

## **The IUFRO Unit 4.05.00 “Managerial economics and accounting”**

by

**Prof.Dr. Shashi Kant,**

Faculty of Forestry, University of Toronto, Ontario, Canada  
Tel : +1-416-978-6196 ; fax : 1-416-978-3834 ; e-mail : [shashi.kant@utoronto.ca](mailto:shashi.kant@utoronto.ca)

**Univ.-Prof. Dr. Hans Jöbstl,**

Boku, University of Natural Resources and Applied Life Sciences, Vienna  
Tel: +43-1-47654-4421; fax: +43-1-47654-4429; e-mail: [hans.joebstl@boku.ac.at](mailto:hans.joebstl@boku.ac.at)

and

**Dr. Jean-Luc Peyron**

ECOFOR, 42, rue Scheffer, F-75116 Paris France  
tel : +33 (0)1 53 70 21 49, fax : +33 (0)1 53 70 21 54, [peyron@gip-ecofor.org](mailto:peyron@gip-ecofor.org)

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Resulting from the merger of the former Working Party “Managerial economics” with the Research Group “Managerial social and environmental accounting”, the IUFRO Unit “Managerial economics and accounting” concentrates on the economic and accounting aspects of management of forest enterprises, specifically small-scale enterprises. The group deals with the economic analyses of forest enterprises, principles and techniques of accounting relevant to forest enterprises, fundamentals of decision-making, and the economic and accounting tools for planning, supervising, measuring, controlling, and evaluating the status and performance of forest enterprises..

In the present era of environmentalism, the economic and accounting aspects of forest enterprises have become much more challenging and complex than in the past. The three critical dimensions of these aspects are: (i) multi-functionality of forests; (ii) evolving social, economic, and environmental context; and (iii) uncertainty and risks associated with natural phenomenon.

In the past, the focus of forest enterprises as well as of researchers has been on wood production. Due to numerous externalities associated with wood production, the economic and accounting aspects of wood production are also not fully understood, but a new major challenge to the researchers of this group is to develop new economic theories and analytical (economic and accounting) tools to analyze multiple functions, in an integrated manner, of forests, such as the production of non wood forest products, the preservation of soils, the maintenance of biogeochemical cycles (carbon, nutrients, water), the conservation of biodiversity and the support of social activities. There is also emergence of non-wood based forest-based enterprises such as bio-energy enterprises, carbon enterprises, bamboo enterprises, and other non-timber and ecological services enterprises. The focus of this group will be to address the economic and accounting aspects associated with multiple functions and related to these new enterprises.

The second dimension is the evolutionary nature of social and economic context in which forest management is henceforth carried out. The increased importance of multi-functionality of forests is an outcome of changing social preferences in which non-timber and ecological services are rated higher than wood products. Social preferences are also moving towards the wood products from forests management on the principles of sustainability. Hence, the social context in which forest enterprises have to perform is changing, and is

different than it was few decades ago. Similarly, economic atmosphere is becoming different. For example, the business sphere is affected by an increase of labour costs that is not totally covered by a similar increase of labour productivity. The price of energy is also very questionable and its evolution will probably have in the future major consequences on the whole forest sector. Then, on an environmental point of view, ecological modifications induce climate changes, productivity variations, more perturbations, and biodiversity erosion. In summary, the social, economic, and environmental context, in which forest enterprises have to perform, is changing at a rate never encountered before, and therefore, managerial economics and accounting of forestry enterprises have to be responsive to this evolutionary nature of the context. This research group will move the frontiers of managerial economics and accounting in this direction.

The third dimension arises from the precedent. Actually, the changes in progress create a form of instability which generates disturbances in the functioning of the ecosystems as in the operation of the social systems. It becomes very difficult to predict the future and considerable decisions must be taken under uncertainty. Globally, because of the uncertainty of future (social, economic, and environmental) context, more flexibility is useful in forest planning and decision-making. This means that non-reversibility of decisions and dynamic nature of long-term objectives of forest management will have to be taken into account. Additionally, forests will always be in transition between situations and any steady state will not be relevant any more. Hence, managerial economics and accounting has to move from the principle of stable equilibrium (steady-state) to the principle of dynamic equilibrium and possibilities of multiple equilibria.

These three dimensions – multi-functionality, evolving context, and uncertainty and risks - result into various consequences for forest management and forest enterprises. First, some of the non-wood forest products and ecological functions have economic features of public or common goods, and forest enterprises, who provide these goods through forest management, will have to be compensated through non-market mechanisms. Public policies have thus to reconcile social and private objectives. Second, as a consequence of these new ways of management decisions, based on public policies together with private strategies, new planning, analytical, evaluation, and monitoring approaches will be necessary. Third, due to close interactions between social, economic, and environmental context, natural sciences have to be integrated with social sciences. The IUFRO unit “Managerial economics and accounting” will provide a conducive environment for research on all these aspects.

Finally, in the world of environmentalism and globalization, forestry enterprises cannot survive by focusing on local markets and local conditions. Hence, this IUFRO unit will focus, during the next five years, on the unit’s globalization and on bringing a global perspective to its research.