I. INTRODUCTION

1. As countries strive to achieve sustainable forest management, it is important to measure progress in all dimensions of sustainability. Information is routinely collected about environmental and economic aspects of forest management, but the collection and analysis of information about socioeconomic benefits remains comparatively weak.

2. Socioeconomic benefits occur when peoples’ lives are improved in some way. This can be from employment and income generated in the forest sector or it may occur directly from the consumption of forest outputs that contribute to different human needs. A second aspect of socioeconomic benefits that should be considered is equity. Improving the well-being of poorer or disadvantaged members of society is likely to result in greater benefits than if those improvements were obtained by others. Thus, it is also important to obtain information about the distribution of the socioeconomic benefits from forests or, at least, whether those benefits are received by certain groups such as women, indigenous people or the rural poor.

II. EXISTING INDICATORS OF SOCIOECONOMIC BENEFITS

3. The Forest Resources Assessment and regional criteria and indicators processes include a number of indicators covering, for example, income, employment and different forest uses. Much of the data on income and employment is obtained from reliable national statistical sources, but a major problem is the lack of information about informal activities in the sector. In particular, this is a problem in countries where large numbers of people may be employed in the production of fuelwood, charcoal and non-wood forest products (NWFPs).

4. With respect to the uses of forests and forest products, good quality data are available about the consumption of wood products and, in some cases, wood energy. However, this information is generally not linked to the benefits that people receive from this consumption (i.e. how it contributes to their well-being) and very little information is available about the consumption of NWFPs. Information about other uses of forests is mostly presented as the areas of forests that are managed or designated for different functions. While the quality of this information may be high, it is not a very valid measure of socioeconomic benefits.
5. In light of the above, SOFO 2014 has attempted to collect information about the socioeconomic benefits from forests in terms of how forests make a contribution to human well-being by providing income\(^1\) or meeting different needs.

III. INCOME AND THE NUMBERS OF PEOPLE THAT BENEFIT FROM INCOME IN THE FOREST SECTOR

6. Statistics about income and employment in the forest sector are collected from existing national and international data sources every 3-5 years, as part of the Forestry Department’s regular work-programme activities on forest product statistics. For SOFO, all of this data was updated to the year 2011. In addition to this, information was also collected about employment in informal wood production, the number of forest owners and income from the production of woodfuel and NWFPs and payments for ecosystem services (PES).

7. Activities in the formal forest sector generated US$ 606 billion in 2011, with an additional US$ 124 billion generated from primary production of NWFPs, fuelwood and charcoal. The latter is an under-estimate, because it only includes a few NWFPs and excludes income from further along the value chain. However, even with these limitations, it shows that informal income is significant (and even more so in some countries and regions).

8. The number of people employed in informal activities is also much higher than employment in the formal sector. In 2011, 13.2 million people were employed in the formal forest sector, but an additional 41 million people were employed in informal wood production.\(^2\) It was not possible to estimate employment in NWFP production, but it seems likely that a similarly large number may be employed in these activities as well.

9. Forest owners are another group that receive income from forestry and, based on forestry and agricultural census data, it is estimated that there are at least 29 million forest owners in the world. This is likely to be a significant under-estimate, because data was not available for many countries. In addition, many millions of other people may also receive income from communal ownership of forests or from revenue-sharing mechanisms.

IV. SOCIOECONOMIC BENEFITS FROM THE CONSUMPTION OF FOREST PRODUCTS AND SERVICES

10. To show how forests contribute to meeting different needs, information was collected from a number of sources and combined with FAO’s production statistics to create indicators showing how forest products contribute to food security, energy, shelter and health.

Food and water

11. Forests contribute to food security in several ways. For example, income from forestry enables people to purchase food. More direct benefits come from the food that can be collected from forests, the use of woodfuel for cooking and the use of edible NWFPs to provide stability in food supply.

12. FAOSTAT agriculture statistics contain some information about the contribution of NWFPs to total calorific intake (shown in FAO’s food balance sheets), but the results show that NWFPs make only a minor contribution in most countries. NWFPs are more important as sources of micronutrients that result in a better diet, but this is not measured at a large-scale.

13. The one area where high quality information is widely available is the number of people that use woodfuel to cook food. The data show that about one-third of the global population (or 40 percent of the population in less-developed regions) use woodfuel to cook, making this a very valuable contribution to food security.

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\(^1\) Income generated in the sector enables people to meet their needs indirectly by purchasing goods and services.

\(^2\) Much of this employment is part-time, but all figures presented here are converted to full-time equivalents.
14. With respect to water, the crucial role that forests and trees play in the hydrological cycle and in ensuring food security is increasingly recognised: forests influence the amount of water available and regulate surface and groundwater flows while maintaining high water quality. Moreover, forests and trees contribute to the reduction of water-related risks such as landslides, local floods and droughts and help prevent desertification and salinization. Forested watersheds supply a high proportion of the world’s accessible fresh water for domestic, agricultural, industrial and ecological needs in both upstream and downstream areas. However, it is currently not possible to estimate the numbers of people that benefit from forests managed for the protection of water supplies. One specific area where socioeconomic surveys provide some information on forests’ contribution to clean water is how many people sterilize their drinking water by boiling it and it was estimated that about 764 million benefit in this way from the use of woodfuel.

Energy and shelter

15. The need for energy and shelter are the other two basic needs that may be satisfied in some way by the use of forest products.

16. In the case of energy, data on the total consumption of energy is available for almost every country in the world in IEA and UN energy statistics. Statistics on woodfuel use (from FAOSTAT) were combined with this to show how forest products contribute to meeting this need. Globally, wood energy accounts for about 6 percent of all energy use, with about two-thirds of this coming from woodfuel and the rest from energy production in the forest industry. Wood energy show great spatial variation and accounts for 27 percent of total primary energy supply in Africa, 13 percent in Latin America and the Caribbean and 5 percent in the Asia-Pacific region. Wood energy is the source for more than half of all energy used in 29 countries, with the majority of these countries (22) in Africa. In addition to its use for cooking, the use of wood energy for heating is also growing in a number of developed countries.

17. To show how forest products contribute to the provision of shelter, information was collected about the main materials used in different parts of peoples’ houses. Information about this is quite limited, but the available data suggest that forest products are the main materials used in the roof, walls or floors in the houses of 18 percent of the global population.

Other needs

18. Apart from meeting basic needs, forests and forest products may also contribute to other needs or improvements in the quality of life, but as the needs become more difficult to evaluate and quantify, the availability of reliable information becomes much more limited.

19. For example, SOFO briefly examines how forests and forest products may lead to benefits for human health. There is a lot of micro-level data about this, but very little systematic collection and collation of such information. At a large scale, WHO estimates that 2.8 billion people in Africa, India and China use traditional medicine in some way and USAid’s Demographic and Health Surveys suggest that at least 1 billion people use herbal or traditional medicine to treat children’s diarrhea. However, the information in these studies is not detailed enough to estimate how many people use medicinal plants from forests or the health benefits obtained. Given the large amount of raw data that is available and the likely scale of these benefits, this could be one area that should be prioritized for further investigation.

V. THE IMPORTANCE OF FOREST BENEFITS FOR SPECIFIC GROUPS

20. None of the data collected for SOFO 2014 can be used to show how the socioeconomic benefits from forests are distributed across different income groups within a country. However, the data do show that the socioeconomic benefits from forests make a higher contribution to meeting needs in countries with lower levels of income.

21. With respect to specific groups, very little information is available about the benefits received by indigenous people, but the data show that the socioeconomic benefits from forests make a greater contribution to meeting peoples’ needs in rural areas. As these areas are likely to be where most
indigenous people live and where incomes are likely to be lower, it can be concluded that these benefits probably have a positive impact on equity.

22. Some gender-disaggregated statistics are available, mostly about the employment of men and women in the sector. For example, women account for about one-quarter of all employment in the formal forest sector. Information about informal activities is more limited and imprecise, but suggests that relatively few women are employed in the commercial production of woodfuel (although women and children appear to account for about 85 percent of all time spent on collection of woodfuel for domestic use).

VI. IMPROVING INFORMATION ABOUT THE SOCIOECONOMIC BENEFITS FROM FORESTS

23. To measure the socioeconomic benefits of forests, data collection must focus on people, not only trees. With the exception of the number of people employed in the formal forest sector, forestry administrations tend to have relatively little information on how many people benefit from forests.

24. One area where statistics are deficient concerns the numbers of people engaged in different informal activities in the sector. This information could be improved in collaboration with other statistical efforts, such as national censuses and surveys in other areas.

25. Another priority should be to try to improve statistics on the distribution of benefits between men and women and produce information about activities that are particularly important for disadvantaged groups such as indigenous people and the rural poor. At a minimum, forestry administrations should improve their reporting of benefit sharing, to show how many people benefit from these arrangements. Gender disaggregated employment statistics should also be collected in countries where this is not already done.

26. With respect to consumption benefits, information about the benefits from forests for food security, nutrition and health could be improved. Partial information is available, but this could be collected more systematically and with more quantification. There are many existing surveys of health and nutrition in countries and if the benefits from forests can be identified then there may be scope for improvements in this area. As a first step, countries should identify the most important issues and how forests may contribute to addressing them.

27. Mobilizing resources for better data collection is likely to remain a challenge, but a new focus on measuring benefits to people may be an attractive proposition for national and international agencies that support data collection. The opportunities for collaboration with other surveys should be explored to examine where this would be feasible and most useful.

VII. POINTS FOR CONSIDERATION

28. If forest policies are to increase the socioeconomic benefits from forests, then these benefits need to be quantified more accurately, so that the impacts of policies can be monitored and used to inform and improve policy making. With this in mind, the Committee may wish to:

- reaffirm the importance the collection of annual statistics on the production and trade of forest products, as well as income, gender aspects and employment in the forest sector.
- invite countries to consider ways to improve information about the socioeconomic benefits of forests in collaboration with other agencies responsible for welfare.
- recommend that FAO should increase efforts, in particular in the context of Strategic Objective 1 and 3, including support to countries in the following:
  a) collection of more detailed and useful information about income and employment in forest-related activities;
  b) development and testing of methodologies to measure more accurately the contributions of forests to improved quality of life, with a focus on food security, nutrition and health;
  c) dissemination of information about the socioeconomic benefits of forests and their contributions to broader development goals; and
d) inclusion of socioeconomic indicators in national forest monitoring and forest information systems.