towards the general public.

1.4a Capabilities generated by the project

Knowledge generated in the project / outcomes of the project, such as unpublished doctoral theses, patents and patent applications, computer programs, prototypes, new processes and practices; established new businesses; potential to create new business opportunities in the sector.

Due to the social science nature of the project no patents and patent applications were generated. The tools developed by the demonstration phase of the project include several prototypes like an online quiz game or a market segmenting tool based on machine learning.

1.4b Utilisation of results

Give a brief description of how the results of the research and development have been used and/or what is the exploitation plan or plans for transferring the results into practice.

The results were wrapped up in the Major Project Results Report and Good Guidance Report, of which the latter is in particular for practitioners. During the project five stakeholder workshops have been used to transfer results to relevant stakeholder and also incorporate their feedback in the project progress. Especially the final workshop held in Brussels was very well attended by relevant stakeholders.

1.5 Publications and communication

a) Scientific publications

For publications indicate a complete literature reference with all authors and for articles a complete name. Indicate the current stage of the publishing process when mentioning texts accepted for publication or in print. Abstracts are not reported. Indicate the five most important publications with an asterisk.

1. Articles in international scientific journals with peer review

*Korhonen E, Toppinen A, Lähtinen K, Ranacher L, Werner A, Stern T, Kutnar A, (2016)
Communicating Forest Sector Sustainability: Results from Four European Countries.
Forest Products Journal 66: 362-370.*

- Ranacher, L., Stern, T., (2016) *Are your messages being heard? Evaluation of the forest-based Sector's communication of sustainable forest management in Austria. Journal of the Austrian Society of Agricultural Economics 25: 159-168.*
- Ranacher L, Lähtinen K., Järvinen, E, Toppinen A, (2017) *Perceptions of the general public on forest sector responsibility: A survey related to ecosystem services and forest sector business impacts in four European countries. Forest Policy and Economics 78: 180-189.*
- Lähtinen K, Toppinen A, Suojanen H, Stern T, Ranacher L, Burnard M, Kitek Kuzman M, (2017) *Forest sector sustainability communication in Europe: A systematic review on the contents and gaps. Journal of Current Forestry Reports, (in press)*
- Ranacher L , Stern T, Schwarzbauer P, (submitted) *Perceiving the wood butnot the trees? Public perception of the forest-based sector's contribution to climate change mitigation. Austrian Journal Forest Science.*
- Huber, J., Ranacher, L., Stern, T., Schwarzbauer, P. (submitted) *Forest management or greed of gain? – An information experiment on peri-urban forest visitors' attitudes regarding harvesting operations. Journal of Urban Forestry and Urban Greening.*
- Toppinen, A., Vihakara, M., Lähtinen, K., Berghäll, S., Ranacher, L., Mair, C. & Stern, T. (under preparation) *Public perceptions on forest sector innovativeness: biofuels, biomaterials or what?*

2. Articles in international scientific compilation works and international scientific conference proceedings with peer review

Toppinen, A., Lähtinen, K., Korhonen E., Ranacher, L., Stern, T., Kutnar, A., Burnard, M., Kitek Kuzman, M., (2015) "Communicating forest sector sustainability: results from a four-country comparison in Europe" SWST/IUFRO 5.10 conference proceedings

Huber, J.; Ranacher, L.; Stern, T (2016) Forest management or greed of gain? – a case study of forest visitors' attitudes on forest operations, 26th Annual Conference of the Austrian Society of Agricultural Economics, Vienna, Austria

Lähtinen-Toppinen-Suojanen-Stern-Ranacher-Burnard-Kitek Kuzman (2016) "Forest sector sustainability communication in Europe: A systematic review on the contents and gaps", Biennial Conference of Scandinavian Society of Forest Economists, 25-27.5.2016, Oscarsborg, Norway.

Ranacher & Stern (2015) "Wood you believe it? Pro-environment is pro-forestry" (Ranacher & Stern) oral presentation at the conference InWOOD2015: Innovations in Wood Material and Processes, Brno, Czech Republic, May 2015.

Burnard et al. (2016) "Public Perception of Wood as Building Material", SWST International Conference; Forest resources and Products: Moving toward a Sustainable Future, Curitiba, Brazil, March 6-10, 2016

3. Articles in national scientific journals with peer review

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4. Articles in national scientific compilation works and national scientific conference proceedings with peer review

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5. Scientific monographs

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6. Other scientific publications, such as articles in scientific non-refereed journals and publications in university and institute series

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a) Other dissemination

Such as text books, manuals, user guidelines, newspaper articles, TV and radio programmes, meetings and contacts for users and results.

Dissemination of results to industrial partners and industrial partners dissemination within the company.

- Wood News “Erfolgreich kommunizieren im Forst-Holz-Sektor“ , September 2014 (Ranacher)
- Der Waldwirt Forstkammer Baden-Württemberg e.V. “Forst-Kommunikation erfolgreich bei Personen mit hohem Umweltbewusstsein“, March 2015 (Ranacher)
- wald-in-oesterreich.at “Erfolgreich kommunizieren im Forst-Holz-Sektor“, May 2015 (Ranacher)
- ÖBf-Forschung 2014 Jahresbericht (research report of the Austrian Federal Forests) “What We Wood Believe“, June 2015
- Forest Information Billboard “What We Wood Believe W3B –Societal Perceptions of the Forest-based Sector” Issue 1, March 2015
- Forest Information Billboard “What We Wood Believe: international online survey“, Issue 2, June 2015
- Holzkurier “Neue Wege der Kommunikation“, April 2016
- Wood News “Es geht darum verstanden zu werden“, April 2016 (Ranacher)
- Website Innovawood „Communications for the European forest based sector: opportunities and challenges“ (Dieguez, Wippel, Viergutz) Available at: <http://www.innovawood.com/LinkClick.aspx?fileticket=xSAfR4cc3vQ%3d&tabid=230>
- Holz-Zentralblatt “Es fehlt an Wissen über die Holznutzung“, September 2016 (Wippel, Dieguez, Ranacher, Stern)

1.6 National and international cooperation

Give a brief description of the cooperation/ networking (partnership between the project participants and how this has developed; industrial involvement; synergies of industrial and research expertise; Has the project collaborated with similar projects in the WW-Net countries or other regions, or established new links with/ between local or

international organisations involved in the respective research field? Describe how these partnerships have supported the project.

National vs. transnational aspects in the project; added value for the project and its impacts which result from transnational cooperation.

Cooperation and networking between project participants was mostly done at the kick-off-meeting and five project meetings (before or after the stakeholder workshops). In the project meetings, results were presented and further procedures concerning project management as well as work packages discussed. Next to this face-to-face communication, project partners communicated with each other via e-mail, telephone and conference calls on a regular basis. In some cases a project partner visited each other (e.g. Anne Toppinen and Bernd Wippel visited Wood K plus).

Especially the short term scientific missions are pointed out as an example of excellent cooperation. They allowed young researchers to visit the project partners to jointly work on the project (Laura Dieguez visited Wood K plus in November and Lea Ranacher visited University of Helsinki in February 2016).

Cooperation and networking with non-partners took place at the four international stakeholder workshops.

- 1st stakeholder workshop in Helsinki: Kai Merivuori Finnish Sawmills Association, Andrea Steinegger Austrian Wood Working Association, Illmari Absetz Tekes, Simo Jaakkola European Network of Forest Entrepreneurs, Erno Järvinen MTK, Kai Lintunen Finnish Forest Association, Jukka Tissari Food and Agriculture Organisation.
- 2nd stakeholder workshop in Freiburg: Hagen Maraun proHolz Baden-Württemberg GmbH, Yvonne Hengst-Erhart Forstkammer Baden-Württemberg, Jan Bulmer proHolz Schwarzwald, Andy Selter University of Freiburg, Carol Grossman Forest-Based Sector Technology Platform.
- 3rd stakeholder workshop in Ljubljana: Kim Turk Ministry of Education, Science and Sport, Ales Marolt Kocevski les company, Bernhard Likar Chamber of Commerce and Industry of Slovenia, Ziga Simoncic Advantage Austria, Maji Mesil, Polymer Technology College, Bostjan Temniker, Municipality of Slovenj Gradec, Luha Zajec Race Kogo, Indah Sulistiana Kunorco Student Technical University of Vienna
- 4th stakeholder workshop in Vienna: Sandra Czezelitz forvisions, Martin Greimel Austrian Ministry of Agriculture, Forestry, Environment and Water Management, Hermine Hackl Kooperationsplattform Forst Holz Papier, Günther Jauk Holzkurier, Monika Kanzian Austrian Federal Forests, Christian Lackner Federal Forest Research Institute, Lisa Lehner Austrian Ministry of Agriculture, Forestry, Environment and Water Management, Gerhard Mannsberger Austrian Ministry of Agriculture, Forestry, Environment and Water Management, Bernhard Wolfslehner European Forest Institute, Gerda Wolfrum International Unions of Forest Research Organizations, Julia Huber BOKU student.
- 5th Stakeholder Workshop in Brussels: Karen Bennett Forest Stewardship Council (FSC) International, Jean-Baptiste Boucher European Biomass Association (AEBIOM), Dan Burgar KUŽELIČKI European Commission, Sylvain Lhôte Confederation of European Paper Industries (CEPI), Salvatore Martiere European State Forest Association (Eustafor), Thais Mattos Forest-based Sector Technology Platform (FTP), Sergej Mozina Representation of the Republic of Slovenia to the EU, Xavier Noyon Programme for the Endorsement of



Forest Certification (PEFC), Clive Pinnington European Panel Federation (EPF), Peter Sauerwein Verband der Deutschen Holzwerkstoffindustrie e.V. (VHI), Laura Salo Confederation of European Forest Owners (CEPF), Zoe Volioti Sustainability Consult, Melanie Wollenweber Arbeitsgemeinschaft Rohholzverbraucher e.V. (AGR), Heini Hyrkkö Forest-based Sector Technology Platform (FTP), Diego Benedetti European Organization of the Sawmill Industry (EOS)

Apart from the workshops, the project has been presented to a wide range of different stakeholders from policy, industry and media representatives over to general public such as students, pupils, and forest visitors.