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Editorial

Forests: An International and Multi-disciplinary Scientific Open Access Journal

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Natural and man-made forests serve many facets of society, including the production and consumption of forest products, provision of various environmental services such as clean air and water, soil protection, sources for critical endangered species habitats, and home for about 80% of the world's terrestrial biodiversity. Throughout the world, forests are essential for offsetting poverty by contributing to the livelihood of the poor, and providing a foundation for the sustainable economic development of many countries.

Forests can be defined and classified in many ways, ranging from tropical lowland to alpine forest types. Recent statistics from the Food and Agricultural Organization (FAO) suggest that the world has just under 4 billion hectares of forests that cover about 30% of the world's land area. In the 21st century, there is little doubt that forest resources throughout the world will face mounting pressures associated with the increasing demands being placed on them by an expanding population, along with various abiotic and biotic stresses that also accompany population growth. For example, predicted demographic changes suggest that the world's population will increase from 6.4 billion in 2005 to about 8.2 billion in 2030. The impact of these demographic changes on forests will vary regionally throughout the world, and the ability of countries to manage and conserve their forest resources in a sustainable manner will depend on the technological, institutional, legal and economic conditions that prevail.

Forest research serves as a critical foundation for developing biologically sustainable and economically viable management systems, as well as the basis for understanding forest ecosystem processes and function in relation to anthropogenic and natural disturbances such as fire, harvesting, catastrophic weather events, shifting land use patterns, invasive species, and climate change.

Although scientifically relevant questions and themes continuously change, forestry research often embraces multidisciplinary and interdisciplinary efforts in order to address and understand the wide

array and complexity of scientific topics that prevail. For example, forest scientists are examining contemporary topics related to the threats of climate change on forest ecosystem processes, carbon sequestration by forests and mitigation strategies that may reduce the threats of climate change, the potential role of forests for bio-energy production, and the centrality of people in land management policy and decision-making processes. In the case of bioenergy, improved knowledge will be essential in the quest to develop and commercialize technologies to produce biofuel from cellulose. These analyses and research efforts will include development of sustainable production systems, cost-competitive comparisons with fossil and other traditional sources of fuel, as well as life cycle assessment and mitigation strategies for reducing environmental impacts. Sustainable plantation forestry will undoubtedly be central to these and other efforts, with both applied and basic research focused at improving planting stock (genetics), matching germplasm to site conditions, nutrient management, understanding competition interactions, reducing growth losses from forest pests, and using biotechnology and genome mapping to better understand wood formation and stress tolerance. Similar to agricultural systems, GIS and global navigation systems have also provided forest managers with increased precision in managing forest resources. For example, advanced modeling and visualization software linking GIS and remote sensing provide opportunities for practitioners and scientists alike to create and use digital simulations to examine various forms of disturbance such as climate change in an attempt to better understand genetic and environmental variation in tree growth, forest health, and environmental adaptations to stress.

Forests has been established to provide comprehensive coverage on the ecology, conservation and management of forests, both natural and man-made. As an international and multi-disciplinary journal, *Forests* will provide a forum for publishing process–based and applied scholarly articles that span the technological, environmental, cultural, economic, and social realm associated with the management, use, conservation, and understanding of forested ecosystems. *Forests* publishes reviews, regular research papers, communications and short notes, and there is no restriction on the length of the papers. The aim is to encourage forest scientists to publish their theoretical and experimental research in as much detail as possible. A diverse and eminent scientific editorial board has been appointed to represent the breadth of these disciplines and topical areas. Their combined and collective experience will ensure the highest degree of scientific rigor and review of all published articles. In addition to individual articles, the journal intends to publish special issues dedicated to the synthesis of important and timely topics, including selected papers presented at relevant conferences.

Is there a need for a new journal focusing on the ecology and management of forests? In my opinion, the answer is yes. Although it is true that many established journals already cover this field, forestry as a discipline continues to grow and expand. As a result, good quality journals are receiving increasing numbers of submissions, which can result in delayed processing times for reviewing and eventual publication of scholarly articles. A unique aspect of *Forests* relative to other forestry journals is its on-line and Open Access format. A major benefit of an on-line and Open Access format is that it provides free access via the internet for scientists, practitioners, policy makers, students, and other interested persons who would otherwise not have access to expensive, subscribed forestry journals. In other words, *Open Access* means that peer-reviewed literature is freely available to anyone without subscription or price barriers, literature is immediately released in Open Access format, without “in press” delays or embargo periods, and published material can be re-used without permission, including

commercial use, as long as the original publication is correctly and completely cited. The full text of published articles can be queried and retrieved from all search engines, which means that published articles can be easily and quickly added to many literature databases, resulting in higher visibility and possibly more citations. Once a manuscript is accepted, it can be prepared for on-line publication much faster than most print journal formats and does not require that an issue be "filled" before publication actually occurs. The result is that your research will get published faster and become more widely circulated within the forestry community.

The on-line and Open Access format will strengthen communication within the scientific community, including organizations and countries that have had limited forest research programs and access to forest-based journals. While retaining the highest rigor of peer review, on-line publication of *Forests* will ensure rapid and effective communication of high quality research results to the scientific community and other interested readers and stakeholders. All of these factors indicate that the long-term impact of *Forests* will be high. Other unique features of this journal, in addition to publishing traditional types of articles, will be a willingness to consider manuscripts regarding research proposals and research ideas, as well as summaries and surveys on research projects that provide information for a broad field of users. Announcements regarding academic activities such as forestry conferences will also be published free of charge within this journal.

We are fortunate with *Forests* to have the broad scientific backing and publishing experience of MDPI, an international organization located in Basel, Switzerland, that has been publishing peer-reviewed, full Open Access scholarly journals since 1996. Today, the highly professional editorial staff of MDPI oversees the publishing details associated with 26 journals, including *Forests.* All MDPI journals are included in Google Scholar and the Directory of Open Access Journals (DOAJ) and, once established, MDPI aims to have *Forests* covered by the Science Citation Index Expanded (SCI) (http://www.mdpi.com/about/journals/sci/).

Similar to most Open Access journals, the cost of publication in *Forests* will be paid by the authors or their institutes. Publication costs, regardless of article length, will be the same, and are relatively modest compared to many other Open Access journals. Publication charges will be waived for all articles that are submitted to *Forests* before the end of 2010. Therefore, the Editorial Board and I encourage you to use this as an important incentive for submitting your papers soon.

Finally, the Editorial Board views *Forests* as a new and innovative publication for forestry-related research. Our collective desire is to have *Forests* be recognized as the foremost publication outlet for high quality, leading edge research in this broad and diverse field. This goal, of course, will be dependent upon the readership and potential authors. We, therefore, invite you to submit your original research articles, review papers, notes and suggestions for Special Issues to *Forests* and, in doing so, sharing your important findings and contributions within the global forestry community.