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ALTERFOR (Alternative models and robust decision-making for future forest management) is a joint European Horizon 2020 project examining existing forest management models (FMMs) in the light of different alternative scenarios over 100-years period in ten case studies: Germany, Italy, Ireland, Lithuania, the Netherlands, Portugal, Slovakia, Sweden, and Turkey. The project develops robust FMM alternatives for delivering ecosystem services and reducing vulnerabilities at stand to landscape level and aims to provide based on the innovative results policy support in practice. The knowledge transfer activities are oriented toward the RIU-model which claims to bridge science and practice. The RIU-model assumes Research and Utilization of scientific results (which comprises politics) as independent phases which follow their own rational: science is looking for new theoretical and empirical based knowledge whereas utilization by practice and politics is an interest and power driven process. Nevertheless, the both different areas can be bridged by "Integration". Integration builds a link by fully respecting the autonomy of science but selecting specific results and research questions which fits into the interests of actors. These actors will become allies for scientific knowledge transfer who put their power behind specific science-based solutions forcing other actors to follow them.In all cases ALTERFOR analyzed existing networks of forest-related actors, organized workshops with targeted actors and critically analyzed experiences with such Integration activities. They show that a big project like ALTEROF creates promising linkages into practice but lacks resources to implement the RIU-model on a high level and trigger major impact that way.

Storytelling for science communication and media engagement

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Storytelling is one of the most effective and natural mechanisms to supply new knowledge to the human brain. Using a storytelling approach in communications enables audiences of different professional and social backgrounds to learn about forest research projects. It also increases the likelihood of engaging media, thus increasing the visibility of the work. The session will focus on digital storytelling and filmmaking, which can be used effectively in a broad range of projects to drive change. I will outline the building blocks of an effective story and explain how these translate into film production. An essential building block is a character to whom viewers can relate, who conveys the key messages through un-scripted interview as an authentic voice. The session will include a screening of a successful film to illustrate the proposed ideas and will analyze the steps necessary for pre-production, production and promotion.

Explaining my PhD through cartoons

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During my PhD studies, I rediscovered my love for art, and learned that science and arts are not necessarily mutually exclusive. My thesis dealt with the emerging bioeconomy paradigm, the actors and political coalitions that shape the bioeconomy discourse in Europe. Political science is complex, the general stereotype being that it heavily relies on large amounts of dense, ambiguous text and scientific jargon. This preconception is not necessarily wrong. Indeed, communicating and simplifying the main points of ones research into small digestible bits of "take-home" or "key messages" is not always easy. Dealing with the bioeconomy issue from a political science perspective, made the task of communicating my research results even more daunting. An old saying goes, a picture can tell a thousand words. So I started experimenting with illustrations/cartoons that would explain my main findings in a fun and engaging way. I started creating digital art for my scientific papers and posting them on my personal blog. Later I experimented with explainer-animated videos in PowerPoint. So far the response has been nothing but positive.In this presentation, I aim to share my approach and the lessons I've learned from my attempts to communicate science with the help of cartoons.

Forestry and natural resources webinars: success, challenges, and implications based on 10 years of experience

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To help forestry professionals, landowners, and others increase their forestry and natural resource management knowledge, Universities have turned to using learning management systems for online education. The *Webinar Portal for Forestry and Natural Resources* is a learning management system designed to transfer research-based information from scientists and educators to practitioners, landowners and others, through live and on-demand webinars. The portal was developed through a partnership of university extension programs, government agencies and others to provide an effective platform for delivering webinars. Post webinar evaluations of approximately 3,700 participants utilizing the portal in 2018 indicate webinars are an effective tool for increasing participant knowledge and aspiration; two factors known to lead to adoption and implementation. Based on post evaluations 34% of the participants indicated an increase in knowledge and 65% aspire to further investigate the topic. These changes in knowledge and aspiration have resulted in 55%, 24% and 54% of the participants indicating they will improve their land management skills, business practices, and ability to respond to client questions respectively. By training online in 2018, verses on site, participants achieved over $11 million dollars in costs savings due to elimination of travel expenses. The portal is an effective tool for scientists and educators to disseminate knowledge to forestry professionals, landowners and others. Within the scope of this presentation, the authors will discuss lessons learned from delivering approximately 200 webinars, focusing on challenges faced in developing and delivering the webinars, and how webinars may increase the effectiveness and efficiency of technology transfer.

Use of an augmented reality app to disseminate integrated crop-livestock-forest systems / *Uso de aplicativo de realidade aumentada para a divulgação dos sistemas de integração lavoura-pecuária-floresta (ILPF)*

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A necessidade de expandir o entendimento de diferentes públicos sobre a complexidade dos sistemas de integração lavoura-pecuária-floresta (ILPF) levou à busca por novas ferramentas de comunicação que pudessem ser facilmente utilizadas por qualquer pessoa, em qualquer local, a qualquer momento. A tecnologia da realidade aumentada (RA) mostrou-se com grande potencial, tanto pela expansão do número de smartphones no país como pela sua praticidade

e interatividade. Desenvolveu-se, então, o aplicativo Maquete Virtual de ILPF em RA, que mostra a evolução de um sistema ILPF desde sua implantação, passando por todas as combinações possíveis entre lavoura, pecuária e floresta. O usuário pode acompanhar as diferentes etapas não só no que ocorre sobre a terra, mas também abaixo dela, como a mudança no perfil do solo, o ciclo de nutrientes e de carbono, a infiltração de água e o comportamento de raízes. O aplicativo foi disponibilizado nas versões Android e IOS, em português e inglês, e pode ser baixado gratuitamente nas lojas online. Para usá-lo é preciso imprimir uma imagem (target), para onde se aponta a câmera do celular ou tablet. Este aplicativo pode ser usado em palestras por pesquisadores, extensionistas e professores, sendo didaticamente adaptável aos seus diversos públicos. Além disso, esse app pode ser usado para divulgar a ILPF em feiras, exposições, congressos, entre outros eventos.

F9c: FOREST SCIENCE EDITING IN THE CONTEXT OF OPEN SCIENCE: WHAT CHANGES ARE AHEAD FOR US?

Global, regional, local: What kind of peer-reviewed forestry journals are being published?

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Bibliometric analysis of scholarly journals in forestry shows us high publishing in journals primary covering other disciplines (eg. Chirici, 2012), mostly due to low impact (eg. Bojovic et al., 2014). A key objective of IUFRO WP 9.01.06 (Forest Science Publishing) is to clarify the range of forestry journals within an overall goal of assisting both authors and readers to further our knowledge of forestry. In this study we expanded this list of forestry journals prepared by Vanclay (2008) using the ISSN database, journals indexed and cited in Web of Science and listed in Scopus, journal indexed in the Forest Science Database (or CAB s), and other sources. Each title was recorded with the ISSN, publisher, language of publication, web page, and geographical coverage (i.e. local, regional, national or international). It is hoped that the list will be published and regularly updated on the IUFRO website and therefor thereby available to forestry students, researchers, and practitioners.∎

What level of publication transparency should we request in forest sciences?

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Publication transparency is an important dimension of open science. Naturally, transparent publication with adequate opening of data, methods, and code is needed for fully understanding how a research was done and avoiding serious misunderstanding. Second, transparency is needed for evaluating the quality of the research even when good scientific practice is followed. Third, transparency is needed for reproducing new research findings or verifying results of inherently non-reproducible work, e.g. long-term ecological research. Fourth, reuse of research data in new studies or meta analyses requires full understanding on the study environment and methods. Fifth, transparency is needed for detecting questionable research practices. While serious scientific misconduct is quite rare, lighter deviations from good research practice, or sloppy science, are quite common: A recent survey indicated that up to 60% of ecology researchers have sometimes used questionable research methods. A peer-reviewer or an editor can detect them only if publication transparency is required. Both general and discipline-specific transparency guidelines have been published and major publishers have created their own versions of them yet the policies require stronger enforcement. Journals are in the frontline for bringing transparent practices to the main steam of research. Without a signal from journals, scientists' expectations for publication transparency are not likely to shift en masse towards open data, methods, and codes. Forest science journals should develop common guidelines on publication transparency because the typical characteristics of forest research, especially the large spatial and temporal scales, call for specific applications of common or publishers' standards.

The opportunities offered by open science to forest and wood science journal editors

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The movement towards open science has gained strong momentum across the world, which is good news for the editors of forest and wood science journals who favour the broadest possible dissemination of research results. The current trend is towards open data, open access to published papers, open review of submitted manuscripts, posting of pre-print manuscripts in open repositories. The number of submitted manuscripts increases readily and peer review is made difficult given the overload of work it induces. In parallel, the number of journals and outlets increases continuously. There is a strong competition between publishers and between journals, all aiming to attract the best and potentially most cited paper. This context, opposing the ideal of open science and the reality of competing interests of publishers may lead to the end of the traditional model of science editing/publishing and our good old journals. In the contrary, we believe that our journals still have a bright future ahead if they adapt to this new context and serve forest and wood sciences requiring long lasting time series, large data bases and tight cooperation across disciplines and countries. In this presentation, we will address following questions: (i) how can our journals adapt to this context and develop innovative and open editorial processes; (ii) how can they enhance their cooperation to develop the innovative editorial processes required by open science. Our final aim is in all cases to support the development of forest and wood sciences while their contribution is absolutely required.

Developing a sustainable solution to funding open access publishing

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Despite a widespread desire for Open Access (OA) publications from the research community and its stakeholders, one of the major stumbling blocks to OA remains the cost of publishing research. Publication costs are often covered by authors themselves, through an Article Processing Charge (APC), despite limited research budgets to do so. With funding agencies and institutions more commonly requiring published research to be made OA, there is a pressing need to identify alternative models for funding OA publishing. To tackle this issue, Canadian Science Publishing, a not-for-profit scholarly publisher, hosted a national summit with various Canadian stakeholders, including researchers, research administrators, librarians, publishers, and research funders. The purpose of the