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Sub-Group on Sex Disaggregated Data of the IAWG on Gender and Development

Women's Role and Contribution to Forest-Based Livelihoods

by

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2002

The analysis and policy recommendations of this Paper do not necessarily reflect the views of the United Nations, its Executive Board or its Member States

Acknowledgements

The author is grateful to Dr. N.C. Saxena and Ms. Madhu Sarin for reviewing this paper and providing useful insights, inputs and encouragement and to Ms. Anu Bhasin for editorial assistance. The study was carried out in August 2001.

The contribution of Ms. Swati Bakshi Moghe in providing relevant papers and secondary references that are available at the Indian Institute of Forest Management, Bhopal is gratefully acknowledged.

Prologue

Two national workshops jointly organised in 1998 by the UN System, the Department of Women and Child Development and the Central Statistical Organisation helped in identifying a set of 18 indicators to be compiled at the district level and areas of research that needed more focus. Access to resources, to assets, widowhood and destitution were identified as possible areas for special studies to be undertaken with the aim of improving the data system. Control over resources was among the proposed 18 indicators with work force participation rate and wage rate differentials as the current proxy. Subsequent discussions and reports such as the South Asia HDR 2000, which focused on gender, also highlighted the critical importance of improving gender data especially with regard to the women's control over resources. Therefore, it was thought useful to focus on women's access to and control over resources.

Women workforce participation rates (WPR) in tribal areas have been consistently high. This has implications for computation of Gender Development Index (GDI) for tribal communities and areas. In terms of spatial disaggregation (district and sub-district) the GDI measure could be used as a tool for resource allocation and decentralised planning. Given this orientation, this paper studies women's role and contribution to forest based livelihoods, especially the minor forest produce (MFP) by mapping the existing data available not only with the national data bases (Census and National Sample Survey and National Accounts System) but also with the line departments at the state level.

The Human Development Resource Centre of the UNDP India Country Office and United Nations Educational Scientific and Cultural Organisation (UNESCO) took the lead in having this paper prepared as part of the activities of the Sub-group on Sex Disaggregated Data of the UN Inter Agency Working Group on Gender and Development.

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GLOSSARY

JFM	Joint Forest Management
NCO	National Classification of Occupations
NGO	Non Governmental Organisation
NIC	National Industrial Classification
NSS	National Sample Survey
NTFPs	Non-Timber Forest Products
SNA	System of National Accounts
TRIFED	Tribal Cooperative Marketing Development Federation of India Limited

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SECTION I



Poverty in rural India is generally considered to be linked to inadequate arable land or its low productivity. Collections from forests such as fuelwood and non-timber forest products (NTFPs) and their contribution to household income in rural areas especially for communities living adjacent to forests, are largely unnoticed¹. There are an estimated 100 million people in the country who live in and around forests and another 275 million for whom forests constitute an important source of livelihood².

As a result of the gender division of work, it is primarily women who are the major gatherers of a wide range of NTFPs for subsistence and as a source of income. Women are also employed along with men in forestry operations of the forest and other departments. Additionally, they have been prominent in regional movements for forest protection, such as the Chipko Movement in Uttaranchal and self-initiated forest protection groups.

An emerging understanding of the following has triggered interest in the role of women in forestry and the forest economy:

- Importance of forest produce, especially fuelwood, fodder and NTFPs,

Introduction

in the livelihood of the rural poor.

- Participation of women in the forest-derived economy as primary collectors of forest produce, as wage employees in forestry operations and forest-based enterprises and in forest management.
- The dominant role played by women in mass movements to protect forests.
- A growing realisation that forestry projects can only partially succeed if they do not involve women.
- An increasing focus on gender and equity issues in international and national fora and policymaking and on the need to analyse gender issues for each sector and programme.

In this context, the present paper is an outcome of a study commissioned by the Human Development Resource Centre of the United Nations Development Programme and UNESCO, New Delhi to examine the following:

- Women's role and contribution to forest-based livelihoods, with special reference to non-timber forest products (NTFPs).
- Gender focus in forest policy, forestry schemes and government programmes.

There are an estimated 100 million people in the country who live in and around forests and another 275 million for whom forests constitute an important source of livelihood

¹ Kumar, N., N.C. Saxena, Y. Alagh and K. Mitra, 2000, *Poverty Alleviation through Forestry Development*, Country Case Study, Operations Evaluation Department, The World Bank. Washington DC.

² Bajaj, Manjul, 2001, *The Impact of Globalisation on the Forestry Sector in India with Special Reference to Women's Employment*, Paper for National Commission on Labour: Group on Women and Child Labour, New Delhi

- Gender reporting of women in forestry in:
 - The Census, National Sample Surveys and National Accounts Statistics
 - Departmental data.
- Indicators that capture women's roles in forest-based livelihoods including an evaluation of the adequacy of workforce participation rates and wage rate differentials as a proxy for women's control over forests and forest produce.
- Suggestions for strengthening gender reporting on issues related to forests for national databases and departmental data.

This paper is based on:

- A desk review of secondary literature and relevant government publications and documents. The sources consulted are referred to in the footnotes and a list of relevant publications on women and forestry is given in Appendix.

- Meetings and discussions with experts and resource persons, research and policy institutions and government departments (the footnotes refer to discussions where relevant).

The paper is organised as follows:

Section II discusses the role of women in forestry as reflected in secondary literature on the subject.

Section III examines the gender focus in forest policy and programmes, primarily of the Forest Department, with suggestions for strengthening gender-based reporting in departmental data.

Section IV presents the reporting of women's role in forestry in national databases namely, the Census of India, National Sample Surveys and National Accounts Statistics. It examines the adequacy of the representation of women's roles in the databases and puts forth suggestions for strengthening gender reporting in the forestry sector.

SECTION II



Women's Role in Forestry

A review of secondary literature highlights the role of women in forestry in essentially three areas:

- Gathering fuelwood, fodder and NTFPs;
- Employment and income; and
- Protection and management.

Gathering Fuelwood, Fodder and NTFPs

Apart from industrial timber, most NTFPs, such as fuel wood and fodder, come from forests and provide valuable flows for subsistence and cash income. Gathering of fuelwood, fodder and NTFPs is an important subsistence and economic activity for poor women and about 60-70 percent of gatherers are women³. Their relative status within the family is higher in well-forested villages, because their contribution to subsistence and cash incomes of households is greater in villages close to natural forests⁴. Moreover, as their ownership of private resources is negligible, women, particularly those who are poor, depend heavily on common resources for meeting their survival needs.

Fuelwood: Between the late 1970s and early 1990s the share of fuelwood in total energy consumption increased from 55 percent to nearly 62 percent⁵. Wood tends to be the main domestic fuel in poorer regions with low productivity. In Bihar, for instance, 90 percent of the people depend on fuelwood for their energy needs. Gathering firewood, or “head loading” as it is often called, for domestic use and as a source of income is the most widespread gender-based activity for poor women. It has been estimated that two to three million people are engaged in headloading, with the majority being tribal and other poor women⁶.

Fodder: About 30 percent of fodder requirements are met from forests and about 25 percent of the country's livestock graze on forestlands. A study shows that, in the absence of forest resources, 66 percent of small and marginal farmers in Andhra Pradesh would be unable to cultivate their land, as they would not be able to maintain a pair of bullocks⁷. According to the Forest Survey of India records, grazing takes place in over 83 percent of forest lands in

Gathering of fuelwood, fodder and NTFPs is an important economic activity for poor women and about 60-70 percent of gatherers are women

³ Discussions with Mr. Rajiv Kumar, Assistant Inspector General of Forests and Mr. M. Satyanarayana, Deputy Inspector General (Forest Policy & NAEB) at the Ministry of Environment and Forest, New Delhi.

⁴ Kumar, N., N.C. Saxena, Y. Alagh and K. Mitra, 2000, *Poverty Alleviation through Forestry Development*, Country Case Study, Operations Evaluation Department, The World Bank, Washington DC.

⁵ TERI. 1996, *TERI Energy Data Directory and Yearbook, 1995/96*, Tata Energy Research Institute. New Delhi.

⁶ Centre for Ecological Sciences, 1995, *Community Forestry: An Ecological, Economic and Institutional Assessment of Western Ghats*, Report to the Ford Foundation, Mimeo, Indian Institute of Science, Bangalore, Karnataka.

⁷ Singh, D., A. Kumar and A. Khare, 1993, *Common Lands of Andhra Pradesh: An Analysis of the Grazing Problem*, Society for Promotion of Wasteland Development, New Delhi.

NTFPs are obtained from about 3,000 species in the country and form an important source of food and livelihood for communities, particularly tribals and rural poor living adjacent to forests

Uttar Pradesh, over 87 percent in West Bengal, over 85 percent in Meghalaya, over 70 percent in Orissa, over 75 percent in Sikkim and over 53 percent in Nagaland⁸.

In Himachal Pradesh and Uttaranchal, very little fodder is grown on agricultural land and livestock graze mainly in pastures and forests. In these regions, tree fodder is predominant and it is mainly women who manage lopping and fodder collection. As many of these regions have a high degree of male migration, the responsibility of agriculture and animal husbandry lies with women⁹.

NTFPs: NTFPs are obtained from about 3,000 species in the country and form an important source of food and livelihood for communities, particularly tribals and rural poor living adjacent to forests¹⁰. About 70 percent of NTFPs are collected from Maharashtra, Madhya Pradesh, Bihar, Orissa and Andhra Pradesh, states that are home to 65 percent of the country's tribal population¹¹.

Several thousand tons of NTFPs are re-

moved annually from Indian forests providing earnings that run into billions of rupees each year¹². At the national level, 40 percent of state revenues and 70 percent of forest export revenues come from NTFPs, mostly in unprocessed and raw forms¹³. Some studies point out that NTFPs contribute a higher economic return than timber¹⁴. About 60 percent of NTFP collection goes unrecorded as it is consumed or bartered by the 15 million people living in and around forests¹⁵.

In Andhra Pradesh, around 58 percent of mahua flowers and seeds and 17 percent of tamarind fruit collected by tribals are consumed by them. In district Bastar, Chattisgarh, about 75 percent of forest-dependent people supplement their food with tubers, flowers and fruits. In the Andaman and Nicobar Islands, several tribes subsist wholly on food derived from forests and the sea¹⁶. In Maharashtra, tribal groups living near forests derive about 30 percent of their diet from forest products¹⁷.

⁸ Forest Survey of India, 1987, *The State of Forest Report 1987*, Forest Survey of India, Dehradun, Uttaranchal.

⁹ Kaur, R. 1991, *Women in Forestry in India*, Working Paper (WPS 714), Women in Development, The World Bank, Washington DC.

¹⁰ Kumar, N., N.C. Saxena, Y. Alagh and K. Mitra, 2000, *Poverty Alleviation through Forestry Development*, Country Case Study, Operations Evaluation Department, The World Bank, Washington DC.

¹¹ Saxena, N.C. Women in Forestry, <http://planningcommission.nic.in/wforest/htm>.

¹² Kumar, N., N.C. Saxena, Y. Alagh and K. Mitra, 2000, *Poverty Alleviation through Forestry Development*, Country Case Study, Operations Evaluation Department, The World Bank, Washington DC.

¹³ Prasad, R., 1999, *Joint Forest Management in India and the Impact of State Control over Non-wood Forest Products*, Unasylva, 198, Volume 50.

¹⁴ Campbell, J.Y., 1995, "Evolving Forest Management Systems to People's Needs" in S.B. Roy (ed.) *Enabling for Joint Forest Management*, Inter India Publications, New Delhi; Malhotra, K.C., D. Deb, M. Dutta, T.S. Vasalu, G. Yadav and M. Adikari, 1991, *Role of Non-timber Forest Produce in the Village Economy*, IBRAD, Calcutta.

¹⁵ Kumar, N., N.C. Saxena, Y. Alagh and K. Mitra., 2000, *Poverty Alleviation through Forestry Development*, Country Case Study, Operations Evaluation Department, The World Bank, Washington DC.

¹⁶ Khare, A., M. Sarin, N.C. Saxena, S. Palit, S. Bathla, F. Vania and M. Satyanarayana, 2000, *Joint Forest Management: Policy, Practice and Prospects*, India Country Study, Policy that Works for Forests and People Series no: 3, World Wide Fund for Nature - India and International Institute for Environment and Development, UK.

¹⁷ World Bank., 1993, *India Forestry Sector Review*, The World Bank, Washington DC.

Employment and Income

The main forest-based activities from which people derive employment and income are¹⁸:

- sale of firewood and fodder;
- rearing of livestock (grazing in and/or collecting fodder from forests);
- collection and processing of NTFPs;
- forest-based handicrafts and cottage industries; and
- wage labour. (Box 1)

Employment generated in forestry can be classified broadly into direct employment, self-employment and secondary employment.

Direct Employment

The Forest Department and other departments (Rural Development, Agriculture and Cooperatives) generate direct employment under regular forestry activities in forests under their control and through special afforestation programmes. The forestry staff prefers women for forestry operations such as nursery work, transplanting and tendu leaf collection. The work is contracted either on a daily-wage or piece-rate basis, but women often get lower wages than men for similar work, are not paid regularly and harassed if they complain¹⁹. These forestry operations are largely sporadic owing to the seasonal nature of forestry work (Table 1). Firm estimates

Box 1: Employment Opportunities in the Forestry Sector

In Madhya Pradesh, the forestry sector makes a significant contribution to the state's exchequer (9.7 percent between 1989-94), and also provides:

- Around 100 million person days employment to the rural poor annually.
- Regular employment to 43,000

people in various forest department establishments.

- Employment opportunities for tribals (25 percent of the state's population are almost entirely dependent on forestry for their livelihood) of approximately 70 million person days.

Source: *Madhya Pradesh Human Development Report 1998*.

Table 1: Gender Distribution of Work in Forestry Operations²⁰

Forestry Operations	Women	Men
Development Work		
Nursery operations	x	
Clearing and road work	x	x
Earth work	x	x
Maintenance Work		
Watering	x	
Weeding and applying fertilisers & pesticides	x	
Protection	x	x
Harvesting		
Major produce		x
Minor produce	x	
Management		
Forest officials	negligible	x
Village Extension Workers	x	x

of women employed in forestry operations are hard to come by.

In social forestry projects, too, women have benefited only to a limited extent. The Orissa social forestry project reviewed in 1985-86 showed that women had only 37 per cent of the total person days of employment generated for the different sub-components (nursery, village woodlots, reforestation, farm forestry for rural poor, rehabilitation and protection)²¹. (Table 2)

¹⁸ Kaur, R., 1991, *Women in Forestry in India*, Working Paper (WPS 714), Women in Development. The World Bank, Washington DC.

¹⁹ Bajaj, M., 2001, *The Impact of Globalisation on the Forestry Sector in India with Special Reference to Women's Employment*, Paper for National Commission on Labour: Group on Women and Child Labour. New Delhi.

²⁰ Ibid

²¹ Olsson, G., 1988, *Employment and Income Generation in Social Forestry: Case Study from Orissa*, International Labour Organisation, Geneva.

Table 2: Employment Generated by Forest Department's Harvesting Operations (1980)

Harvesting Operation	Employment (Million Man Days)	Employment (Million Woman Days)
Minor forest products (21 products)	456.97	03.17
Major forest products (coniferous and non-coniferous wood, pulpwood and fuelwood)	136.42	46.06
Plantation activities	31.29	15.69
Total	624.68	364.92
(% of total mandays + womandays)	(63.13)	(36.87)

Source: M.M Pant. 1984. *Forest Economics and Valuation*. Medhawi Publishers, Dehradun, Uttaranchal.

Self-employment in forestry refers to individual or family units geared towards deriving income from activities such as the sale of firewood, livestock rearing (where income is derived from the sale of milk) and collection, and processing and marketing of NTFPs

Self-employment

Self-employment in forestry refers to individual or family units geared towards deriving income from activities such as the sale of firewood, livestock rearing (where income is derived from the sale of milk) and collection, processing and marketing of NTFPs.

West Bengal: In West Medinipur district many village communities derive as much as 17 percent of their annual household income from NTFP collection and sale²².

Orissa: Women, especially in tribal areas, depend more heavily than men on forest produce for employment and income. In some areas, 91 percent of men and 98 percent of women were engaged in NTFP collection from forest areas. In these areas, processing of NTFPs is done

primarily by women, with the exception of liquor making from *mahua* flowers²³.

A study conducted in 301 randomly selected tribal households (Kondhs, Mundas and Saoras) in six districts (Boudh, Phulbani, Keonjhar, Mayurbhanj, Sundergarh and Gajapati) shows that on average a tribal family derives about 50 percent of its annual income from forests and trades about one-third of the products gathered²⁴. According to another estimate, about 15 lakh poor people, mostly women, derive 10-40 percent of their annual income from tendu leaf collection²⁵.

Himachal Pradesh: A study in the Kullu-Mandi region shows that about 10 percent of the families derive on an average 15 percent of their total cash income from NTFP sales, the main collectors being women²⁶.

Chhattisgarh: In a study of two districts in this predominantly tribal state, NTFPs contribute to around 20 percent of the per capita income in villages²⁷.

Gujarat: A study conducted in Panchmahal district shows that 35 percent of the total earnings of tribal households was from NTFPs²⁸.

²² Malhotra, K.C., D. Deb, M. Dutta, T.S. Vasalu, G. Yadav and M. Adikari., 1991, *Role of Non-timber Forest Produce in Village Economy*, IBRAD, Calcutta.

²³ Saigal, S., 1998, *Participatory Forestry in India: Analysis and Lessons*, M.Sc. thesis, Oxford Forestry Institute, Oxford.

²⁴ Indian Institute of Forest Management Bhopal, Madhya Pradesh, 1998, Study for the Ministry of Environment and Forests, New Delhi.

²⁵ Planning Commission, Government of India, 2001, *Appraisal of the Ninth Five Year Plan*. Chapter 34 - Environment & Forests.

²⁶ Bajaj, Manjul, 1998, *How Much is a Lot? An Economic Evaluation of the Contribution of Non-timber Forest Products to the Tribal Economy of Madhya Pradesh*, Food and Agriculture Organisation, New Delhi.

²⁷ Bajaj, Manjul, 1997, *Medicinal Plants and other Non-timber Forest Products in Himachal Pradesh*, Overseas Development Administration, New Delhi.

²⁸ Kaur, R., 1991, *Women in Forestry in India*, Working Paper (WPS 714), Women in Development, The World Bank, Washington DC.

Jharkhand: In district Dumka, a study shows that fuel wood sale is the main source of income for about 65 percent of women²⁹.

Secondary Employment

This refers to employment in wood-based and small-scale forest-based enterprises. These enterprises, many of which rely on NTFPs, provide up to 50 percent of the income for about 25 percent of India's rural labour force³⁰. According to a 1987 estimate, women accounted for 572 million person days (i.e., 35 percent) of an estimated 1,623 million person days of employment in forest-based enterprises³¹. Approximately 90 percent of this employment is generated in small-scale enterprises that depend on applying local skills and village-level technology for the collection and processing of produce, where production can be pursued as a household or non-household cottage industry. Although women's participation rate in some large enterprises such as the match industry may be very high, total women's employment is less than half that of small-scale enterprises.

In addition to forest-based enterprises, secondary employment also includes employment generated through the collection and sale of NTFPs to contrac-

tors, agents of the Forest Development corporations or directly to the corporations. This is essentially for nationalised NTFPs in most states, except in Madhya Pradesh where select non-nationalised NTFPs can also be sold to the Minor Forest Produce Federation.

Madhya Pradesh: The state accounts for nearly 21 percent of the country's total forest cover. The Madhya Pradesh Forestry Department controls legally designated forest lands comprising about 34 percent of the state's geographical area³². Apart from meeting the needs of urban and industrial establishments, these forests are an important source of livelihood for at least 30,000 villages (42 percent of the state's total villages) located on the fringes of forest areas and home to 90 percent of the state's tribal population³³. The forests meet 50 percent of Madhya Pradesh's fodder demand.

The nationalised NTFPs (tendu leaf, sal seed, harra and gum) contribute an annual revenue of around Rs 750 million to the state government. In 1996-97 the total disbursement in the form of wages to collectors of tendu leaf, harra and sal seeds was Rs. 1,700 million. Since 1995, the Madhya Pradesh

Although women's participation rate in some large enterprises such as the match industry may be very high, the total women's employment is less than half that of small-scale enterprises.

²⁹ Khare, A., M. Sarin, N.C. Saxena, S. Palit, S. Bathla, F. Vania and M. Satyanarayana., 2000, *Joint Forest Management: Policy, Practice and Prospects*, India Country Study. Policy that Works for Forests and People Series no: 3, World Wide Fund for Nature - India and International Institute for Environment and Development, UK.

³⁰ Campbell, J.Y., 1995, "Evolving Forest Management Systems to People's Needs" in S.B. Roy (ed.) *Enabling for Joint Forest Management*, Inter India Publications, New Delhi.

³¹ Kaur, R., 1991, *Women in Forestry in India*, Working Paper (WPS 714), Women in Development, The World Bank, Washington DC.

³² Madhya Pradesh was bifurcated to create the new state of Chattisgarh in November 2000. After the bifurcation, the state's forests are 24.38 percent of its geographic area according to the *State of Forest Report 1999 Supplementary* for the newly reorganised states of Bihar and Jharkhand, Madhya Pradesh and Chattisgarh, Uttar Pradesh and Uttaranchal. Forest Survey of India (Ministry of Environment and Forests), Dehradun, Uttaranchal.

³³ *Madhya Pradesh Human Development Report*, 1998, Government of Madhya Pradesh, Bhopal.

Gatherers used to be able to sell forest produce to any buyer, but after nationalisation of NTFPs, produce can be sold only to the Forest Department

Minor Forest Produce Federation has been given the task of collecting non-nationalised NTFPs through its Primary Cooperative Societies. Wages paid in 1996-97 amounted to Rs. 28 million for 35 species³⁴.

Gatherers used to be able to sell forest produce to any buyer, but after nationalisation of NTFPs, produce can be sold only to the Forest Department. In most cases the Department has appointed agents formally or informally.

Although the private trade of nationalised NTFPs is illegal, tribals do exchange the produce for low-priced basic necessities from shopkeepers and traders, which the latter then sell to government bodies. Under these conditions, gatherers are forced to operate illegally which further reduces their collection and incomes.

For gatherers, it is not merely the volume but the remuneration that matters. In 1981, sal seeds were a nationalised NTFP in Madhya Pradesh, which gave the state government monopoly rights over its collection. Primary collectors of sal seeds could sell only to government-appointed agents/contractors, who in turn sold the produce to private oil mills after paying royalties to the state government. A study carried out in two villages in district Sarguja, Madhya Pradesh, found that the majority of sal seed collectors were women³⁵. Of the

price of Rs. 2.20 per kilogram paid by private oil mills, the percentage shares as royalty of the state government, agents/contractors and tribal women, was 45, 36 and 19, respectively. Women, thus, received less than one-fifth of the total income generated by their labour³⁶.

Government officials justify nationalisation of NTFPs on the grounds that the private sector, if unregulated and allowed to openly trade, would exploit the poor gatherers. In actual practice, however, shopkeepers and traders manage to buy produce from gatherers at low prices. In Orissa, only one private company has been given collection rights for 29 NTFPs for ten years with no limits on prices it pays tribal collectors³⁷. Field studies further show that primary collectors of these NTFPs, mainly women, are paid wages often at low rates based on the time invested, and that the profits from value addition through processing are accrued mainly by traders, contractors or forest department agencies³⁸. Nationalisation has reduced the number of legal buyers, choked the free flow of goods and delayed payment to gatherers because forest departments find it difficult to make prompt payment to the licensed traders. The late payments in turn induce traders to pay lower amounts to gatherers, so as to operate with higher margins and to bribe the police and other authorities to ignore their illegal activities. The reality is that the current system reduces the in-

³⁴ Ibid.

³⁵ Saxena, N.C., Women in Forestry. <http://planningcommission.nic.in/wforest/htm>

³⁶ Saxena, N.C., Women in Forestry. <http://planningcommission.nic.in/wforest/htm>

³⁷ Saxena, N.C., 1995, *Forest Policy and Rural Poor in Orissa*, Wasteland News, Volume XI, No. 2, November-January, New Delhi.

³⁸ Saigal, S., C. Agarwal and J.Y. Campbell, 1996, *Sustaining Joint Forest Management: The Role of NTFPs*, Society for Promotion of Wasteland Development, New Delhi.

come that forest dwellers might get from gathering NTFPs.

The current thinking is that the government needs to end its monopoly by gradually denationalising trade in NTFPs, starting with *mabua* flowers and *sal* seeds. When primary gatherers are free to stock, process and sell without needing licenses, their knowledge about market conditions will improve, the number of traders will increase, and conditions will be created to increase competition. This will increase profits for gatherers and encourage value addition through local sorting, bulking and storage. Encouraging the setting up of local processing units by the private sector or individuals is also recommended; forest departments should be assigned targets for setting up such units and thus become facilitators of higher incomes for forest dwellers rather than regulators.

The urgency to do away with the government monopoly is also because under the new legislation for tribal areas by the central government (Schedule V Act), the *gram sabha/panchayat* and not the government owns the NTFPs (Box 2). Although this law has been on the statute since December 1996, its implementation unfortunately has been extremely tardy. States have ignored the law and not modified various provisions of the forest regulations that control the flow of NTFPs³⁹.

Box 2: Panchayats and NTFPs

Following the 76th Amendment of the Constitution and enactment of the Panchayats (Extension to the Scheduled Areas) Act, 1996, the Government of Madhya Pradesh decided to give the net profits from NTFPs to primary co-op-

erative societies. Of the total profit, 20 percent was to be spent on forest regeneration, 50 percent would be distributed among collectors and the balance would go towards village development.

Source: *Madhya Pradesh Human Development Report 1998*.

Management and Protection of Forests

Given their significant role in, and contribution to, forest-based livelihoods, women have rarely been accorded due importance in planning of forestry programmes and formal forest management and protection systems. Therefore, their role in protection and management of forests largely through informal and self-initiated women's groups (*mahila mandals*) remains largely invisible and consequently unrecognised, unacknowledged and poorly reported. As a result, their 'invisible' forest management systems are often destabilised when, through supervision of 'participatory' programmes, control over forests is transferred to the male elite⁴⁰.

Prior to 1988, the Forest Department's programmes, projects and schemes enlisted women's participation as essentially wage earners. Projects and schemes requiring participatory planning with local communities mostly involved only men. The 1988 Forest Policy mandated a shift from complete state controlled

When primary gatherers are free to stock, process and sell without needing licenses, their knowledge about market conditions will improve, the number of traders will increase, and conditions will be created to increase competition

³⁹ Based on comments from Dr. N.C. Saxena

⁴⁰ Sarin, Madhu, 2001, *From Right Holders to 'Beneficiaries'? Community Forest Management, Van Panchayats and Village Forest Joint Management in Uttarakhand*, (Draft paper available with author: msarin@satyam.net.in)

Several studies suggest a positive impact of both the Joint Forest Management Programme and self-initiated forest protection on the condition of forests

forest management to decentralised and participatory management, and to implement the new policy the Ministry of Environment and Forests initiated the Joint Forest Management Programme (in June 1990) which required state forest departments to work with local communities to regenerate degraded lands. Currently 25 states have issued orders and about 1.16 million hectares of degraded forests (15 percent of India's total forestland) are being regenerated under community management by more than 45,000 joint forest management (JFM) committees and by promising local communities access to forest resources⁴¹.

Several studies suggest a positive impact of both the Joint Forest Management Programme and self-initiated forest protection on the condition of forests. Local community institutions are proving effective in protecting forests and many states have recorded increases in forest productivity often with increased flows of NTFPs⁴².

Women in User Groups

While acknowledging the positive impact of the Joint Forest Management Programme, studies analysing its operational issues have raised concerns related to equity and gender. These are discussed in greater detail in Section 3 of

this paper ("Gender Focus in Forest Policy..."). The gender and equity issues raised in these studies are summarised as follows:

Representation in management bodies

According to the Joint Forest Management guidelines (revised in February 2000), the Joint Forest Management General Body should have 50 percent female representation and the Management Committee a minimum of 33 percent. Although this represents a significant improvement on the initial guidelines of June 1990, even 50 percent representation does not ensure membership access to the poorest and neediest women and men users.

Participation in planning and decision-making

The process by which the Management Committee is constituted determines the extent of representation of diverse interest groups within a community and consequently its gender and equity concerns⁴³. None of the resolutions require that forest-dependent women within a community should select women representatives so that they can represent the priorities of women forest users, which has implications on the participation and

⁴¹ Figures by the Ministry of Environment & Forests, New Delhi, quoted in *Information E-bulletin on Participatory Forest Management*, Volume 1, No. 2, July 2001. Published by Resource Unit for Participatory Forestry, Winrock International India (www.winrockindia.org). New Delhi.

⁴² Singh, R.P., 1996, *Degradation to Sustainability - Kudada Shows the Way*. New Voices in Indian Forestry, Society for Promotion of Wasteland Development. New Delhi; Poffenberger, M., P. Bhattacharya, A. Rai, S.B. Roy, N. Singh and K. Singh, 1996, *Grassroots Forest Protection: Eastern Indian Experiences*, Asia Forest Research Network Report No. 7. Berkeley; Bahuguna, V.K., 1992, *Collective Resource Management: An Experience in Harda Forest Division*, Regional Centre for Wasteland Development, Indian Institute of Forest Management, Bhopal, Madhya Pradesh.

⁴³ Sarin, M., M. S. Raju, M. Chatterjee, N. K. Banerjee and S. Hiremath, 1998, *Who is Gaining? Who is Losing? Gender and Equity Concerns in Joint Forest Management*, Mimeograph, SPWD, New Delhi.

access of primary users to forest use as well as its produce. The representation norm also fails to reach out to disadvantaged women within a household such as widowed, divorced, separated and unofficially abandoned women and women-dependent households (as a result of male migration, unemployment or disability, or women remaining single)⁴⁴.

Access to resources

With the Joint Forest Management Programme's focus on natural regeneration, forest patches demarcated for joint management are closed for protection. The absence of primary forest users' participation in micro-planning and planning alternatives hampers the thorough assessment of forest uses and consequently the consumption and income needs of those acutely dependent on forest produce.

Women in Forest Departments

Field studies have shown that the employment of women as field staff and officers in forest departments helps improve interface with village women in micro-planning and forest management.

The absence of women among forestry field staff was recognised as a major constraint for promoting women's participation in social forestry projects. In response, some states have recruited a few women field staff in positions equivalent to forest guards, terming them "village forestry workers" (Haryana, Tamil Nadu), "lady forest guards" (Himachal

Table 3: Women's Employment in the Forest Service

Category	No. of Women Employed
Indian Forest Service Officer	81
Assistant Conservator of Forests	6
Range Officer	31
Deputy Ranger	84
Forest Guard	169
Forestry Worker	34

Source: *Report of the Advisory Committee to Promote the Involvement of Women in Forestry*. April 1999. National Afforestation and Eco-Development Board. Ministry of Environment

Pradesh) and "extension workers" (West Bengal, Madhya Pradesh, Karnataka, Maharashtra, Orissa and Bihar). Orissa is the only state to recruit women at levels equivalent to Range and Block Forest Officers.

The Indian Forest Service opened to women in 1979, but its present level of 81 women officers constitute barely 3 percent of the total cadre (Table 3). Further, many states still do not allow women to enroll in their State Forest Services.

In recent years, Himachal Pradesh has issued separate notifications for all cadres to allow women applicants by specifying the required physical standards. Karnataka, West Bengal and Andhra Pradesh have taken a policy decision to reserve one-third of all government jobs, including those in forest departments, for women⁴⁵.

Summary

This section clearly brings out the fact that the nature of forest-based livelihoods is varied and so is the dependence of different communities in different

Field studies have shown that the employment of women as field staff and officers in forest departments helps improve interface with village women in micro-planning and forest management

⁴⁴ Ibid.

⁴⁵ *Report of the Advisory Committee to Promote the Involvement of Women in Forestry*, April 1999, National Afforestation and Eco-Development Board, Ministry of Environment and Forests, New Delhi.

Although women are a significant category of forest users, their participation in forest departments and formal local institutions is far lower than their contribution to forest-based livelihoods

regions. Some of the key issues related to this are summarised here:

- Although there is a lot of variation in the dependence of poor and tribal communities on forest produce for subsistence, it is nevertheless high.
- As a result of the seasonal nature of work, direct employment generated by forestry operations is sporadic and depends on the location of forestry operations in a particular year.
- Self-employment, which is largely in the informal sector and involves collection and sale of fuelwood, live-stock rearing and collection, and processing and sale of NTFPs, varies from region to region. However, micro case studies have shown that in district Dumka, Jharkhand, for example, sale of firewood is the main source of income for 65 percent of women and in Orissa tribal communities derive 50 percent of their earnings from NTFPs.
- Fuelwood is collected throughout the year for domestic consumption and sale.
- Collection of NTFPs species-wise is a seasonal activity. However, if one takes into account the range of NTFPs - nationalised and non-nationalised for both subsistence and income - then field studies reflect engagement of households and especially women in NTFP collection for a major part of the year.
- Although women are a significant category of forest users, their participation in forest departments and formal local institutions is far lower than their contribution to forest-based livelihoods.

SECTION III



Gender Focus in Forest Policy and Programmes

About 90 percent of India's 64 million hectares of forests are under state ownership, and only 10 percent are community and private forests. This paper, thus, focuses on understanding the gender dimension of the government's forest policy and programmes.

Forestry is primarily the domain of the Ministry of Environment and Forests and state forest departments. However, afforestation and tree planting schemes also figure in the portfolio of the Ministry of Rural Areas and Employment, Department of Poverty Alleviation and Rural Employment and Department of Agriculture and Cooperation.

Gender Focus in Policy, Programmes and Schemes

Forest Policy

The evolution of forest policy in India since independence can be divided into three phases. Prior to 1976, the 1952 Forest Policy continued to follow the British system that was based on maximising the timber harvest for the state and industry. The second phase, which began in 1976, was characterised by social forestry, which sought to meet industry's demand for forest materials as well as people's needs of fuelwood, fodder and construction timber from plan-

tations outside forest areas. During this period, as revenues from NTFPs began increasing, state governments nationalised major products and established forest development corporations to procure and sell these for revenue. The 1952 Policy as well as the 1976 National Commission on Agriculture stressed the importance of production forestry and achieving self-sufficiency in the supply of wood products from national forests.

The 1988 Forest Policy marked a radical shift as it changed the focus substantially. It set a target of increasing forest cover to 33 percent of India's land area and treated forests primarily as an ecological necessity, then as a source of goods for local populations with particular emphasis on NTFPs and, third, as a source of wood and other products for industry. It acknowledged the dependence of local communities on forests for livelihood, and specifically mentioned the need to involve women to meet the policy objectives⁴⁶.

Although states are entitled to formulate their own forest policies, only some have done so and, apart from Madhya Pradesh⁴⁷, none of these policies have a specific focus on women.

The 1988 Forest Policy marked a radical shift as it changed the focus substantially

⁴⁶ *National Forest Policy*, December 1988, No. 3A/86-FP, Ministry of Environment and Forests, New Delhi.

⁴⁷ *Report of the Advisory Committee to Promote the Involvement of Women in Forestry*, April 1999, National Afforestation and Eco-Development Board, Ministry of Environment and Forests, New Delhi.

The Joint Forest Management Programme aims at fostering a partnership between state forest departments and local institutions of forest users to share forest management responsibilities and benefits

The Madhya Pradesh Policy for Women has specific provisions for:

- Increasing women's control over income from the collection, processing and marketing of NTFPs.
- Organising women's cooperatives to safeguard them from exploitation.
- Providing shelter and water at NTFP collection centres.
- Introducing welfare measures to reduce occupational hazards.
- Ensuring at least 50 percent participation of women in managerial and decision-making bodies in associated institutions such as the Primary Co-operative Societies for NTFP
- Collection and Forest Protection Committees under the Joint Forest Management Programme.

Joint Forest Management

The 1998 Forest Policy paved the way for the formulation of the Joint Forest Management Programme (Ministry of Environment and Forests, Government of India Circular: June 1, 1990; revised, February 2000)⁴⁸. In response to the circular, 23 states have so far issued orders for enabling joint forest management.

The Joint Forest Management Programme aims at fostering a partnership between state forest departments and local institutions of forest users to share forest management responsibilities and

benefits. Under this framework, most state forest departments have given participating villagers access to specified NTFPs and a 20-50 percent share of poles/timber⁴⁹ (in cash or kind) on final felling. Villagers, in return, are expected to protect the forests after forming an organisation along the lines specified by forest departments.

Women's ownership of private resources is negligible and they depend heavily on common resources for their survival needs; a programme such as Joint Forest Management can provide them independent access and entitlements to forest resources.

States such as West Bengal, Orissa and Haryana have completed a decade of Joint Forest Management, and their experiences along with those of other states have brought to the forefront a range of issues related to gender and equity. Many of these issues are referred to in government documents as well.

Some of the issues relevant to this paper are discussed here:

Women's Access to Planning and Decision-making Institutions: Field studies have shown how, as a result of the one-representative per household norm, a vast majority of forest users have been excluded from the joint forest management processes⁵⁰. The initial resolution had stated that the joint forest management resolutions of all states, except

⁴⁸ For further information on guidelines, visit <http://envfor.nic.in>, Forest Protection Division of the Ministry of Environment and Forests, New Delhi; for state JFM resolutions visit www.viksat.org/envirodebate.

⁴⁹ Exceptions: In Andhra Pradesh, 100 percent of the poles/timber goes to the villagers; Himachal Pradesh has recently revised its rules whereby 75 percent goes to villagers and 25 percent to gram panchayats.

⁵⁰ Suess, W., 1995, *How Joint is Forest Management in the Actual JFM Implementation? Observations on Practice, Problems and Prospects of JFM from Selected Cases in Udaipur District*, Sewa Mandir, Udaipur, Rajasthan.

Gujarat and Haryana, would use the household as the basic unit for membership of the local institution's general body. (In Gujarat, any interested person could become a member of the general body and in Haryana all male and female adults were eligible.) According to the initial resolution only one representative per household was eligible to be a general body member. However, this representative is almost always a man who is socially and culturally perceived to be the head of the household. As a result, a majority of women and marginalised men, who in most cases are acutely dependent on forests, do not have the right to participate in Joint Forest Management on their own behalf⁵¹. Several studies have further indicated that male household 'heads' neither consult their household women nor represent their priorities. These studies have noted the lack of awareness among male decision-makers of a household about the negative impact of sudden and total closure of forests on women's (from the same household) gendered responsibility for procuring fuelwood⁵².

In response to criticism of women's exclusion from forest protection committees despite their being major gatherers and users of forests, the West Bengal Joint Forest Management resolution made a provision that a husband's membership automatically ensures his wife's

membership on a committee.

Subsequently, Andhra Pradesh, Kerala, Tamil Nadu, Himachal Pradesh, Orissa and Madhya Pradesh have allowed one man and one woman per household to be members, so that at least approximately 50 percent of the members are women. However, studies have shown that, as long as the 'household' continues to be the qualifying unit, membership access to the poorest cannot be assured, as it implicitly assumes that households are essentially nuclear families of husband, wife and children. (The 1981 Census recognises 10 types of households, and only 44 percent of the population can be categorised into nuclear households.) Further, the norm fails to reach out to the disadvantaged women within a household, such as the widowed, divorced, separated and unofficially abandoned⁵³. Moreover, none of the resolutions require that forest-dependent women within a community select women representatives who can better present the problems and priorities of women forest users.

The Advisory Committee to Promote Involvement of Women in Forestry constituted by the Ministry of Environment and Forests in 1998 recommended in its report of April 1999 that women should have a greater participation in the forestry sector. The revised Joint Forest

Studies have noted the lack of awareness among male decision-makers of a household about the negative impact of sudden and total closure of forests on women's gendered responsibility for procuring fuelwood

⁵¹ Sarin, M., M. S. Raju, M. Chatterjee, N. K. Banerjee and S. Hiremath, 1998, *Who is Gaining? Who is Losing? Gender and Equity Concerns in Joint Forest Management*, Mimeograph, SPWD, New Delhi.

⁵² Sarin, M., 1994, *Regenerating India's Forests: Reconciling Gender Equity with JFM*, Paper presented at the International Workshop on India's Forest Management and Ecological Revival by University of Florida and TERI, New Delhi, February 10-12, 1994; Correa, M., 1995, *Gender and Joint Forest Management: A Research Study in Uttara Kannada District, Karnataka*, Mimeo, India Development Service, Dharwad, Karnataka.

⁵³ Sarin, M., M.S. Raju, M. Chatterjee, N.K. Banerjee and S. Hiremath, 1998, *Who is Gaining? Who is Losing? Gender and Equity Concerns in Joint Forest Management*, Mimeograph, SPWD, New Delhi.

Nationalised NTFPs in protected forest patches continue to be procured by forest department agencies or their agents and their benefits do not accrue to communities from their management of forests

Management Guidelines of February 2000 provide for 50 percent representation of women in the general body and 33 percent in the management committee.

Access to Forests: As mentioned in Section 1, with the Joint Forest Management Programme's focus on natural regeneration, forest patches demarcated for joint management are closed for protection. As primary forest users are not included in micro planning, a proper assessment cannot be carried out of forest uses and the consumption and income needs of those acutely dependent on forest produce such as for firewood head loading and livestock grazing. Nationalised NTFPs in protected forest patches continue to be procured by forest department agencies or their agents and their benefits do not accrue to communities from their management of forests.

In many areas, protection has reduced access to certain NTFPs. In West Bengal, Orissa and Bihar, where sal leaf plate-making is an important source of income, the increasing height of protected sal trees reduces collection as women find it difficult to reach new leaves. Similarly, the volume of tendu leaves tends to decline in a regenerating forest as growing trees shade the tendu bush and adversely affect leaf growth⁵⁴. Tendu leaves also need pruning for good leaf growth but the Joint Forest Management resolutions do not allow local communities to undertake pruning.

Centrally Sponsored Schemes

During the Ninth Five-Year Plan, the following state schemes were initiated:

- Non-timber forest produce (including medicinal plants) scheme.
- Area-oriented fuel wood and fodder project scheme.
- Integrated afforestation and eco-development projects.
- Integrated village afforestation and eco-development schemes and the creation of a forest development agency.

Given their specific focus, all the centrally sponsored schemes have the following common operational features:

- Joint Forest Management (as per Joint Forest Management Guidelines of June 1990) as a central and integral part of all plantation activities.
- People's participation in planning and implementation.
- Conducting participatory rural appraisal for developing microplans with people.
- Employment generation especially for the most needy: women, scheduled castes/tribes and landless labourers.
- Formation and registration of village forest committees.
- Finalisation of protection mechanism, rules for penalties, establishment of village funds, benefit-sharing mechanisms, calendar of meetings and quorum for meeting including the mandatory representation of women as required by the village forest committee and forest department.

⁵⁴ Based on comments from Ms. Madhu Sarin.

The ‘operational guidelines’ use of terms such as ‘participation of people/village/local community’ in planning and setting up village-level committees with ‘due representation from villagers’⁵⁵ however does not bring into focus the significant role, dependence and contribution of women to forest-based livelihoods. As discussed above, most forest protection committee schemes do not emphasise women’s participation in planning and management. As a result, their role remains invisible; they are excluded from micro-level planning and are not adequately represented in formal village-level committees for decision making and management.

The Integrated Village Afforestation and Eco-development Scheme (and creation of forest development agencies - FDAs) initiated on a pilot basis during the Ninth Plan has a more detailed emphasis on women’s participation and employment generation targeting mainly the weaker sections⁵⁶. It also has selection criteria for villages as those with:

- A preponderance of scheduled caste/scheduled tribe population;
- People who are willing to participate in forest conservation efforts;
- Forest protection committees/eco-development committees;
- Some extent of degraded forest land; and

- A degree of dependence on biomass resources.

The funds under this scheme are released directly to FDAs and specify a labour component of about 60 percent and a minimum number of women representatives in the Forest Development Authority. The requirements are given in Table 4.

The scheme has been implemented in nine states and it is proposed to extend it to all states during the Tenth Plan⁵⁷.

State forest departments’ concurrent monitoring of schemes track mainly quantitative aspects: progress on/achievement of physical and financial targets, person days of employment

Most forest protection committee schemes do not emphasise women’s participation in planning and management

Table 4: Representation in Forest Development Authorities

General Body	Executive Body
Chairpersons of all village forest committees.	Chairperson - Conservator of Forests.
Member secretaries of all village forest committees.	Member Secretary cum Chief Executive Officer-Divisional Forest Officer.
One designated woman member from each forest committee.	Ex-officio members (without voting rights) District Development Officer, and district-level officers of 9 departments.
Chairpersons of district panchayat forest committees.	Chairperson of district panchayat forest committees.
Range forests officers, ACFs/SDFs.	25 nominees from village forest committees/eco-development committees to include at least 14 women.

⁵⁵ Each centrally sponsored scheme has its own operational guidelines that are available with the National Afforestation and Eco-Development Board, Ministry of Environment and Forests, Government of India.

⁵⁶ *Integrated Village Afforestation and Eco-development Scheme and Creation of Forest Development Agency: Operational Guidelines*, May 2000, National Afforestation and Eco-Development Board, Ministry of Environment and Forests, Government of India.

⁵⁷ From discussions with Mr. Arvind Kumar, Assistant Inspector General of Forests, Ministry of Environment and Forests, New Delhi.

Externally aided projects on average have a total budget of Rs. 3,000 million over a four to six year period. Joint forest management is an integral part of these projects

generated and amounts disbursed in wages. Evaluations commissioned by the National Afforestation and Eco-development Board, Ministry of Environment and Forests, on the other hand, examine the scheme as a whole and cover issues such as people's participation and benefits to local communities, and assess qualitative aspects such as the survival rate of saplings, health of plantations, training programmes, the effectiveness of local management systems, etc. The evaluation format for the NTFP schemes refers to women only once in terms of their number represented in village forest committees⁵⁸.

Externally Aided Projects

Ten externally aided projects are presently being implemented:

- The World Bank in Uttar Pradesh, Uttaranchal, Kerala;
- Japanese Bank for International Cooperation in Rajasthan (2 projects), Gujarat, Punjab, Karnataka, Tamil Nadu; and
- GTZ in Himachal Pradesh.

Externally aided projects on an average have a total budget of Rs. 3,000 million over a four to six year period. Joint forest management is an integral part of these projects and about 75 percent of the donor budget is for employment gen-

eration. Among the ongoing projects, those funded by the World Bank record the impact of the project on men and women in terms of the number of woman days and man days generated, wage earnings of men and women in different forestry operations and membership and participation in village forest committees⁵⁹.

National Biodiversity Strategy and Action Plan

The Ministry of Environment and Forests is currently preparing the National Biodiversity Strategy and Action Plan in close collaboration with the non-governmental organisation (NGO), Kalpvriksha, and with funding from the Global Environment Facility. Preparation of the plan involves participation of key stakeholders: a large number of village-level organisations and movements, academicians, scientists, government officers from various line departments and the private sector. Detailed guidelines have been formulated for developing the action plan. To ensure that issues of participation, empowerment and access integrating gender sensitivity are an integral part of the plan development process, separate guidelines for each of these issues have been formulated⁶⁰.

⁵⁸ Evaluation Format for the National Afforestation and Eco-Development Board (Ministry of Environment and Forests, Government of India) Scheme Sanctioned to States in the Ninth Five Year Plan currently being used for the first phase evaluation of the NTFP scheme.

⁵⁹ From discussions with Mr. Rajiv Kumar, Assistant Inspector General of Forests and Mr. M. K. Jiwrajka, Deputy Inspector General (Forest) at the Ministry of Environment and Forests, New Delhi.

⁶⁰ For details on these guidelines, visit <http://envfor.nic.in>, Forest Protection Division of the Ministry of Environment and Forests, New Delhi.

Gender Reporting in Forest Department Operations

Employment and Wage Earnings Generated by Forestry Operations

As mentioned earlier in this paper, the Forest Department (and other departments involved in afforestation) generates direct employment under regular forestry activities in forests under their control and through special afforestation programmes and schemes⁶¹ (Box 3). For the different forestry operations, the department records employment generated and wages disbursed to people hired as wage labour.

The muster rolls available at the offices of the Division Forest Officer record the employment generated for the different activities and wages disbursed. The name of the person is recorded against the wages paid and may often specify, if required, whether the person employed as wage labour is from the reserved or general category. Therefore, it is possible to generate data on employment and wages earned by men and women separately going by the name of the person recorded. However, as it is not required for reporting purposes, it is not segregated in the muster rolls⁶².

Collection and Sale of NTFPs

In the 1960s and 1970s, as the commercial importance of NTFPs increased, the state government nationalised important products, apparently with the intention of helping the poor. While the nature and extent of NTFP nationalisation

Box 3: Employment Opportunities in Forestry Operations

- *Development Work:* Nursery operations, clearing and road work, earth work
- *Plantation*
- *Maintenance Work:* Watering, weeding, applying fertilizers and pesticides, protection
- *Harvesting:* Major produce, minor produce
- *Management:* Village extension workers

varies by state and product, nationalisation requires gatherers to sell nationalised NTFPs only to forest departments or their agents. Different states have adopted different ways to procure nationalised NTFPs, which are a major source of revenue for the state, as well as generating substantial employment and income for NTFP collectors who, as mentioned earlier, are mainly women (60-70 per cent)⁶³.

The Tribal Cooperative Marketing Development Federation of India Limited (TRIFED) is an apex body of State Tribal Development Corporations and other tribal marketing cooperatives/federations for procurement, processing, fixing prices and sale (domestic and export) of agricultural commodities (e.g., tamarind, soyabean, gram, tamarind, masoor, turmeric, ginger, etc.), handicrafts and nationalised NTFPs (including medicinal plants). The State Forest Development Corporation is represented in the TRIFED's Board of Directors at the state level.

At the apex level in states, there are corporations for marketing NTFPs such as the Kerala Forest Development Corporation, Girijan Cooperative Corporation in Andhra Pradesh, Large-size

Nationalisation requires gatherers to sell nationalised NTFPs only to forest departments or their agents

⁶¹ Refer to section 1.2.1 in this report for direct employment generated by forestry operations.
⁶² Discussions with Mr. Rajiv Kumar, Assistant Inspector General of Forests. Externally Aided Projects Division, Ministry of Environment and Forests, New Delhi.
⁶³ Refer to section 1.2.2 in this report for employment generated by NTFP collection.

Box 4: Forest Produce Cooperatives

The collection and sale of NTFPs is done through a three-tier cooperative structure: at the apex is the Madhya Pradesh State Minor Forest Produce Cooperative Federation at the state level;

the District Primary Forest Produce Cooperative Union at the district level and the Primary Forest Produce Cooperative Society at the village level. Members of the Primary Society are collectors.

Although private trade of nationalised NTFPs is illegal, gatherers manage to exchange these with shopkeepers and traders for low-priced basic necessities

Multipurpose Cooperative Society in West Bengal and the Madhya Pradesh State Minor Forest Produce Cooperative Federation (Box 4). Monopoly collection rights for nationalised NTFPs are often auctioned to contractors (e.g., tendu leaves in Gujarat and most NTFPs in Orissa and Karnataka) or leased to other agencies (e.g., Large-size Multipurpose Cooperative Societies in tribal areas of West Bengal and other states). In Orissa, only one private company has collection rights for 29 NTFPs for 10 years with no check on the prices it pays to tribal collectors⁶⁴. With respect to reporting, data generated at TRIFED covers quantities procured and sold of different commodities. For forest department agencies and agents primarily responsible for procuring NTFPs from collectors, data at the state level relates to revenue generated and quantities collected and wages paid for different NTFPs.

Although private trade of nationalised NTFPs is illegal, gatherers manage to exchange these with shopkeepers and traders for low-priced basic necessities, which they then sell to government bodies. This means that a large part of nationalised NTFP collection goes unrecorded. Similarly in many states the collection of non-nationalised NTFPs for sale remains unrecorded in official

records. However, in Madhya Pradesh where the Minor Forest Produce Cooperative Federation is responsible for collecting selected non-nationalised NTFPs of commercial importance through its primary cooperative societies, official forest department records have begun to keep records.

With respect to the sale of NTFPs, pass-books of members in primary cooperative societies (for example, in Madhya Pradesh) are updated at the time of sale. As anyone from a household can sell the produce, it is difficult to track collection of NTFPs by women alone. In areas, which do not have primary cooperative societies, receipts to collectors carry the name of the person receiving payment, but this may or may not necessarily be the collector. Madhya Pradesh has put into practice the relevant provisions in the state policy for women but only rarely are women collectors recorded as members of primary cooperative societies.

Suggestions for Strengthening Gender Reporting

This paper focuses on forest departments, however, the suggestions listed below for strengthening gender reporting can be relevant for afforestation programmes of other departments as well.

Within forest departments, gender focus of schemes and programmes can be improved by strengthening

- Operational guidelines, and

⁶⁴ Saxena, N.C., 1995, *Forest Policy and Rural Poor in Orissa*, Wasteland News, Volume XI, No. 2, November-January, New Delhi.

- Implementation and monitoring.

Gender reporting could be integrated in schemes and programmes that

- Generate employment and wage earnings;
- Are mandated to establish local institutions such as the Forest Department Authority under the Integrated Village Afforestation and Eco-development Scheme and the Village Forest Committees under Joint Forest Management guidelines.

Gender Focus

As women ‘forest users’ are the significant if not the largest single group of forest users, a gender focus in the operational guidelines of programmes and schemes can be strengthened if the following are included during micro planning⁶⁵:

- Explicit directions for the involvement of women (especially forest users) in micro planning and their representation and participation in village-level committees.
- Identifying and, to the extent possible, quantifying pre-project benefits likely to be foregone by women and their households, with special attention to households headed by women: e.g., when
 - common land is to be used for tree plantations;
 - gathering and sale of wood from government forests is eliminated as a source of income for poor households;
- Identifying workload implications for women: e.g.,
 - the use of NTFPs is likely to become commercialised; or
 - changing gender-specific economic interests and incentives induced by project interventions are likely to deprive women of access to previously accessible resources.
- Identifying and, to the extent possible, quantifying probable gains to women from planned interventions: e.g.,
 - increased availability of forestry products (but with checks for potential conflicts arising between men and women, between commercial and subsistence users);
 - availability of new products for subsistence and/or market-oriented income generation;
 - introduction of new income-earning activities based on forest products not previously available;
 - generation of wage-labour opportunities (but with checks for potential distortions in male-female competition for new employment).
- Identifying workload implications for women: e.g.,
 - the extent of added labour required of women from different socio-economic groups for project activities (such as watering, weeding, protection);
 - changes in distances to be traversed for gathering fuel, fodder and other products previously obtained from land now brought under a different production and

Women ‘forest users’ are the significant if not the largest single group of forest users

⁶⁵ Comments by Dr. N.C. Saxena.

Progress monitoring formats at the departmental level and any independent evaluation of schemes can include indicators to assess women's participation in planning, protection and management of forests and plantations

management regime;

- the effect of such additional labour requirements on women's time and labour allocation and on women's and household welfare (e.g., reduced time available for other tasks, increasing reliance on child labour).
- Differences and potential conflicts between probable gains and losses for women and those anticipated for men, households in general or the community as a whole: e.g.,
 - men's strong preference for timber species crowding out women's need for fuel and fodder trees;
 - men's preference for selling trees *en bloc* conflicting with women's need for domestic or home-industry use of by-products;
 - or men's interest in cash-cropping of trees and their command over the labour of women in their household forcing women to reduce their time allocations to other family-care and/or income-earning tasks.

Gender Reporting

To ensure that women's role in forestry is reflected in departmental data, progress monitoring formats at the departmental level and any independent evaluation of schemes can include indicators to assess women's participation in planning, protection and management of forests and plantations. The assumption here is that the department's baseline data will have information on these aspects.

In the light of issues raised in this and previous sections, reporting status on the following could be integrated with existing formats:

Employment: Direct and Self-employment

- Disaggregated data on employment generated and wage earnings from forestry operations.
- The number of women employed in NTFP collection and NTFP-based enterprises in the organised sector.

Participation and access

- Representation of women in the general body.
- Number of women in management/executive committees.
- Number of management and executive committees with women as president and/or secretary.
- Number of women participants, as a percent of the total, present during microplanning.
- Percent women from the forest dependent group of women in the general body and management/executive committees.
- Gender balance within the forest department.

Gender Budgeting

There is a growing recognition of the concept of 'gender budgeting' for integrating gender into national budgetary processes. Such a process allows governments to undertake a gender analysis of

their schemes and programmes, study the gender differential impacts and develop a gender sensitive budget. Many countries have already initiated the process of developing a gender-sensitive budget and assessing its gender differential impact⁶⁶. The Ninth Plan (1997-2002) directed central ministries and departments to identify a “Women Component Plan” to ensure that at least 30 percent of the funds and benefits flow to women from developmental sectors.

The Department of Women and Child Development sponsored a study on gender budgeting in India undertaken by the National Institute of Public Finance and Policy. A recent report⁶⁷ assembles useful information on the Union Budget 2001-02 and provides a post-budget gender diagnosis of progress towards

achieving budgetary allocations and implementation to improve the economic status of women. The report assesses the expenditure specifically targeting women by different ministries and departments of the government, public expenditure with pro-women allocations (not exclusively targeting women) and taxation and subsidies specifically benefiting women.

At present, the Ministry of Environment and Forests is not one of the government bodies that identified women component plans in its programmes and schemes. Gender budgeting is nevertheless an important process through which forest departments can strengthen and monitor the gender focus in programmes and schemes.

Many countries have already initiated the process of developing a gender-sensitive budget and assessing its gender differential impact

⁶⁶ Australia (1984); South Africa (1995); Fiji, St. Kitts and Nevis, Barbados and Sri Lanka (1997); Namibia, Tanzania, Uganda, Canada, Mozambique, United Kingdom, India. Reference in Lahiri, Ashok, Lekha Chakraborty and P.N. Bhattacharyya, 2001, Gender Budgeting in India: Post-budget Assessment Report, National Institute of Public Finance and Policy, New Delhi, India.

⁶⁷ Ibid.



Inclusion of Women's Role in Forestry in National Databases

To generate estimates on employment-unemployment, the report defines “economic activity” as any activity resulting in the production of goods and services that add value to the national product

This part of the paper assesses the national databases, the National Sample Surveys, Census of India and National Accounts Statistics, from the following points of view:

- How the forestry sector is represented in the databases in terms of the different forestry activities.
- What categories of data are collected and presented.
- Whether gender disaggregated data is available for different types of forestry activities.

It also discusses the adequacy (or otherwise) of the above databases in terms of representation of women's role and lists suggestions to strengthen gender reporting in the forestry sector.

National Sample Survey

This paper reviews two National Sample Survey (NSS) reports that are relevant:

1. NSS Report No. 455⁶⁸: Employment and Unemployment in India, 1999-2000.

2. NSS Report No. 452⁶⁹: Common Property Resources in India.

NSS Report 455: Employment and Unemployment in India

Enquiries for this quinquennial survey were conducted between July 1999 and June 2000, and estimates were made on a quarterly basis. The survey adopted stratified multi-stage random sampling for rural and urban areas and the data was collected at the household-level.

To generate estimates on employment-unemployment, the report defines “economic activity” as any activity resulting in the production of goods and services that add value to the national product. Such ‘economic activities’ include production of all goods and services for the market as well as production of primary commodities for own consumption and own-account production (i.e., non-market activities).

Representation of the Forestry Sector

The tables use the National Industrial Classification (NIC) 1998⁷⁰ to classify industries. Forestry figures can be found

⁶⁸ Employment and Unemployment in India, 1999-2000 – Key Results. NSS 55th Round - July 1999- June 2000. NSS Report 455. National Sample Survey Organisation, Ministry of Statistics and Programme Implementation; Government of India. December 2000.

⁶⁹ Common Property Resources (CPRs) in India, NSS 54th Round, Jan.-June 1998, NSS Report 452, National Sample Survey Organisation, Ministry of Statistics and Programme Implementation; Government of India, December 1999.

⁷⁰ Refer to Appendix for a detailed classifications of industry and occupations in the forestry sector.

in the category “Agriculture, Hunting and Forestry” (at the one-digit level), which is further classified (at the two-digit level):

- Agriculture, Hunting and Forestry
 - Agriculture, hunting and related services
 - Forestry, logging and related services
- Fishing
 - Fishing, operation of fish hatcheries and fish farms; service activities incidental to fishing.

According to the NIC classification, the following activities (referred to as sub-class) are covered under forestry:

- Growing of standing timber: Planting, replanting, transplanting, thinning and conserving of forests and timber tracts; operation of tree nurseries.
- Logging: Logging camps and loggers primarily engaged in felling timber and producing wood in the rough such as pilprops, split poles, pickets, hewn railway ties or fuelwood.
- Gathering of tendu leaves.
- Gathering of other wild growing forest materials (balata and other rubber-like gums, cork, lac, resins and balsams; vegetable hair and eel grass; acorns and horse-chestnuts; mosses, etc.) including fuel/firewood.
- Forestry services activities: Transport of logs in association with logging chiefly within the forest.

- Logging service activities: Transport of logs in association with logging chiefly within the forest.

Data Categories and Gender Reporting

- NSS Report 455 gives estimates of the distribution of ‘usually working persons’ in the principal and subsidiary status as a total for the two divisions under the category “Agriculture, Hunting and Forestry”. These are presented for each state and union territory and cover men and women in different age groups⁷¹ (Box 5).
- Further, the distribution of persons by principal and subsidiary activity status as a total for the two divisions under the industry category is presented for the following ‘activity categories’ that men and women in different age groups are involved in⁷²:
 - Worked in household enterprise (self-employed) as an own-account worker (code 11);
 - Worked in household enterprise (self-employed) as an employer (code 12);
 - Worked as regular salaried/ wage employee (code 31);

Box 5: Activity Status of Working Persons in the Forestry Sector

For the reference period of 365 days preceding the date of survey:

Principal Usual Subsidiary Status refers to the activity status on which a person spent a relatively longer time (i.e., major time criterion).

Subsidiary Economic Status Activity: A person whose principal usual status was determined on the basis of major

time criterion could have pursued some economic activity for a relatively shorter time during the reference period. If someone was engaged in more than one subsidiary economic activity, then the details of subsidiary activities for two activities - subsidiary status I and subsidiary status number II - were recorded on the basis of time spent on them.

Source: NSS Report 455, 2000.

⁷¹ Refer to Tables 5 and 6 in NSS Report 455.

⁷² Refer to Tables 1-4 in NSS Report 455.

**Table 5: Gender-wise Employment and Wages in Forestry:
NSS Report**

Type of Operation	Estimated person days		Average wage earnings per day (Rs.)	
	Male	Female	Male	Female
Forestry	14,77,200	8,18,600	46.45	33.34

Source: NSS Report 455, 2000.

Gender-disaggregated data at the sub-class level, important for an understanding of women's role in forestry, is not available

- Worked as casual labourers in other types of works (code 51);
- Attended domestic duties and was also engaged in free collection of goods (roots, vegetables, firewood, cattle feed, etc.), tailoring, weaving, etc., for household (code 93).

- On wage earnings, the report provides average daily wage earnings only for casual labourers, for men and women in rural and urban areas. This is specifically for “forestry”, which is listed as a ‘type of activity’ (code 07) for the first time in an NSS survey (Table 5).

Observations

- Estimates for the two divisions in the industrial category are clubbed together and forestry is not represented separately. As a result, forestry activities according to the NIC classification at the sub-class level, although reflecting the range of forestry activities discussed in previous sections of this paper, are not reported separately in the estimates.
- Consequently, gender-disaggregated data at the sub-class level, important for an understanding of women's role in forestry, is not available.

- The five activity categories cover all kinds of employment options in forestry available to men and women. Estimates for the activity categories are available for different types of activity status, primary and subsidiary (I and II). However, estimates at the sub-class level would have been useful for an understanding of the role of women in different forestry activities. These are instead available as a total of two divisions and further, are not available for different states and union territories.
- Forestry is listed as a separate category for wage earnings. However, it only covers casual labour, which is only one of five activities used to generate estimates for the different activity categories. Women, as evident from the table, earn lower daily wages than men, which is not different from the ground reality discussed in previous sections of this paper.

NSS Report No. 452⁷³: Common Property Resources in India

Given the important role common property resources play in rural areas, especially as livelihood sources for the poor, this NSS report is the first attempt to provide comprehensive state and national-level estimates of the size, utilisation and contribution of common property resources (CPR). The countrywide enquiry was conducted between January and June 1998 in rural areas, with data collected at the household level.

⁷³ Common Property Resources (CPRs) in India, NSS 54th Round, Jan.-June 1998, National Sample Survey Organisation, Ministry of Statistics and Programme Implementation; Government of India, December 1999.

Representation of the Forestry Sector

With regard to forest and forest produce, the enquiry covers:

- State-owned forests including reserved (with absolute rights of ownership vested in the government and which cannot be used by local populations unless through grant of privilege), protected and unclassed forests.
- Village forests/woodlots and any forestland belonging to the forest department or any other government department (such as revenue departments and public works departments) but formally under the management of the village panchayat or village community, such as the Van Panchayat in Uttar Pradesh, and areas under Joint Forest Management. These are clubbed under Common Village Land or Common Property Resource land which also include village panchayat grazing land/pasture land, village sites earmarked for common use for economic activities and other barren or wasteland not owned by an individual.

Data Categories and Gender

Reporting

- Availability and access⁷⁴ to common village land and forests, are defined as follows:

Availability is defined in terms of area of village common land and forests vis-a-vis total geographical area in different states and agroclimatic zones;

common village land per household by population size and; common village land and forests for each climatic zone.

Access to a resource is determined either by legal status or by convention. Right of use for forests is categorised as 'no right of use', 'right of use for collection of a large number of forest produce', 'of minor forest produce', 'of restrictive use'. For village common land, right of use is categorised as 'no right of community use on any part'; 'some area for community use'; 'reserved for a particular community or managed and owned by a tribal community'; 'partly reserved for certain communities'; 'entirely for all villages'.

- Use of common village land and forests for collection of different materials in different agroclimatic zones⁷⁵: Data on households reporting collection of timber and 18 non-timber forest products⁷⁶ is presented separately from common village land and forests (within the village or outside).
- Number of households reporting collection and sale of fuelwood⁷⁷: Data on households reporting use of fuelwood collection from Common Property Resource lands and forests is available by agroclimatic zones, states and union territories and category of household (rural labour, landholding class and others).

Access to a resource is determined either by legal status or by convention

⁷⁴ Tables 1.1 – 1.3; 2; 3.1-3.2 and 4 in NSS Report 452.

⁷⁵ Tables 5 and 6 in NSS Report 452.

⁷⁶ 18 NTFPs: Fuelwood, bamboo/cane/reeds, medicinal plants, tendu/kendu leaves, other leaves, thatching materials, fodder, edible oilseeds, fruits, other edible products, lac, gums and resins, non-edible oilseeds, fibres and flosses, tans and dyes, honey, bee-wax, kattha.

⁷⁷ 11.1-11.2; 12.1-12.2 and 15.2 in NSS Report 452.

According to the Census, work is defined as participation in any economically productive activity, and may be physical or mental in nature

- Number of households reporting collection of fodder⁷⁸: Data on households reporting collection of fodder from Common Property Resource lands and forests is available by agro-climatic zones, states and union territories and category of household (rural labour, landholding class and others).
- Number of households reporting collection of selected materials and value of collected materials⁷⁹: Data on households reporting collection of manure and six materials⁸⁰ from Common Property Resource lands is available by states and union territories and category of household (rural labour, landholding class and others).

Observations

Extensive data is presented for each of the selected materials for agro-climatic zones, states and union territories, and households by different categories and sources (forest and common village land). This is a useful document to understand the dependence of different landholding classes, rural labour and others on forests and common land for subsistence and income. Within a household, however, the role of different members, men, women and children, in collection of forest produce is not reflected.

Census of India, 1991

The survey for the Census of India is conducted decennially. Unlike the NSS, it carries out a full count for the different data categories. At a macro level, the economic tables of the Census of India 1991⁸¹ provide data on main and marginal workers classified by industrial category⁸², age and gender.

According to the Census, work is defined as participation in any economically productive activity, and may be physical or mental in nature. It involves not only actual work but also effective supervision and direction of work. For the first time, the 1991 Census included unpaid work on farms or in family enterprises. Enumerators were also trained to probe into economic activities carried out by women⁸³. A main worker is defined as a person who has worked for a major part of the year preceding the date of enumeration, i.e., more than 183 days or six months. A marginal worker is someone who has done some work for a period less than 183 days or 6 months in a year.

Representation of the Forestry Sector

The category relevant to our study is Industrial Category III, "Livestock,

⁷⁸ Tables 19.1, 20. and 21 in NSS Report 452.

⁷⁹ Table 22.1-22.2; 23.1 – 23.2 and 24.1 – 24.2 in NSS Report 452.

⁸⁰ Materials apart from manure selected in these tables are fruits, roots tubers, etc.; gums and resins; honey; medicinal herbs; leaves and weeds, grass, bamboo, etc.

⁸¹ Registrar General and Census Commissioner, India Census of India, 1991, Relevant Volumes on Economic Tables, M. Vijayanunni of the Indian Administrative Service, Registrar General and Census Commissioner, India.

⁸² See Appendix for details on industrial classifications under the Census of India.

⁸³ Prabhu, K. S, P.C. Sarkar and A. Radha, 1996 *Gender-Related Development Index for Indian States: Methodological Issues*, Economic and Political Weekly, October 26.

Forestry, Fishing, Hunting, Plantation, Orchards and Allied Activities”. The tables⁸⁴ do not provide separate information on forestry.

Data Categories

The Census includes an occupational classification of main and marginal workers. Using the National Classification of Occupations (NCO) 1998⁸⁵ it provides data at two, three and four-digit levels. Further, it classifies workers into four categories, cultivators, agricultural labourers, workers in household industry and other workers. The category “other workers” includes family members working in forestry, logging, fuel, charcoal production, gathering and selling fodder and other forest produce, plantation, hunting, fishing, mining and quarrying.

The Economic Tables (Census 1991) on occupational classification of main and marginal, male and female workers relevant to this paper are discussed below.

Using the NCO 1968, data under this classification is available at the two-digit level for all divisions, the one relevant to this paper being division 06: Farmers, fishermen, hunters, loggers and industrial workers. The data has been further classified at the three-digit or group level, and the group relevant to this paper is 66: Forestry workers. For each group, data has been further provided

for the fourth-digit or family level, the one relevant to this paper being family 660-663 and 669⁸⁶.

For each group and family under each division, data has been provided by industrial categories as per Census 1991, the relevant one for this paper being Category III: Livestock, forestry, fishing, hunting, plantation, orchards and allied activities.

Table B-21 (F) - Part A (Urban) and Part B (Rural)⁸⁷: Occupational classification of main and marginal workers other than cultivators and agricultural labourers by gender (full count). Data under this classification is available at the three-digit level, i.e., group 066 for division 06 (Table 6).

Table 19(F)⁸⁸: Occupational classification of main workers other than cultivators and agricultural labourers by industrial category and gender (full count) (Table 7).

The Census classifies workers into four categories, cultivators, agricultural labourers, workers in household industry and other workers

Table 6: Gender-wise, Rural-Urban Distribution of Main and Marginal Forestry Workers - All India

Group 66 of NCO: Forestry Workers	Urban			Rural			Total
	Total	Male	Female	Total	Male	Female	
Main Workers	71,693	66,377	5,316	2,21,618	1,91,380	30,238	2,93,311
Marginal Workers	1,791	646	1,145	40,603	5,461	35,141	42,394
Total	73,484	67,023	6,461	2,62,221	1,96,841	65,379	3,35,705

Source: *Census of India. 1991*. Economic Tables, Volume 9 Parts I and II.

⁸⁴ For further details, refer to tables B-1 (S), B-2 (S), B-2 (F), B-6 (F) and B-8 (F) in relevant volumes of Economic Tables of Census of India 1991.

⁸⁵ National Classification of Occupations 1968, Directorate General of Employment and Training (Occupational Information Unit), Ministry of Labour, Employment and Rehabilitation, Government of India, March 1969, See Appendix for the NCO Classification 1968 of categories reflecting the forestry sector.

⁸⁶ See Appendix.

⁸⁷ Registrar General and Census Commissioner, India Census of India 1991, Series I – India, Part II B - B Series, Economic Tables, Volume 9 Parts I and II.

⁸⁸ Registrar General and Census Commissioner, India Census of India 1991, Series I – India, Part III B - B Series, Economic Tables, Volume 8 Part I.

**Table 7: Gender-wise, Occupational Classification of Main Forestry Workers - All India
(other than cultivators and agricultural labourers)**

Industrial Category III as per Census 1991		Main Workers			Urban			Rural		
		Total	Male	Female	Total	Male	Female	Total	Male	Female
Group 66 of NCO	Forestry Workers	2,82,323	2,46,935	35,388	67,866	62,607	5,259	2,14,457	1,84,328	30,129
Family 660 of NCO	Foresters and related workers	1,42,445	1,38,826	3619	38500	37683	817	1,03,945	1,01,143	2,802
Family 661 of NCO	Harvesters and gatherers of forest products including lac (except logs)	20,597	15,121	5,476	3,203	2,788	415	17,394	12,333	5,061
Family 662 of NCO	Log fellers and wood cutters	59,221	50,526	8,695	15,260	13,768	1492	43,961	36,758	7,203
Family 663 of NCO	Charcoal burners and Forest Product Processors	2,304	1,853	451	272	210	62	2,032	1,643	389
Family 669 of NCO	Loggers and other forestry workers	21,901	17,607	4,294	4,277	3,732	645	17624	13,875	3,649

Source: *Census of India, 1991*. Economic Tables, Volume 8 Part I.

Observations

- While the Census gives a full count of workers in different families of the group on Forestry, it is obvious from the tables above that data collection at the group level does not reflect ground reality.
- In Family 661, which represents gatherers of forest produce, the number of women involved is negligible and, in fact, lower than the number of men. This is contrary to the role of women as gatherers discussed in the previous

sections of this paper. In the description of Family 661 (see NCO classification, Appendix), NTFPs are inadequately represented as they are limited to lac, medicinal plants and firewood.

- The occupational classification table does not reflect the fact that fuel wood collection for sale is an important activity for many poor rural women and dependence on NTFPs for income is widespread among tribal populations. Moreover, Table 19(F) considers only

main workers and not marginal workers, which further contributes to under-representation of forestry workers in the occupational classification.

National Accounts Statistics

The Central Statistical Organisation, Ministry of Statistics and Programme Implementation regularly compiles and publishes estimates of national accounts aggregates (such as domestic product, consumption expenditure, capital formation, savings, stock, etc.).

The Principal Conservator of Forests of each state supplies data on production and prices of industrial wood, fuelwood and minor forest products to the National Accounts Division of Central Statistical Organisation⁸⁹. Data on minor forest products submitted by states contains details of the quantities procured for different nationalised NTFPs. The total procurement of NTFPs is further sub-divided into 'recorded by the Forest Department' and 'Unrecorded', the latter representing the Department's estimate of NTFPs collected by people⁹⁰.

Observations

These statistics capture only those forest products that can be marketed and documented and whose prices exist in a market. They cannot account for the subsistence collection by local communities and local market transactions of both nationalised and non-nationalised

NTFPs. There is therefore considerable underestimation of total as well as specie-wise production.

Time-Use Surveys

Given the limitations of the above surveys in capturing the roles of men and women in forestry (and in other sectors as well), the time-use survey is emerging as an important tool to measure paid and unpaid work of men and women. The Central Statistical Organisation carried out a time-use survey for the first time on a pilot basis between July 1998 and June 1999 in 18,591 households spread over six states: Haryana, Orissa, Madhya Pradesh, Tamil Nadu, Meghalaya and Gujarat⁹¹. The survey was conducted for the sampled households for a range of activities classified into three categories:

- SNA (system of national accounts) activities covering primary production activities such as crop farming, animal husbandry, fishing, forestry and mining; and secondary activities such as construction, manufacturing, trade, business and services;
- Extended SNA activities such as household maintenance, care of children, sick and elderly; and
- Non-SNA activities such as learning, social and cultural activities, mass media, personal care and self-maintenance.

The time-use survey is emerging as an important tool to measure paid and unpaid work of men and women

⁸⁹ Central Statistical Organisation National Accounts Statistics, 2000, CSO, Ministry of Statistics and Programme Implementation.

⁹⁰ Discussions with Mr. K.C. Saxena, Assistant Director, Agriculture, Accounts Division, Central Statistical Organisation, Ministry of Statistics and Programme Implementation, New Delhi.

⁹¹ *Report of the Time-Use Survey*, April 2000, Central Statistical Organisation, Ministry of Statistics and Programme Implementation, Government of India, New Delhi.

Representation of the Forestry Sector

Activities related to the forestry sector fall under SNA primary production activities:

- Fishing, forestry, horticulture, gardening (code 13) - nursery seedlings (code 131); planting, tending and processing of trees (code 132); wood cutting, chopping and stocking firewood (code 134).
- Collection of fruit, water, plants, etc., storing and hunting (code 14), collection of minor forest produce, leaves, bamboo, etc. (code 142); collection of

fuel/fuel wood/twigs (code 143).

Table 8 presents how much time men and women spend on forestry-related activities. The report has data for urban and rural areas separately, but is presented here as an aggregate of both.

Observations

- Although it is a pilot survey covering a small number of households, the time-use survey brings out the role of women and men in different forestry activities, which is closer to the ground reality (especially with respect to minor forest produce/NTFPs) com-

**Table 8: Gender-Wise, Time-Use Survey of Forest-Related Activities
(weekly average time in hours)**

Activities	Haryana		Madhya Pradesh		Gujarat		Orissa		Tamil Nadu		Meghalaya	
	M	F	M	F	M	F	M	F	M	F	M	F
Fishing, forestry, horticulture, gardening												
Nursery seedlings	0	0	.02	.01	0	0	0	0	0.02	0.01	0.06	0
Planting, tending and processing of trees	0	0	.02	0	0.02	0	0.03	0.03	0.03	0	0.67	1.08
Wood cutting, chopping and stocking firewood	.03	.09	0.32	0.20	0.03	0.02	0.30	0.17	0.23	0.02	1.80	0.69
Collection of fruit, water, plants, etc., storing and hunting												
Collection of minor forest produce, leaves, bamboo, etc.	0	.01	0.15	0.25	0.10	0.18	0.22	0.30	0.04	0.02	0.06	0.24
Collection of fuel/fuel wood/twigs (code 143).	.03	0.39	0.14	0.48	0.01	0.01	0.13	0.33	0.07	0.27	0.21	0.42

Source: Central Statistical Organisation's report on the Time Use Survey, April 2000.

pared to the Census and NSS surveys.

- The report on the Time Use Survey is an interim document, which releases some important results of the survey. Reports on methodology, estimates of workforce/labour force, valuation of unpaid work and lessons learnt are forthcoming.

Gender Reporting in the Databases

It is obvious from the preceding section that forestry as a sector and specifically the role of women in forestry are inadequately reflected in the Census, National Sample Surveys and National Accounts Statistics. Given the estimated 100 million forest dwellers in the country living in and around forests and the additional 275 million for whom forests constitute an important source of livelihood, the databases do not reflect this scale of dependence. Sections 1.1 and 1.2 in this paper have captured the dependence of different communities in various regions primarily on NTFPs for subsistence and income. Estimates of employment are hard to come by in secondary literature and departmental data and whatever is available is considered an underestimation. The Census, NSS and NAS lag behind the ‘underestimated’ data available at the departmental level and in secondary literature. The reasons for the underestimation or inadequate reflection of the sector as a whole and women’s role in it are discussed below.

At the first level, forestry is clubbed with other sectors in the occupational and in-

dustrial classifications (NCO 1968 and NIC 1998, respectively). Along with agriculture and agricultural labour, collection of forest produce and wage earnings in forestry operations and forest-based enterprises, as the previous sections have shown, are important sources of income and subsistence. Census and NSS estimates, however, grossly underestimate the engagement of men and women in forestry activities.

The available data on women’s participation as main or marginal workers in forestry sector activities (as reflected in the Census) or on primary and subsidiary status of activities in which men and women are engaged (as reflected in the NSS Survey) show women’s contribution as negligible.

The invisibility of women’s contribution, as is true for the major sector of agriculture⁹², is an outcome of the following:

- Households including women themselves do not report on their engagement in this sector either because men do not recognise their contribution or women report themselves as non-workers as they consider this activity as additional in spite of its significant contribution to income and subsistence. Time-use surveys make visible the different activities they are involved in, which remain unreported in NSS and Census surveys.
- The prevailing cultural attitude where for an enumerator the man is the primary wage earner or worker.

The available data on women’s participation as main or marginal workers in forestry sector activities or on primary and subsidiary status of activities in which men and women are engaged show women’s contribution as negligible

⁹² *Human Development in South Asia: The Gender Question*, 2000, Mahbub ul Haq Human Development Centre, Oxford University Press, UK.

Women are mainly involved in the collection stage and not in the value addition stages and are therefore overlooked in national databases

- Over a year different NTFPs are collected in short periods when they are available and therefore get excluded in the prevailing system of categorising main activities and secondary activities under the Census or principal and subsidiary activities under the NSS.
- Women are mainly involved in the collection stage and not in the value addition stages and are therefore overlooked in national databases. For example, the collection of nationalised and non-nationalised NTFPs which are not processed by them into final products; collection of fodder whereas sale of milk may be done by men.

Typical census questions such as ‘main activity’, ‘secondary activity’ or ‘work’ are insufficient to capture women’s engagement in the labour force⁹³ especially as a large part of NTFP collection is for subsistence. When collected for income, it is an activity which for a particular species, lasts for a few days and its collection is often intertwined with other daily tasks. The NSS surveys, although more frequent than the Census and which provide more detailed information that takes into account persons ‘engaged in gainful activity resulting in production of goods and services for both market and own consumption’, still underestimate female workforce participation due to the nature of women’s work and biases produced by the questionnaire method of collecting data⁹⁴.

Suggestions for Strengthening Databases

Currently, women’s workforce participation rates and wage rate differentials are the two primary indicators reflecting their participation in forestry activities. However, in the current scenario where the forestry sector as a source of subsistence and livelihood is grossly underreported, where women’s role in forestry although significant, remains largely invisible and where cultural biases of both the respondent and enumerator continue to result in underreporting, women’s workforce participation rates as well as wage rate differential are not adequate proxies for women’s participation in forestry activities, their contribution to forest-based livelihoods and their control over forest resources.

Participation of women as reflected in the databases is negligible, primarily because the nature of women’s engagement is not captured by the prevailing system of categorising these under Census and NSS. To enable a better representation of women’s role in forestry, data collection needs to take into account the following elements that characterise the work of women involved in this sector:

- **Time as a criterion for engagement in activity:** Given the reasons for women’s invisibility in this sector, data

⁹³ Mehta, Asha Kapoor., 1996, *Recasting Indices for Developing Countries: A Gender Empowerment Measure*, Economic and Political Weekly, October 26.

⁹⁴ Prabhu, K. S., P.C. Sarker and A. Radha., 1996, *Gender-Related Development Index for Indian States: Methodological Issues*, Economic and Political Weekly, October 26.

collection systems need to be strengthened where time as a criterion reflecting engagement of men and women in forest produce is focussed upon. Household surveys conducted on time-allocation patterns for men and women⁹⁵ for the forestry sector will bring out a more realistic picture of their engagement in collection of forest produce.

- **Value of the product:** With respect to forest produce, the value of the product and not just the number of days spent on collection should be taken into account. A particular NTFP collected in one week may yield cash income equivalent to a month's daily wage earning from some other activity, such as agricultural labour.
- **Inflow of continuous income:** Seasonal availability of forest produce except fuelwood may not indicate a

“secure” employment or source of income. However, it is a source of income flow throughout the year from a range of products that are either sold or consumed.

Additionally, it would be useful if disaggregated data is made available not only at national and state levels but even at the district level. Availability of district-level data can strengthen planning processes as it can be used for gender analysis of forestry-related activities, analysis of gender differential impacts and design of gender-sensitive programmes, monitoring and reporting systems.

Given this data, the contribution of the forestry sector to the ‘economic’ and ‘subsistence’ component of a household economy and the different roles of men and women will become more representative.

Availability of district-level data can strengthen planning processes as it can be used for gender analysis of forestry-related activities, analysis of gender differential impacts and design of gender-sensitive programmes, monitoring and reporting systems

⁹⁵ Mukherjee, Mukul., *Towards Gender-aware Data Systems: Indian Experience*, 1996, Economic and Political Weekly, October 26; Jain, Devaki., *Valuing Work: Time as a Measure*, 1996, Economic and Political Weekly, October 26; Most field studies on NTFP collection prepare activities calendars that chart the month-wise activities of men and women in collecting a range of forest products.

Appendix

1. National Industrial Classification (NIC): All Economic Activities⁹⁶

Only sections of the NIC relevant to forestry are included

Tabulation Categories: Classification at the One-digit Level

A. *Agriculture, Hunting and Forestry*

Divisions: Classification at the Two-digit Level

For Tabulation Category A

Division 01 - Agriculture, Hunting....

Division 02 - Forestry, Logging and Related Service Activities

Division 05 - Fishing....

Detailed Structure

For Tabulation Category A and Division 02

Sub-class 02001	Growing of standing timber: planting, replanting, transplanting, thinning and conserving of forests and timber tracts. Operation of tree nurseries.
Sub-class 02002	Logging: logging camps and loggers primarily engaged in felling timber and producing wood in the rough such as pilprops, split poles, pickets, hewn railway ties or fuelwood.
Sub-class 02003	Gathering of tendu leaves.
Sub-class 02004	Gathering of other wild growing forest materials (balata and other rubber-like gums, cork, lac, resins and balsams; vegetable hair and eel grass; acorns and horse-chestnuts; mosses, etc.) including fuel/firewood.
Sub-class 02005	Forestry services activities: timber cruising, timber evaluation, fire-fighting and forest management including afforestation and re-forestation.
Sub-class 02006	Logging service activities: transport of logs in association with logging chiefly within the forest.

⁹⁶ Published by the Central Statistical Organisation, Ministry of Planning and Programme Implementation, Government of India, New Delhi. 1998

2. National Classification of Occupations 1968⁹⁷

Only sections relevant to forestry are included

Divisions: Classification at the One-digit Level

- 01 Professional...
- 02 Administrative, Executive...
- 03 Clerical and ...
- 04 Sales Workers
- 05 Service Workers
- 06 Farmers, Fishermen, Hunters, Loggers and Related Workers**
- 07-09 Production and
- X Workers not classified by occupations

Divisions and Groups: Two-digit Level

For Division 06: 9 Groups - Code 60 – 68

Code 66 Forestry Workers

Groups and Families – Three digit level ---Fourth/5th digit level

For Group 66: 5 Families – Code 660-663 and 669

660 Foresters and Related Workers

- 660.10 Forester
- 660.20 Forest Guard
- 660.30 Forest Fire Watcher
- 660.90 Foresters and Related Workers, Others

661 Harvesters and Gatherers of Forest Products Including Lac (except logs)

- 661.10 Gatherer, Lac
- 661.20 Gatherer, Medicinal Herbs
- 661.30 Gatherer, Firewood
- 661.40 Cane Cutter
- 661.50 Thatch cutter

662 Log Fellers and Wood Cutters

- 662.10 Log Feller
- 662.20 Wood Cutter
- 662.30 Marker, Log
- 662.40 Sandalwood Extractor

⁹⁷ Published by the Directorate General of Employment and Training (Occupational Information Unit), Ministry of Labour, Employment and Rehabilitation, Government of India. March 1969.

663 Charcoal Burners and Forest Product Processors

- 663.10 Charcoal Burner, Wood
- 663.20 Digester Operator, Wood
- 663.30 Digester, Turpentine and Eucalyptus
- 663.40 Lac Treater
- 663.90 Charcoal Burners and Forest Product Processors, Other

669 Loggers and Other Forestry Workers, Other

- 669.10 Estimator, Timber
- 669.20 Sorter, Timber
- 669.30 Log Driver
- 669.90 Loggers and Forestry Workers, Other

3. Census of India 1991⁹⁸

Industrial Category of Workers

- I Cultivators
- II Agricultural Labourers
- III Livestock, Forestry, Fishing, Hunting, Plantation, Orchards and Allied Activities**
- IV Mining & Quarrying
- Va Manufacturing, Processing, Services and Repairs in the Household Industry
- Vb Manufacturing, Processing, Services and Repairs in other than House hold Industry
- VI Construction
- VII Trade & Commerce
- VIII Transport, Storage & Communication
- IX Other Services

⁹⁸ The Economic Tables of Census of India, 1991.

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