Forest Ecosystems
a SpringerOpen Journal

EDITORIAL Open Access

Editorial – Forest Ecosystems

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Welcome to this first issue of *Forest Ecosystems*, a peer-reviewed, international Open Access journal managed and financed by the Beijing Forestry University, and published in cooperation with SpringerOpen. The journal will seek to provide an effective platform for sharing knowledge in a paperless publication process where all published articles may be freely downloaded and will be permanently archived. Our Editorial Board includes 30 distinguished scientists from 13 countries: ecologists, economists, modelers and an environmental consultant with a science background. In this launch editorial, following (Franklin, Bob 2013) we want to "unravel our ambitions" by posing four simple questions: **why? what? how? who?**

Why is there a need for a new journal?

Fundamental changes associated with the development of digital media technology have changed virtually every aspect of writing and reporting and many scholars involved in forest research have become increasingly aware of the need for a new international Open Access platform of Forest Science. The enormous significance of the world's forests regarding their large scale and importance for the global climate is not adequately represented by the few existing international OA journals. These few journals are "inundated" with manuscripts which signals a real need for additional outlets. Forest ecosystems are characterised by long time frames, multiple services, useful products and many stakeholders. Traditional assumptions regarding forest research and education are being challenged, and reassessment of even the most fundamental questions such as "who is a forest scientist?" are needed. We believe that a journal devoted to a broader view in forest science has the potential to make a significant contribution to scholarly publishing and we are delighted that the Beijing Forestry University in cooperation with SpringerOpen has decided to fill that gap.

What are the editorial ambitions for *Forest Ecosystems*?

Forest Ecosystems intends to provide what other journals are offering readers and authors: a place of research reporting and public discourse where argument and evidence can be tested. Journal contents should follow the journal title and we will seek and promote ecological studies covering natural and man-made forests; forest insects, birds and herbivores; forest fires and pests. At the same time we should acknowledge that the "Anthropocene" concept implies that human activities are a dominant feature of ecosystem dynamics. Thus, contributions to the journal must include research about the economic and ecological impact of harvest events and other human disturbances, resource assessment and modeling, and environmental policy. Human activities are part of ecosystem dynamics, and human perceptions of forests are changing. Many disciplines are involved in the study of wooded landscapes and all are welcome to become part of *Forest Ecosystems*. This newly launched journal will be a place for addressing common concerns with scholars and decision makers who share a similar interest and enthusiasm for forest studies. It will also be a repository for research results and an archive of change regarding the visions and methods of forest scholars. The more specific question about what will be the precise editorial ambitions and concerns of *Forest Ecosystems* is more difficult to answer because forest science constitutes a massive research area that is not fixed, but constantly evolving. Forest Science engages different types of research organisations and individuals and involves contributors with divergent professional backgrounds and educational achievements, who try to reach diverse audiences. Unfortunately, it is often hard for authors to get broader interdisciplinary work published, and we will try to assist them. Thus, *Forest Ecosystems* will be a place for research and scholarship with policy implications for natural and domesticated forest ecosystems.

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How will *Forest Ecosystems* achieve these editorial ambitions?

By developing an editorial policy which is committed to conceptual and methodological diversity, theoretical and practice-based studies and a global perspective. *Forest Ecosystems* will encourage methodologically diverse studies, employing both quantitative and qualitative approaches. We welcome scholarly contributions and anticipate a global reach where readers and contributors can access the journal at the touch of a tablet screen. To be relevant to readers and contributors, *Forest Ecosystems* will publish forest research in a wide range of geographical settings. We will especially try to seek out studies which explore developments in those regions which typically do not enjoy easy access to western-based journals. *Forest Ecosystems* will try to stimulate more and wider discussion about the manifold interactions in forests and their ecosystems that influence the products and services on which people rely.

Special Issues are a supplement to our main stream of regular papers. A special issue has the benefit of offering readers a focused set of related articles on an important or emerging topic. Several Special Issues are currently under way. They include forest observational studies; plantations and natural forests in a historical context; modeling ecosystem dynamics; forest wildlife; remote sensing; urban forest ecosystems; environmental risk and uncertainty. The publication date is not limited by the latest paper or slowest peer-review process. Every contribution to the Special Issue is published as soon as it becomes available. All Special Issue contributions are linked and coherently presented on dedicated Special Issue webpages, using their own logo, if available.

Who is involved with *Forest Ecosystems*?

The most significant groups to mention are the readers and contributors who will guarantee the journal's success and viability. The Managing Editor, Dr. Li Hui (lihui@bjfu.edu.cn) works at the editorial office in Beijing with its Director Dr. Zhao XiuHai. A full list of Editorial Board members is published online at http://www.forestecosyst.com/. We are very grateful for the support and enthusiasm of our distinguished board. The highly enthusiastic and dedicated staff at the university's editorial office and several staff members of the publisher Springer, in the Netherlands, in Singapore and in Beijing, have been very supportive in developing and launching *Forest Ecosystems*.

About this issue

Our first issue presents papers on science writing, subcanopy forest analysis, modeling and optimisation. Mike Mentis (2014) opens the issue with *Science Writing in the Real World*. This entertaining and thought provoking contribution questions common assumptions ("a hallmark of written science and technology is that every statement is capable of being tested and capable of being shown to be wrong, and that methods yield repeatable results") and warns that it is not only the content of messages that matters, but reliability too. I like his statements on parsimony. No description, experiment, explanation, … model, … should be more elaborate than necessary to satisfy its purpose, which reminds me of Oscar García who once said something like "increasing complexity requires simpler models". Mike is a former professor at the University of the Witwatersrand in South Africa who now works as an environmental consultant and practical ecologist in different regions of the world.

This is succeeded by Timo Pukkala's (2014) contribution which is entitled "Stand management optimization – the role of simplifications". Simulation studies are often based on simplified assumptions (neglecting natural regeneration; simplified harvest events) and this study analyses the impacts of simplifications by gradually reducing the number of simplifying assumptions. The results showed that forced low thinning, cleaning the plantation from the natural regeneration of mixed species, and ignoring advance regeneration all have a major impact on optimization results. Timo is widely recognized for his pathbreaking studies on ecosystem dynamics and landscape optimisation and his contribution will generate much interest among forest design specialists.

Supportive to Timo's contribution are two additional studies from Finland. Olavi Laiho et al. (2014) present "Height increment of understorey Norway spruces under different tree canopies" and Sauli Valkonen et al. (2014) "Ingrowth, survival and height growth of small trees in uneven-aged Picea abies stands in southern Finland". There is renewed interest to test the potential of continuous cover forestry (CCF) in Scandinavian countries, and studies on growth survival of small trees are essential.

Corral-Rivas et al. (2014) are using mixed models with random components to develop height-diameter functions for mixed, uneven-aged forests in the State of Durango in Mexico. Sacramento and his co-authors from Mexicoand Spain are using measurements from 44 permanent plots in the North of Durango. The results of their work, involving several species of *Pinus*, *Quercus*, *Cupressus*, *Arbutus* and *Alnus* are useful for estimating forest biomass in a rather unknown but (because of the unique social-ecological settings) most interesting forest regions of the world.

Last but by no means least is Jerome Vanclay's (2014) highly interesting paper "Unsuspected implications arising from assumptions in simulations: Insights from recasting a forest growth model in system dynamics". Jerome Vanclay is well known for his fundamental

studies on multi-species forest ecosystems. He warns that "familiarity with a simulation platform can seduce modellers into accepting untested assumptions for convenience of implementation" and "modellers should remain conscious of all assumptions, consider alternative implementations that reveal assumptions more clearly, and conduct sensitivity tests to inform decisions". This paper is another very important contribution, especially relevant to users of forest dynamics software that is based on individual tree models.

We trust that you will enjoy this first issue of *Forest Ecosystems* with a set of papers that do not only inform, but stimulate and challenge. We look forward to the active participation of many readers and contributors who will support us in creating a truly international forum for presenting research and debating significant issues which will lead to improved understanding of the structure and dynamics of natural and domesticated forest ecosystems.

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