4. Conclusions and recommendations

The current study represents a joint FAO/INBAR initiative to incorporate bamboo into the FAO Global Forest Resources Assessment programme. It is a first attempt at systematic reporting of the best available information on bamboo resources and utilization at the global level. The study has developed a methodology for monitoring and reporting on bamboo resources and has proved its feasibility. The initiative thus provides bamboo-producing countries with an opportunity to include bamboo in their national forest inventory programmes.

The study was preceded by preparatory work, global and regional expert consultations, meetings, workshops and pilot studies. Outlines and guidelines were created and tested with forest departments and FAO national correspondents in China, India and Indonesia. The tests were successful and demonstrated data availability.

Twenty-two countries responded to the FAO/INBAR call for information and voluntarily submitted reports following a standardized format. Interestingly, about one-third of the countries responding were not INBAR member states. Review of the reports confirmed that data on bamboo resources were available in many countries and could be collected through national statistics. Where the data were not available, expert estimates helped bridge the gaps. Country maps were submitted and provided valuable information. This study represents an overview of the current situation of bamboo resource statistics in the world.

Data quality varied significantly among countries and regions. In many Asian countries, where bamboo was included in national forest inventories, the data quality was reasonably good. Africa and Latin America relied primarily on remote sensing, limited pilot studies and expert estimates. Information is still fragmented due to the absence of a standardized methodology. Many inconsistencies stemmed from differing definitions as well.

Varying methodologies and the quality and reliability of the presented data are a matter of concern. In many cases, the data in country reports were validated using previous FRA assessments, literature searches, studies, remote sensing information and interviews with experts. Where needed, the figures were calibrated for consistency using FRA methodological approaches and interpolation/extrapolation methods.

The study results are timely and demonstrate the importance of bamboo resources as a valuable economic asset in growth and development. The total export value of bamboo commodities reaches US$2.5 billion. Bamboo has become a valuable and often superior substitute for wood. It can be especially successful in countries that have exhausted their forest resources. Development of bamboo can help fight deforestation, illegal logging and forest degradation (bamboo is one of the first pioneers occupying open spaces in degraded forests). The present report indicates that the total area of bamboo forest resources might well exceed the earlier estimated 1 percent of total area of tropical and subtropical forest. Further clarifications from the countries are needed to confirm these findings.

Finally, the study makes the following recommendations to:

- incorporate bamboo as an integral part in the FAO FRA framework for future global forest resources assessments;
- encourage bamboo-producing countries to include bamboo in their national inventories and to provide the necessary methodological and organizational support;
- further develop the methodology for bamboo resource reporting, including clear definitions, formulas, guidelines and reclassification approaches;
- introduce standard, international manuals for ground and remote-sensing assessment of bamboo resources;

- establish a global database of information on bamboo resources, with periodic, systematic updates;
- strengthen international partnerships and collaboration in bamboo resource assessment by governments, agencies and international organizations, including FAO, INBAR, UNEP, USGS and others.

1. Bamboo shoot (Thomas Froese)

2. Bamboo culms (Thomas Froese)

3. Mat making in Assam, India (Marco Piazza)

4. Bamboo forest (Thomas Froese)

5. Bamboo forest (Thomas Froese)

6. Collecting bamboo poles (FAO Photo Database)

7. Transporting bamboo poles, Assam India (Marco Piazza)

8. Bamboo products (Jessica Savarese)

9. Basket weaving (FAO Photo Database)

10. Prefabricated bamboo house, India (INBAR)

11. Bamboo mats (Jessica Savarese)

12. Bamboo scaffolding (Jessica Savarese)