Comments on the special issue on forestry of *FASE*

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Forestry in China has changed drastically since the country was affected by devastating floods in 1998. The government has launched a series of nationwide ecological restoration programs, promulgated new forest policies and tax reforms, and heavily compensated forest owners. These policies and programs have already produced tangible benefits in improving forest cover, supporting the wood industry and supplementing rural livelihoods. Large areas are now protected from logging, huge afforestation programs are underway, and tenure reform offers hope of more efficient and effective operations that can create jobs and stimulate economic growth[1]. However, forestry has also been associated with problems, particularly in the context of climate change and the expansion of urbanization, including deforestation, desertification, pest and disease outbreaks, and decline of productivity. Despite this, these challenges also represent opportunities for China. Forest conservation programs have generated a wave of new national parks and ecotourism businesses; afforestation and reforestation programs have improved forest genetic resources and have also led to the development of carbon forestry. The natural forest protection program has encouraged the use of biomass and massive non-timber understory crop plantations.

This special issue organized by the Chinese Academy of Forestry provides a good summary of the multifaceted nature of Chinese forestry today. The issue highlights ecological conservation programs in Chinese forests, from concept to practice (Shen, this issue), and the experience gained and lessons learnt from combating desertification over the last thirty years in China are of great potential benefit for the rest of world (Bao et al., this issue). The establishment of a national forest certification system, a market-based instrument for promoting sustainable forest management, has become a vitally important policy tool for China, particularly when non-timber forest products are major sources of income for local communities (Lu & Muthoo, this issue). As a crucial source of fiber, Eucalypt plantations have become the backbone of the Chinese forest industry, including seedling propagation, fertilizer production, lumber, pulp and paper, and wood-based panels, as well as bioenergy production (Xie et al., this issue). A key area of forest research has been genetic improvement and clonal selection; both have contributed to substantial improvement in forest productivity.

The special issue also highlights research progress with *Betula* and *Larix* (Yang, Sun et al., this issue). Another study examines the modeling of climate change at a local operational scale in the Asia Pacific region, which has provided an opportunity for scientists, forest managers and decision makers to develop local adaptive management strategies (Wang et al, this issue). Bioenergy and biofuels, including forest residuals for wood pellets, are important energy strategies for China, and heat-and-electricity generation has been widely used in northern China. Bioenergy development in Brazil, Denmark, Sweden and the USA may provide some good lessons for China (Hu et al., this issue). The case study of regional GIS-based evaluation of the potential and supply costs of forest biomass in Sweden (Athanassiadis & Nordfjell, this issue) could provide a practical approach for China in its bioenergy decision-making. Several studies dealing with forest genomics, pest and disease control, and wood structure are also presented (Li et al., Biswas et al., Chen et al, and Li et al., this issue). All of these will help readers to gain insights into the current development of forest science and technology in China.

Reference

1. Wang G, Innes J L, Lei J F, Dai S Y, Wu S W. China's forestry reforms. *Science*, 2007, **318**: 1556–1557

John L. Innes, is Dean of the Faculty of Forestry at the University of British Columbia, Canada. He teaches in the field of international and sustainable forestry. He is Chair of the Commonwealth Forestry Association (since 2010), Chair of the Standing Committee of the Heads of Forestry Commonwealth Countries, a Board Member of the International Union of Forest Research Organizations and Chair of the Asia-Pacific Forestry Education Coordination Mechanism. He is a member of the Advisory Group on Forestry Education of the Food and Agriculture Organization of the United Nations. He is an Honorary Professorial Fellow in the Melbourne School of Land and Environment at the University of Melbourne and Honorary Professor at four different Chinese universities. He also serves on the Genome BC and National Forestry Sector Steering Groups, and the Forestry and Fibre Work Group of the BC Forest Sector Bio-Economy Transformation Council. He came to British Columbia in 1999, having previously worked as a Section Head in the Swiss Federal Institute for Forest, Snow and Landscape Research. Since arriving in BC, he has worked on a range of issues associated with forest management. He is actively involved with climate change research, particularly its effects on forest ecosystems and the development of appropriate management strategies for adaptation, and in 2007 was part of the IPCC team that shared the Nobel Peace Prize with Al Gore. As Dean of the UBC Faculty of Forestry, he is encouraging greater international involvement of the Faculty, and entrenching its position as the leading Faculty of Forestry in the world. Under his leadership, the Faculty has taken significant steps toward broadening the curricula and academic content to reflect changing realities in the forest and conservation sectors, also enhancing interdisciplinary and continuing education for forestry professionals and scholars from around the world.