Resource Assessment of Non-Wood Forest Products: Experience and Biometric Principles

By Jennifer L.G. Wong, Kirsti Thornber, and Neil Baker. 2001. Non-Wood Forest Products Series, Issue 13. Published by the Food and Agriculture Organization (FAO) of the United Nations, Viale delle Terme di Caracalla, 00100 Rome, Italy (www4.fao.org). xvii + 109 p., CD-ROM. $18.00. ISBN 925104614X

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Forest managers increasingly recognize that management of non-wood forest product (NWFP) harvesting is important for conserving biological diversity and sustaining human use of forests. Importantly, many of these products, and the forests they grow in, are integral to the persistence of indigenous cultures. Similarly, rural communities are more likely to support forest conservation or longer timber rotations if they can annually harvest and market products derived from local forests. Managing NWFP resources poses a daunting task, however, because such products are numerous and diverse; the organisms that produce them differ widely in form, abundance, distribution, and autecology; and harvesting typically occurs in a complex social, economic, political, land tenure, and forest management context. Nevertheless, forest managers, researchers, development workers, harvesters, and affected local communities agree that assessing the status of, and changes in, resource abundance is central to sustainable NWFP management.

With this publication, Jennifer L.G. Wong (School of Agricultural and Forest Sciences, University of Wales, Bangor, Gwynedd, UK) and her coauthors provide an especially comprehensive overview of NWFP assessment approaches because the information is derived from a three-step process. The United Kingdom's Department for International Development (DIFD) first funded Jennifer Wong to conduct a methodological review of published NWFP monitoring projects. Next, the European Tropical Forest Research Network (ETFRN) used Wong's report as the theme for an international conference. Lastly, the report and conference proceedings were summarized in this Issue 13 of the Non-Wood Forest Products Series published by the United Nations Food and Agriculture Organization (FAO). Purchasers of this publication also receive a CD-ROM containing an electronic version of the publication, the 180-page DIFD preconference report, searchable databases of reviewed studies and pertinent literature, the 95-page ETFRN conference proceedings, a 106-page special issue of ETFRN–News Issue 32 dedicated to NWFP issues, and the entire FAO NWFP web site. Wong's review paper and the conference proceedings can also be downloaded at the ETFRN conference web site: http://www.etfrn.org/etfrn/workshop/ntfp/ntfpbar.html.

All these resources are professionally produced, specific topics are easily found, terminology is well defined and consistently used, the text is concise, tables summarize large amounts of information, and the numerous case examples are pertinent and illustrative. Although the cited examples are mostly from tropical forests, the content of this publication is globally applicable. Similar recent publications have different foci: natural resource sampling in general, particular types of monitoring projects, certain NWFP categories or products, or specific regions. Such publications are prominently cited "for further reading."

The core chapters in the book review the applicability of statistical methods to NWFP resource assessment, statistical sampling designs, stakeholder participation methods, assessment approaches from disciplines such as sociology and ethnobotany, and criteria for selecting among resource assessment approaches. All the chapters are clearly organized, although the information might have been more cogently presented if the sequence of the main chapters was reversed.

The publication stresses the value of rigorous, statistically sound biometric approaches to NWFP resource assessment. Biometric assessments are expensive, however, hence their use can be hard to justify for single products. Multiple NWFP inventories are problematic because very different sampling protocols are often needed for each product or organism. Collaborating with harvesters can be advantageous, but they commonly lack appreciation of, or training in, biometric methods. These challenges have engendered a vigorous debate, reflected in this manuscript, about the utility of nonbiometric approaches to NWFP assessment. The authors note that no one has yet developed an inventory design decision-support framework, so they summarize some of the criteria for selecting among assessment approaches. For instance, they make the valid point that spending scant resources to obtain unreliable data could be considered unethical and might discourage further harvester cooperation. Inadequately discussed are the consequences of management with no inventories or assessments if rigorous biometric approaches prove too expensive and how to conduct biometric inventories when high-value products are easily poached.

The discussion of statistics and sampling designs is tailored to how various NWFP resources can best be assessed; thus, the reader needs only basic familiarity with statistics. One topic that deserved further attention, however, was the distinction between inventories (one-time assays) and monitoring (repeated inventories). In order to judge harvest sustainability, practitioners must know whether sampling designs are adequate to detect trends of a selected magnitude with given level of confidence.

In spite of these few criticisms, I found the book informative and easy to use. I recommend it to anyone who wishes a thoughtful overview of this difficult and sometimes contentious topic.