

Small-scale forestry is gaining importance across a wide spectrum of countries with diverse forestry systems, especially developing countries. It has multiple vertical and horizontal economic linkages. However, the contribution of small-scale forestry has been hampered by being in the shadow of large-scale, industrial, forestry. One reason is the lack of appropriate accounting and reporting methods specifically designed to gauge the value of small-scale forestry. For example, non-timber benefits do not enter the market mechanism, thus their true economic worth remains undervalued.

Recent decades have seen widespread promotion and adoption of small-scale forestry, such as farm, social and community forestry. The sector has become an important mechanism driving rural economies and forestry-based industries. Furthermore, plantations have contributed to narrowing the gap between demand and supply of timber and fuel wood, and have also helped to rejuvenate marginal farm and common property lands. However, despite certain progress, many programmes have failed to take off well due to lack of appropriate government and institutional support, lack of finance and marketing tools, and lack of research, and due to a cumbersome regulatory framework. Moreover, successful cases of small-scale forestry activities need to be evaluated as to their sustainability and possible links to other sectors of the economy.

In this context, the book *Sustainable Small-scale Forestry: Socio-economic Analysis and Policy*, edited by S.R. Harrison, J.L. Herbohn and K.F. Herbohn, offers a timely contribution to the literature. It is the outcome of a research project undertaken by the Cooperative Research Centre for Tropical Rainforest Ecology and Management (Rainforest CRC) in North Queensland, Australia. Individual chapters reflect the research efforts of 17 authors, being academics from various parts of the world. The book is divided into four parts, with 19 chapters in all.

The first part, Chapters 1–3, gives an overview of the role of small-scale

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forestry throughout the world. Chapter 1, presenting the rationale for the book, differentiates between large- and small-scale, and tropical and temperate forestry. It also identifies variations in forestry systems in developed and developing countries, and in 'old-world' and 'new-world' developed countries.

Chapter 2 addresses the biological nature of various small-scale forestry systems and their interaction with social and economic issues. It also explores planting, management, harvesting and other silvicultural options, and timber and non-timber benefits, including biodiversity. The importance of further economic analysis of these options is emphasized; trade-offs need to be evaluated and sufficient information generated for policy-makers.

Chapter 3 outlines the concept of socio-economic analysis and touches on economic perspectives of farm forestry. The chapter looks at examples from different countries, highlighting the need to examine community impacts, attitudes, and responses to changes in forest policies.

The second part, Chapters 4–9, focuses on social and economic aspects of small-scale forestry. It covers newly emerging themes, as well as financial performance, forest enterprise accounting and reporting. Significant issues discussed include pros and cons of native versus non-traditional species, and the valuation of non-timber products.

Chapter 4 reviews various aspects of financial analysis of farm forestry, such as components of financial models and key factors in financial performance. It also discusses problems in estimating growth rates and yields for non-traditional species.

Chapter 5 presents arguments for and against the economic valuation of forests, and discusses total economic value of multiple-use farm forestry as well as non-market techniques. Measurement frameworks for total economic value are compared with alternative approaches for taking non-timber values into account in forest policies. The chapter also summarizes various economic estimates of non-timber forest products.

Chapter 6 defines and assesses economic trade-offs between biodiversity and timber production in plantation forestry, and suggests measures to promote biodiversity in plantations. It also notes the importance of research in plantation biodiversity, and the necessity of educating people about its potential benefits.

Chapter 7 examines opportunities to exploit small-scale forestry and suggests measures to enhance landscape and recreation values. It reviews the issue of property rights with respect to community access to state and privately owned forests with examples from Australia, Europe and North America. It also discusses the economic value of landscape amenity — a recently emerging research subject.

Chapter 8 presents a thorough review of carbon-based marketing opportunities for small-scale farm forestry. This useful chapter surveys the emissions trading market and discusses the development of a carbon accounting system and the impact of silviculture on carbon sequestration — important issues in the context of the Kyoto Protocol.

Chapter 9 discusses traditional accounting problems with forest assets and progress in establishing systematic accounting and reporting in forest enterprises. Accounting practices in the US, Canada, the UK, Australia and New Zealand are summarized. An example of community forestry practices in the wet tropics of Queensland, Australia, illustrates alternative approaches to environmental accounting for non-commercial aspects of forestry.

The first and second parts of the book mainly deal with socio-economic characteristics and non-timber benefits of small-scale forestry. This underlines the increasing importance of factoring non-timber benefits into the decision-making process, both at the level of smallholders and of policy-makers in government and industry.

The third part, covering Chapters 10–18, constitutes the core of this edited book. Featuring country-specific case studies, it provides a clear analysis of current and future international policies in small-scale forestry. A

'bottom-up' approach is adopted as a common worldwide strategy. The discussion suggests that a more comprehensive information-base and further socio-economic analysis are essential to policy formulation and promotion of small-scale forestry.

Chapter 10 presents the case of New Zealand's exceptionally successful farm forestry sector. The sector has changed the course of forestry in the country and put New Zealand in a better strategic position globally. The chapter discusses New Zealand's legislative provisions and other policy and regulatory factors contributing to the success. The New Zealand forestry model could gainfully be emulated in other countries, both developed and developing.

Chapter 11 summarizes small-scale forestry policy in the UK, and analyzes incentive programmes for private forestry. It highlights the pros and cons of new grant-in-aid schemes, which have become vital in the establishment of new woodlands in the UK. Chapter 12 reviews small-scale forestry policy in Europe, with Chapter 13 offering a case study from Baden-Württemberg, Germany, Chapters 14, 15 and 16 review forestry practises in the Philippines, India and China, respectively, followed by a discussion. The first two chapters summarize highly innovative and successful participatory/collective forest management models: community-based forest management in the Philippines and joint forest management in India, as well as outlining the circumstances leading up to widespread adoption of these forest-management models.

Chapter 16 discusses small-scale forestry developments in China. An innovative mechanism has been recently developed in China: 'joint-stock forest farms', with great diversity in ownership in an effort to '... switch from a single large-scale collective operation to multi-arrangement, multi-style, multi-channel operations' (p. 199).

Chapters 14–16 also illustrate the role of government incentives in promoting plantation programmes, as well as expansion potential versus major impediments in small-scale forestry.

Chapter 17 discusses the growing importance of private non-industrial forestry (small private forests) in the US, as publicly owned forests are increasingly being closed to logging for environmental reasons. Also reviewed are management aspects of non-industrial private forestry and attitudes of private owners towards their forests, as well as government-sponsored assistance programmes — such as cost-sharing programmes, tax relief, and extension/technical assistance.

Chapter 18 reviews progress in reforestation in Australia and incentive schemes launched during the last two decades. It examines political, economic and social factors that shape policy in small-scale forestry. The chapter also addresses the dichotomy between commercial versus environmental benefits. The discussion throws light on a variety of new initiatives to tackle the challenges to the development of small-scale forestry in Australia.

In the last part, Chapter 19, the book summarizes key issues presented in

earlier chapters, and develops a range of themes related to small-scale forestry systems. Facilitating factors, as well as impediments to the development of small-scale forestry, are reviewed along with comments on recent progress. Confidence in the future is expressed, albeit with some caution, as likely developments in small-scale forestry are projected over the next 20 years.

While the book offers extensive coverage of small-scale forestry activities worldwide, certain shortcomings should be mentioned. Activities in small-scale forestry in both tropical and temperate zones are discussed, and in Asia, Australia, Europe and North America. However, the impression is that the book is mainly oriented towards developed countries. Inclusion of material from Africa and South America would have made for a fuller comparative analysis of developments across the globe. Moreover, while both Australia and New Zealand are discussed with a number of examples, the impact of small-scale forestry on native populations is not considered. From a

book on socio-economic analysis of small-scale forestry, a discussion of the perspective of native populations — who live in close association with surrounding forests — would have been expected.

In conclusion, despite such minor shortcomings, this collective research work promises to be of great benefit both to students of forestry, and the academic community. The book is a quick read, and, with its numerous examples, makes the subject matter easy to grasp for students. At the same time, the book raises a number of progressive research questions and policy issues in small-scale forestry that will be of interest to academics and practitioners. The authors have done well to approach small-scale forestry as a ‘... distinct enterprise and not simply a scaled-down version of industrial forestry’ (p. 241).

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