
Multipurpose Tree Species Network Research Series

Handbook No.

1

**Farm- and Village-Forestry Practices:
Methods for a Regional Study**

by

Charles B. Mehl
Land and Forest Management Network Specialist
Winrock International
Bangkok, Thailand



Forestry/Fuelwood Research and Development (F/FRED) Project

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...ms, are multipurpose tree species (MPTS).

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Multipurpose Tree Species Network Research Series

This series of publications, produced or supported by the Forestry/Fuelwood Research and Development (F/FRED) Project, was developed to improve the scientific research exchanged on the production and use of multipurpose trees. The series includes research papers, case studies, manuals, videos, and consultancy reports. Publications in this series are available for distribution to F/FRED network members and other selected individuals and institutions.



Winrock International Institute for Agricultural Development



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March 1990



Winrock International (Forestry/Fuelwood Research and Development Project)

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67 Математические основы проектирования в температурных технологических процессах Л. М. Лавренко, 1986. — Пр 80 с.	

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Contents

Introduction	1
Part One: Description	5
Research Goal	6
Rationale	6
Scope of Research	9
Study Outputs	10
Data Collection and Analysis	10
Part Two: Guidelines for Data Collection and Entry	11
2.1 National-Level Data	12
Data Collection	12
Category A: Background Information	
Field Methods	12
Data Format	16
Category C: Government Forestry Development Intervention	
Field Methods	19
Data Format	21
2.2 District-Level Data	24
Data Collection	24
Category A: Background Information	
Field Methods	25
Data Format	27
Category B: Agro-ecological Information	
Field Methods	30
Data Format	32
2.3 Village-Level Data	33
Data Collection	33
Category A: Background Information	
Field Methods	34
Data Format	36
Category B: Agro-ecological Information	
Field Methods	38
Data Format	40
Category C: Government Forestry Development Intervention	
Field Methods	43
Data Format	44
Category D: Land Use, Tenure, and Property Issues	
Field Methods	46
Data Format	48

2.4	Household-Level Data	50
	Data Collection	50
	Category A: Background Information	
	Field Methods	51
	Data Format	55
	Category C: Government Forestry Development Intervention	
	Field Methods	62
	Data Format	64
	Category D: Land Use, Tenure, and Property Issues	
	Field Methods	67
	Data Format	72
	Category E: Forest Use Practices	
	Field Methods	79
	Data Format	85
	Part Three: Using the Farm and Village Forestry Database.	88
3.1	Equipment Required	89
3.2	Installation	89
3.3	Starting the Program	90
3.4	Codes	90
	Entering District and Village Codes	90
	Deleting District and Village Codes	91
	Species Codes	92
	Household Codes	94
3.5	Adding Data	95
3.6	Searching Data	96
3.7	Modifying Data	97
3.8	Deleting Data	98
3.9	Browsing Data	99
3.10	Summary Database	100
	Part Four: Village Summaries	103
	Category A: Background Information	104
	Category C: Government Forest Development Intervention	110
	Category D: Land Use, Tenure and Property Issues	111
	Category E: Forest-Use Practices	114
	Appendix: Species Codes	119

Introduction

This handbook was written for three audiences. First and foremost, it is intended for the cooperators in the first regional study of farm- and village-forestry practices.¹ They received most of this handbook in earlier drafts over the past year. For them, this is a compilation of all the written materials that support the research they conducted and the study and database they helped design.

Second, the handbook is intended for those who want to review and perhaps analyze the existing information in the database. Before using the database, they should first read the rationale for the regional study and review the recommended guidelines for data collection and the format for data reporting. Understanding the rationale for the study and for collecting the various types of information is a prerequisite for intelligent use of the database. Knowing the format for reporting data will help immensely in using the database, since the same format was used to enter information in the database. All data, except the village summary files, appear in the same format on the computer screen.

Finally, the handbook is intended for those wanting to conduct their own research using the farm- and village-forestry database as a research tool. They can collect and, more important, enter data using methods similar to others who have already used the database. They can compare their data with existing entries to build on the comparative research that the first regional study on farm- and village-forestry initiated.

The Regional Study on Farm- and Village-Forestry Practices in Asia emerged from discussions at the workshop Standardized Methods for Farm and Village Forestry held in Kathmandu April 23-29, 1988, co-sponsored by the International Center for Integrated Mountain Development (ICIMOD), the F/FRED Project, the International Development Research Centre (IDRC), and the Institute for Agriculture and Animal Sciences (IAAS) of Tribhuvan University. Workshop participants assembled lists of the minimum social, economic, cultural, and environmental information required to understand local forest-use practices and to implement social forestry programs. They identified eight priority topics for comparative research:

1. existing tree/farm forestry/land-use systems
2. labor, gender, and age issues in farm and village forestry (in division of labor and decision making)
3. people's participation in community forestry
4. property and tenurial arrangements in farm and village forestry
5. population dynamics
6. markets, labor and unemployment issues
(rural labor needs and availability and employment generation)
7. landlessness, social stratification and class issues
8. program/project evaluation, extension in farm/village-forestry

¹Funded by the U.S. Agency for International Development, through the Forestry/Fuelwood Research and Development Project.

The study design is based on recommendations of the 1988 Kathmandu workshop. Three priority topics were selected for comparative analysis: (1) existing tree/ farm forestry/ land-use systems, (2) property and tenurial arrangements, and (3) social stratification and class issues.

Four participants at the Kathmandu workshop met in Bangkok in July 1988 to produce the research design of the proposed network study. In the next months, F/FRED approached researchers from seven countries in South and Southeast Asia to participate in the study. Arrangements were also made with the Ford Foundation to co-sponsor the research in Thailand and the Philippines, and with GTZ to sponsor the study in Sri Lanka. By early 1989, 16 researchers had agreed to join the study. Two of the 16 had to withdraw before the study began, leaving 14 researchers in 6 countries (Bangladesh, Indonesia, Nepal, Philippines, Sri Lanka, and Thailand). The study participants finalized the research design at a meeting in February 1989. Research began by April. The study is currently being completed.

The cooperators in this study are:

Dr. Syed Zahir Sadeque
Faculty of Sociology
Rajshahi University
and CIDA/AST
Bangladesh

Dr. Junus Kartasubrata
Faculty of Forestry, IPB
Indonesia

Dr. Kailash Pyakuryal
Department of Sociology and
Anthropology
Tribhuvan University
Nepal

Mr. A.K. Das
Institute of Forestry
Nepal

Dr. Marian de los Angeles
Philippine Institute for
Development Studies
Philippines

Dr. Herminia Francisco
Department of Agricultural Economics
Benguet State University
Philippines

Mr. Bienvenido Maligalig
Ecosystems Research and Development
Bureau
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Research
Kasetsart University
Thailand

Dr. Charit Tingsabadh
Chulalongkorn University
Social Research Institute
Thailand

Dr. Lert Chuntanaparb
Faculty of Forestry
Kasetsart University
Thailand

Dr. Uraivan TanKimYong
Faculty of Social Sciences
Chiang Mai University
Thailand

They have provided much of the effort and drive to conduct this study and develop the database.

The Global Research Unit of the F/FRED Project developed the database. Mr. Ruiz Tabora of the Global Research Unit participated in most of the meetings that led to the regional study, and he was chiefly responsible for developing the software. Any problems in the structure of the software and the way the information is presented can be attributed to the author, who gave Mr. Tabora instructions on the organization of data and the desired output for the village summaries. Mr. Tabora has done an outstanding job in taking a massive study and developing a well-structured, organized database that has already proven a valuable tool for analysis of farmers' use of trees in Asia.

The regional study and the first draft of the database are just the start of a process to compare farm- and village-forestry practices throughout Asia. Further regional studies and modifications and additions to the database are likely to build on the knowledge gained from this first regional study.

Part One: Description

Research Goal

The purpose of the regional study was to determine how selected social and economic variables affect farmers' needs and uses of tree products to better understand and meet the needs of landless and small-scale farm households.

The study set out to:

1. **obtain a basic understanding of the role of trees in villagers' livelihood.** This basic information on utilization of trees and other woody perennials includes: (a) range of products used, (b) calendar of utilization, and (c) relative species preference.
2. **conduct a comparative study of selected social and economic information on farm and village forestry practices.** Information collected for comparative analysis is on factors that can be compared cross-nationally and cross-culturally. These include: 1) basic information on demographics, economics, and infrastructure; 2) extent of government intervention in services and information that can be used for tree production and development of forest and tree resources; and 3) land use, distribution, and tenure of land and trees in the communities studied.
3. **conduct in-depth analyses of social and economic issues concerning farm and village forestry practices of landless and small-farm households.** Findings from this research will help identify appropriate topics for extensive case studies or regional study. The findings will also help to identify social and economic conditions and processes that should be included in later versions of the minimum data set for farm and village forestry. Researchers selected topics for the case studies within the priorities for social science topics recommended by the Research Committee of the Multipurpose Tree Species Research Network.

Rationale

Although social-science literature on Asian villagers' management and use of trees is increasing, noticeably lacking is comparative, cross-national and cross-cultural research. Even regional research programs usually consist of separate, independently conceived, conducted and analyzed case studies linked loosely by common themes. Regional trends can be discerned only from the conclusions of individual (and not always comparable) studies of different sites, rather than through analysis of information gathered in a systematic, comparable form at all sites.

Existing land-use patterns must be evaluated if new forestry projects are to be undertaken in the villages studied. Furthermore, information on land characteristics, land use, and climate can guide the policy decisions of forestry officials and planners.

1. Background Information

Basic demographic and other background information provide a context for understanding the major social and economic factors covered in the study. Population characteristics, settlement and migration patterns, ethnic and religious majority/minority status, and basic infrastructural and economic conditions all limit and offer potential for various types of forest- and land-use practices.

2. Agro-Ecological Conditions

Because the agro-ecological conditions (soil, topography, rainfall, temperature, etc.) of a site limit the types of trees that will grow in that area, the first requirement of the regional analysis is to classify the study communities according to basic agro-ecological zones. To use an extreme example, the growth and possible uses of tree species in the Rajasthan Desert differ so much from conditions in the humid and sub-humid deltaic plains in Southeast Asia that it makes little sense to compare certain aspects of tree production and management between the two. At the same time, regional analysis may indicate general social and economic conditions or processes that affect land and forest use throughout all agro-ecological zones.

3. Government Development Intervention

Government intervention (as well as work by non-government organizations) is crucial to rural development. Government intervention for development may be expected to play a significant role for the forestry sector as well. Information on existing laws, regulations, and support services provides a basis for analyzing the context of social forestry and projects in the countries. The success and failure of forestry projects can depend on the presence or absence of laws, regulations, and support services conducive to the production and use of tree and forest products, forest lands, and the purchase or provision of needed inputs.

4. Land Use, Tenure and Property Issues

Land distribution, or the distribution of farm sizes, is among the most important information collected in the study. Households are divided among major farm-size categories -- landless, small-farm, medium-farm and large-farm households -- according to socioeconomic criteria established by the cooperating researchers. The criteria used to assign households to these categories are provided in the section describing methods for Category D in the section on village-level data.

The researchers designed the study expecting farmers' needs for forest products and their sources to differ by farm size. The needs and practices of the landless and small-farm households are emphasized in the study since these are the intended beneficiaries of the MPTS research program supported by the F/FRED project.

Land-use patterns at the household level indicate the existing tree/crop/pasture coverage on farms in the study area. Existing land-use patterns also indicate existing sources for forest product utilization, and how and where the needs for tree products are being and will be met. This should form the basis for future interventions through forestry projects.

Virtually all of the extensive literature on the relationship between tree production and property and tenurial rights deals with specific cases or societies. A major goal of this study is to determine the existence of cross-cultural and cross-national trends on how tenurial rights affect tree production and forest and land use. Of particular interest is the effect of various tenurial systems on the practices of the landless and small-farm households. It is expected that the study will provide information regarding villagers' incentives (or lack of incentives) for planting trees on their farms and elsewhere in the village.

Planners and implementers of forestry projects can better design their programs to meet the needs of marginal and small-scale farmers if they introduce species and management techniques within the context of existing practices. If marginal farmers use common forests and other common areas as their main sources of fuelwood, while wealthier farmers use trees planted on their farms, a program that improves the management of trees in common areas is likely to have greater effect on the lives of the poorer, economically marginal villagers.

5. Other Social and Economic Factors

A complete picture of social, cultural, and economic influences on forest-use practices at each site is not possible in a regional, comparative study. Many social and cultural aspects of communities cannot be compared systematically. For example, students of development recognize that the nature of village leadership and community organization is crucial to the success of local development activities. Yet there is no reliable way to measure community leaders' relative strength or weakness, or to compare the effectiveness of community organizations. Village leaders, village councils, irrigation societies, and farmer organizations differ in nature as well as form, even among communities in the same society. At this stage, it is more useful to describe village organization and leadership rather than try to fit them into pre-determined patterns.

Many of the social, economic, and cultural factors not covered in the regional study are subjects of specific studies conducted by the researchers. The results of these case studies are likely to point to some new topics for regional analysis, and emphasize the importance of local social and cultural conditions on production, management, and use of trees and forests.

6. Forest-Use Practices

The major socioeconomic categories studied are expected to affect the source, nature, and timing of tree products obtained for different uses. For example, small-scale farmers are believed to meet their fodder and fuelwood needs from different sources than wealthier villagers. If confirmed, this would have implications for MPTS researchers, project implementers, and policy makers.

Researchers working to improve MPTS for small-farm use can use this information to design experiments to approximate conditions under which small-scale farmers actually obtain tree products. The products obtained from on-farm and other village sources should also help MPTS researchers identify priorities for tree improvement. For example, if marginal or small-scale farmers obtain fodder and fruit from trees on their farms or homesteads, while most of their fuelwood comes from government forests, MPTS researchers have several options. They can 1) concentrate their efforts on improving the fodder and fruit yield of trees already grown by farmers, 2) introduce new fodder or fruit trees, 3) improve the fuelwood potential of these fodder and fruit trees so that farmers will use more of their own resources and less of the dwindling government forests for their fuelwood needs, or 4) introduce new fodder or fruit trees that can also be used for fuelwood. The researchers should not, under these circumstances, work on species that have limited fodder or food value and expect small-scale farmers to plant them.

Scope of Research

Each cooperator studied these basic characteristics of farm- and village-forestry use over six months. Each researcher collected data on the selected social and economic variables, which were agreed on at a meeting of study cooperators held February 27 to March 3, 1989 in Bangkok, Thailand. Categories and levels of data to be collected are described above.

Each cooperator studied two village communities. In most cases, the two villages were proximate to each other. Each village community had at least 35 households; more than 50 households were preferred.

National- and district-level data were collected from secondary sources. Research in each community began with a rapid overview of key community-level variables and conditions. The cooperators visited the communities for data collection and observation for at least two extended periods during the six months of field research. The two periods were at least three months apart to allow the cooperators to observe differences in use of forests and tree products between at least two major seasons (dry and wet, hot and cool).

A random sample of 50 households (unless the community has less than 50 households) were surveyed in each village community. Subsequent detailed surveys on forest practices were conducted on a sample of 25 households from among the 50

household sample. The cooperators agreed to ensure adequate representation of small-farm and landless households in the subsample.

Study Outputs

Each cooperator was responsible for three outputs:

1. **Data for comparative analysis, sent to Winrock International-F/FRED, then redistributed to all cooperators. This handbook deals almost entirely with this comparative data.**
2. **A brief descriptive report of each study community giving the context and meaning of much of the comparative data and describing selected social and economic variables not included in the minimum data set. (Copies of these descriptive reports can be obtained through the Winrock International-F/FRED Project office in Bangkok.)**
3. **A report on a topic selected by the cooperator on farm and village forest- and land-use practices.**

Data Collection and Analysis

Data collected for this study is to be compiled and analyzed at the national and regional levels to determine the effects of the selected social and economic factors on farm- and village-forestry practices. Each researcher who submits data to the central pool receives data from all other participating researchers. If ten researchers participate, with each studying two villages, then each can obtain, upon request, comparable data for analysis from twenty villages in the region.

National-level analysis will be conducted for those countries with enough sites for comparison. In each country, the data are collected and stored at the location where the comparative analysis will be performed. An institution in each country with participating researchers has been designated as a "data compilation center" so that national-level analysis can be conducted when data are collected from enough communities.

Regional analysis is being supported by F/FRED. Data from all sites were collected for analysis by Winrock International-F/FRED. Initial regional analysis is being performed by the F/FRED Land and Forest Management Network Specialist.

Part Two:
Guidelines for
Data Collection and Entry

2.1 National-Level Data

Data Collection

If more than one researcher in a country is cooperating in this study at the same time, only one person is needed to collect the national-level information.

The database retains only one set of national-level data. The most recent entry (note instructions on "Date of Data Entry" in Section 3) will automatically replace data with an earlier date. If data is already entered in the database, inspect it to see if it should be updated. Make sure that any new data to be entered are more up-to-date or more accurate than the existing entries.

Category A: Background Information

Field Methods

I. Population

Most of this data should be obtained from one or two secondary sources: the most reliable, relatively recent estimate of population and population characteristics and the most reliable, recent estimate of the labor force. If a national census has been taken within the past five years, data should be obtained from the census. If the census was taken more than five years earlier, the most recent population estimates by the national office responsible for population statistics (such as a National Statistical Office) should be used. If reasonable population estimates are not available, census data more than five years old may be used.

Data sources must be noted in the descriptive report of the study communities.

A. Total Population

National population should be listed to the nearest 1,000. If a country has a population of 55,689,240, it would be rounded down to 55,689,000 and recorded as 55689. If a country has a population of 55,689,501, it should be rounded up to 55,690,000 and recorded as 55690.

Rural and urban populations of the country should be listed to the nearest 1,000, using the same method as for total national population.

Record the last two digits of the year of the census or population estimate.

The area of the country should be recorded in square kilometers, to the nearest 100 square kilometers. If a country's area is 984,883 square kilometers, its size should be rounded up to 984,900 and recorded as 9849. If a country's area is 1,832,940 square kilometers, the area should be rounded down to 1,832,900 and recorded as 18329.

B. Ethnic Composition

Ethnic groups should be classified according to the ethnic divisions in the country's census reports. Any misgivings that the researcher may have about the official ethnic divisions should be explained in the descriptive report accompanying the information in the database.

The three largest ethnic groups should be listed and their respective proportions of the population recorded to the nearest percentile. All other ethnic groups are to be included under "Other" and their total proportion recorded. Any pertinent information about any of these minority ethnic groups should be presented in the descriptive report (for example, if a study community includes members of an ethnic minority grouped under "Other," their proportion of the total population and other relevant information should appear in the descriptive report supplementing the village study).

C. Religious Composition

The proportions of the population that are Muslim, Buddhist, Christian, or Hindu should be recorded to the nearest percentile in the appropriate category. Up to two other religious groups can be named and their proportions of the population recorded. If there are more than two other major religious groups, the largest should be named and its proportion recorded and the remainder grouped together and their combined proportion recorded. If any study communities include members of a religion grouped under a combined "Other," information about that group should be included in the descriptive report supplementing the village study.

D. Settlement Patterns

A brief description of the general settlement patterns found in the country should be provided, with reference to major differences among national regions.

EXAMPLE: Settlement patterns in Thailand might be described as: "Central Plain, linear along canals and roads; elsewhere, clusters in paddy growing areas, clusters and dispersed in upland farm and hill areas."

E. Migration

As with settlement patterns, a brief description of the country's general migration patterns should be provided, along with reference to major differences among national regions. Migration should be described as 1) internal (within the country) vs. external (to other countries), with references to 2) direction, such as rural to urban, rural to rural, mountain to plain, 3) duration, whether seasonal, permanent, or long-term temporary (for example, one or more years temporary migration to work in a city or another country), 4) organization, either spontaneous or organized (recruited by private companies, organized by the government), and 5) type of migrants, such as skilled laborers, unskilled laborers, professionals, men, women.

EXAMPLE: Migration in Thailand could be described as: "Northeast, permanent and seasonal rural to urban migration of unskilled workers, mainly to Bangkok. Major intra- and inter-regional seasonal rural to rural migration of agricultural wage laborers. Other regions, not as much rural-urban migration. Throughout country, much expansion of agricultural area through rural-rural migration from lowlands to upland hills. Considerable external migration to Middle East, North Africa and Singapore by young male skilled laborers, mainly from rural Northeast."

F. Employment

Seven general occupation categories are given below. List the proportion of the labor force in each category, as nearly as possible from the national labor statistics. Most national census reports will divide occupations among these or similar categories.

There is also space for two other categories, if the seven general categories provided are not adequate.

1. *Agriculture* means farmers, agricultural wage laborers, ranchers, and others employed to produce agricultural or other primary goods, including wood and other tree products.
2. *Industry* means those who are working in manufacturing industries, as workers, managers, etc., or in other occupations involving the production of secondary goods, including processed foods, processed wood and tree products.
3. *Trade* means shopowners, middlemen, exporters, and anyone else involved in the sale or exchange of goods or products who are not the producers of those goods or products.
4. *Service* means those who earn their living by providing services to others and do not produce, sell, or exchange products or goods (barbers, drivers, computer repairmen, etc.).
5. *Professional* means those specifically trained to practice their profession, such as doctors, nurses, university professors, employees of consulting companies. For purposes of this study, government employees and other administrators (if separate data are given for these groups) will also be listed under professionals.
6. *Student* means those whose primary activity is attending an educational institution or otherwise pursuing their education.
7. *Unemployed* means those without work, whether or not they are seeking work at the time of the labor survey.

Total population in the labor force should be given to the nearest 1,000. This should be recorded in the same way as the national population figures, described in section A above.

G. Dependency Ratio

Dependency ratios for rural, urban and total populations should be calculated from census or population estimates. For purposes of this study, children are those under age 15. Working age population are from 15 through 64. Elderly are 65 and over. Method to calculate dependency ratio is as follows:

For children dependency ratio:

$$\frac{\text{Population under 15}}{\text{Population 15 through 64}} \times 100$$

For dependency ratio:

$$\frac{(\text{Population under 15} + \text{Population 65 and over})}{\text{Pop. 15 through 64}} \times 100$$

EXAMPLE: A country has a population of 55,389,000, and those under 15 total 22,850,000, those 15 through 64 total 29,668,000, and those 65 and older total 2,871,000. Dependency ratios are therefore:

$$\text{Children dependency ratio} = \frac{22,850,000}{29,668,000} \times 100 = 77$$

$$\text{Dependency ratio} = \frac{22,850,000 + 2,871,000}{29,668,000} \times 100 = 87$$

Note: The dependency ratio is not a percentage of the total population. The dependency ratio indicates how many dependents in the total population must be supported by 100 members of the population of economically active age. In the above example, the Children Dependency Ratio indicates that every 100 people of economically active age in the country must support 77 children under 15 years of age. The Dependency Ratio indicates that every 100 people of economically active age must support 87 dependents, both children and elderly.

Economically active population is defined here as those aged 15 through 64. In several of the study countries, younger children frequently enter the labor force. However, 15 years was agreed on by the researchers as a satisfactory cut-off for comparison, because most national population data will be presented in 5-year age cohorts (0-4, 5-9, 10-14, 15-19, etc.). The researchers also recognized that many people over 65 years old remain economically active. Yet 65 was agreed on as a convenient cut-off age, especially since some official population statistics present 5-year age cohorts up to age 64, then aggregate all those aged 65 and older.



Data Format

CATEGORY A: BACKGROUND INFORMATION (NATIONAL LEVEL)

COUNTRY _____

I. Population

A. Total Population _____ (x 1,000)

Rural Population _____ (x 1,000)

Urban Population _____ (x 1,000)

Date of Census, Population Estimate 19__ __

Total Area _____ (x 100) Square Kilometers

B. Ethnic Composition

	Name of major ethnic groups	% of Population
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	Others	_____

C. Religious Composition

	% of Population
1. Muslim	_____
2. Buddhist	_____
3. Christian	_____
4. Hindu	_____
5. Other (List Name)	
_____	_____
_____	_____

19
19 91
P. B. B. B.

D. Settlement Patterns

Describe whether dominant rural settlement patterns are clusters of houses, scattered households, linear, etc. Mention major regional differences.

E. Migration

Describe general migration patterns of the country, both external (to other countries) and internal (within the country). Explain major directions, duration, types, and organization of migration. Mention major regional differences.

F. Employment

Major Occupation Categories	% of Population in Labor Force
1. Agriculture	_____
2. Industry	_____
3. Trade	_____
4. Service	_____
5. Professional	_____
6. Students	_____
7. Unemployed	_____
8. Other (List Categories)	
_____	_____
_____	_____

Year of Labor Force Estimate 19 _____

Total Population in the Labor Force _____ (X 1000)

G. Dependency Ratio	Children	Children and Elderly
1. Rural Population	_____	_____
2. Urban Population	_____	_____
3. Total Population	_____	_____

Category C: Government Forestry Development Intervention

Field Methods

I. Land and Forest Laws and Regulations

The specific laws and regulations that affect land-use and forest management practices need to be reviewed to determine whether they are consistent with each other and with forestry practices in the study communities. One or more experts on land and forest laws and regulations (at least one from the national agency responsible for forests) should be consulted to determine the appropriate laws and regulations affecting land and forest use, as well as to identify appropriate literature describing land and forest laws/regulations. If necessary, the researcher should then analyze government reports, gazettes, and proclamations, and review the literature on land and forest laws and regulations.

Information about the laws will be reported in two forms. First, a categorical response in terms of presence (in all or in limited areas of the country) or absence of laws will be provided for comparative analysis. Second, a brief description of the laws and regulations relevant to land and forest management practices should be included in the descriptive reports of at least one of the study communities of the country, or in a national report if prepared separately from the reports of the study communities.

The following types of laws or regulations are of interest for this study:

1. *Allow private ownership of forests.* Whether or not private individuals or corporations can own forests. These can be either natural or planted forests.
2. *Allow common property/community control of forest resources.* Do laws or regulations allow community-owned forests or permit community access to and control of forest resources? This would include panchayat forests in Nepal, forest commons or commonly-owned forests, community rights to specific trees or tree products, and other forms of community owned, controlled and/or managed forests and forest resources.
3. *Encourage homestead forests/homegardens.* Are there laws or policies that encourage the planting and improvement of trees in homesteads and homegardens? This would include fruit and other food trees.
4. *Encourage farm forests.* Do certain laws, policies, or regulations encourage individual farmers to plant trees on their farms? This does not mean whether farmers are allowed to plant or keep trees on their farm, but whether they are encouraged in some way (through extension programs, other projects) to plant trees on their farms.
5. *Encourage community forests.* Are there laws, policies or regulations that encourage communities or groups in the communities to plant forest trees on community, or jointly held, or pooled property? This would include village woodlots, panchayat forests, and roadside "plantations."
6. *Restrict access to forests.* Are there laws or regulations that restrict people's access to and use of forests? A law might restrict access to the use of the forests by

prohibiting people's appropriation of forest products or use of forest lands without permission from appropriate government authorities. Another law or regulation might restrict physical access to the forests by prohibiting people from entering certain forest lands without permission or unless accompanied by the appropriate authorities. Both restrict access to forests.

7. *Restrict use of trees for specific uses.* Are there any restrictions on people's use of trees or tree products for specific purposes? This is a specific type of restriction of use of the forests. An example would be a state monopoly on lumber for railroad ties or for shipbuilding. Another example would be a ban on private production of timber over a certain size for sale.

8. *Restrict use of specific trees.* Are people's access to or use of specific trees restricted? This is another specific type of restriction on forest use. An example is the Thai government control of all teak in the country. Until recently, individuals were not allowed to harvest teak, even if it grew on their property. They can now harvest teak on their property, but only with government permission.

9. *Restrict settlement in or near forest areas.* Is settlement in or near forest areas prohibited or controlled? This is a specific form of restriction on physical access to forest lands.

II. External Support Systems

Information should be collected at the national level on external support systems: whether or not extension services, credit services, and subsidy programs could support tree-growing by small-farm households. If government and NGO programs do not exist at the national level, they are not likely to exist at the village level. This information should be obtained from some combination of personal observation and knowledge, by asking appropriate government, NGO, or other staff, and by reviewing recent literature on extension, credit, and subsidy programs.

Information will be reported in two forms. First, a categorical response about the presence (nationwide or in limited areas of the country) or absence of extension, credit or subsidy programs should be recorded for comparative analysis. Second, a brief description of the nature and extent of these programs should be included in the descriptive report of at least one of the study communities of the country or in a national-level report if prepared separately from the reports of the study communities. Extension services provide training, information, and other services to farm households. Record whether or not four types of programs exist: 1) forestry, 2) agriculture, dealing primarily with field crops, 3) horticulture, and 4) livestock. More than one program can be covered by a single extension department or organization; for example, the Thai Department of Agricultural Extension is responsible for both agriculture and horticulture.

Financial support programs should be listed under national-level data only if they support tree-growing in some way -- including fruit trees, other commercial trees (rubber, teak), and other woody perennials (oil palm, bamboo, rattan) -- by small-farm households. Subsidies can be in the form of inputs (provided free or below market price) or of price supports for the tree products.

Data Format

CATEGORY C: GOVERNMENT FORESTRY DEVELOPMENT INTERVENTION
(NATIONAL LEVEL)

COUNTRY: _____

I. Are there Land or Forest Laws/Regulations that:

Allow private ownership of trees/forests _____

Allow common property/community control of
forest resources _____

Encourage homestead forests/homegardens _____

Encourage farm forests _____

Encourage community forests _____

Restrict access to forests _____

Restrict use of trees for specific uses _____

Restrict use of specific trees _____

Restrict settlement in or near forest areas _____

0 = No
1 = Yes, nationwide
2 = Yes, in limited areas

II. External Support Systems

A. Extension Services

Gov't NGO Other

- | | | | | |
|------------------------|-------|-------|-------|---------------------------|
| 1. Forestry | _____ | _____ | _____ | 0 = No |
| 2. Agriculture (crops) | _____ | _____ | _____ | 1 = Yes, nationwide |
| | | | | 2 = Yes, in limited areas |
| 3. Horticulture | _____ | _____ | _____ | |
| 4. Livestock | _____ | _____ | _____ | |

B. Financial Support for tree-growing (including fruit trees or other woody perennials) by small-farm households

- | | Govt | Comm
Bank | Coop | Informal | |
|------------|-------|--------------|-------|----------|---------------------------|
| 1. Credit | | | | | 0 = No |
| 2. Subsidy | _____ | _____ | _____ | _____ | 1 = Yes, nationwide |
| Inputs | _____ | _____ | _____ | _____ | 2 = Yes, in limited areas |
| Prices | _____ | _____ | _____ | _____ | |

2.2 District-Level Data

Data Collection

A *district* is the smallest administrative unit for which there are census reports and other accurate government statistics. In Bangladesh, this unit is called a *subdistrict*. In the Philippines, it is known as a *province*. In most of the United States, it is called a *county*. In Nepal and Thailand, it is called a *district*.

If more than one researcher is conducting this study in a district at one time, only one of them needs to collect the district-level information.

The names of the country and district should be recorded for each separate category of district-level data. The district code (a two-character alphanumeric code) should also be recorded for each separate category of district-level data so that the correct district code will be used when entering the data in the Farm and Village Forestry Database. If a district code has not already been assigned to the district being studied, please review the section on District, Village and Household Codes in Part Three of this manual to determine an appropriate district code.

Category A: Background Information

Field Methods

Record the name of the administrative unit (district, province, county, etc.).

I. Population

As with the national-level population data, most district-level population data should be obtained from one secondary source: the most reliable, relatively recent estimate of the population and its characteristics. Whenever possible, the same source should be used for the district- and national-level data. However, if another, more accurate source of data is available at the district level, that can be used. If the source for national data does not have information at the district level, another source can be used. The descriptive report must note if the source is different from that used for the national-level data, identify that source, and explain why it is being used.

A. Total Population

List the district population as accurately as possible.

Record the last two digits of the year of the census or population estimate.

Record the area of the district in square kilometers.

B. Ethnic Composition

The names of the three largest ethnic groups in the district should be listed, and their proportions of the population recorded to the nearest percentile. All other ethnic groups should be included under "Other" and their total proportion recorded. Any pertinent information about any of these minority ethnic groups should be presented in the comparative study descriptive report. (Again, if one of the study communities includes members of an ethnic minority grouped under "Other," their proportion of the total population and other relevant information should be in the descriptive report.)

C. Religious Composition

The proportions of the district population that are Muslim, Buddhist, Christian, or Hindu should be recorded to the nearest percentile in the appropriate category. Up to two other religious groups may be named and their proportions of the population recorded.

D. Settlement Patterns

Brief descriptions of the general settlement patterns found in the district should be written. Follow the recommendations for describing settlement and migration in the guidelines for national-level data.

E. Migration

Same as for settlement patterns above.

F. Employment

As with the national-level data, seven general occupation categories are listed. The same method should be used to divide the working population of the district among categories. The proportions of the working population in the district engaged in these occupation categories should be calculated and recorded to the nearest percentile. If any occupation categories cannot be included in these seven groups, they should be listed and their proportions recorded.

Record the total labor force population.

Data Format

CATEGORY A: BACKGROUND INFORMATION (DISTRICT/SUBDISTRICT)

COUNTRY: _____

DISTRICT: _____ **DISTRICT CODE:** ____

Name of Administrative Unit: _____

I. Population

A. Total Population _____ **Rural Population** _____

Urban Population _____

Date of Census/Population Survey 19 ____

Total Area _____ **Sq. Km.**

B. Major Ethnic Groups **% of Population**

1. _____

2. _____

3. _____

4. **Others** _____

C. Major Religious Groups **% of Population**

1. **Muslim** _____

2. **Buddhist** _____

3. **Christian** _____

4. **Hindu** _____

5. **(List Others)** _____

6. _____

D. Settlement Patterns

Describe whether dominant rural settlement patterns are clusters of houses, scattered households, linear, etc.

E. Migration Patterns

Describe general migration patterns of the area, both external (to other countries) and internal (within the country). Explain major directions, duration, types and organization of migration.

F. Employment

Major Occupations	% of Population
1. Agriculture	_____
2. Industry	_____
3. Trade	_____
4. Service	_____
5. Professional	_____
6. Students	_____
7. Unemployed	_____
8. (List others) _____	_____
9. _____	_____

Total Labor Force in District _____

Year of District Labor Force Survey 19__

Category B: Agro-ecological Information

Field Methods

Record the total area covered in hectares.

I. Land Use

The **government-designated** land use for the area should be recorded here. The data for each land-use category should be recorded both in terms of percentage of area and hectares.

Note: If exact data are not available, it is not necessary for the percentage or number of hectares to be extremely precise. It is more important to get a rough estimate of the area under various land uses than to spend too much effort to get precise data. Nor is it necessary to fill in all land-use categories if the information is not available.

A. Forest (Natural or Plantation)

Record total forest hectareage and the proportion of forest land in the district. This is the area the government **designates** as forest land. It does not actually have to be under forest.

EXAMPLE: If the government designates 15,800 hectares of a 46,300 hectare district as forest land, then the proportion recorded here should be 15,800 of 46,300, or 34%, even if most of the "forest land" is no longer forested.

If **adequate data are available**, three subcategories of forest land should then be distinguished by type of ownership: government forests (including reserved forests, parks, wildlife preserves), private forests (owned by individuals, corporations, or other private legal entities), and common forest lands (forests under common property systems or under community control and management). The proportion of each subcategory **to the total forest area** should be given.

EXAMPLE: If total forest lands amount to 15,800 hectares and government forests account for 10,750 hectares, then the proportion recorded for "government forests" should be 10,750 of 15,800, or 68 percent.

If **adequate data are available**, the area and proportion of degraded forest under each subcategory of forest land should be recorded.

EXAMPLE: If 4,500 of the 10,750 hectares of government forest are degraded and mainly used for agriculture, then the proportion of degraded government forest land should be recorded as 42 percent (4,500 of 10,750).

B. Agriculture

Total agricultural area, as designated by the government, should be recorded.

Five subcategories of agricultural land should then be distinguished by major crops planted: rice land, land planted mainly to other annual crops, land planted primarily to perennial crops (including trees), land under intentional agroforestry systems, and land in fallow at the time of the survey.

As with the forest-land subcategories, the proportions given here should be the proportion of each subcategory of agricultural land to the total agricultural land area.

EXAMPLE: If the total agricultural area is 10,000 hectares with 3,200 hectares of rice land, the proportion of rice land recorded here should be the area of rice land divided by the total agricultural area, or 32 percent.

C. Permanent Pasture

Record the total area under permanent pasture or rangeland.

D. Homesteads/Homegardens

Record the total area for homesteads or homegardens. This is the area of houses and the land surrounding the houses considered part of the "home" property.

E. Wasteland

Record the total area of denuded, degraded, or eroded land no longer used for agriculture, pasture, or forest.

F. Fish Ponds/Reservoirs

Record the total area of fish ponds, reservoirs, or other bodies of water (man-made or natural) intentionally used to raise fish or shrimp. Rivers, streams, canals and other waterways, or lakes and bodies of water that are not used intentionally to raise fish or shrimp should not be included in this category.

G. Other

The remaining land area should be recorded under "Other." This would include mountains, roads, and natural shrubland not classified as forest, rivers, lakes, etc.

A brief description of the major land-use practices in the area should also be included in the descriptive reports of the communities.

Data Format

CATEGORY B: AGRO-ECOLOGICAL (DISTRICT LEVEL)

COUNTRY: _____

DISTRICT: _____ DISTRICT CODE: ___ __

I. Government Designated Land Use

	Area (%)	Hectares
TOTAL	1 0 0	_____
A. Forest (Natural or Plantation)	_____	_____
1. Government	_____	_____
- degraded	_____	_____
2. Private	_____	_____
- degraded	_____	_____
3. Commons	_____	_____
- degraded	_____	_____
B. Agriculture	_____	_____
1. Annual Crops: Rice	_____	_____
Other Annuals	_____	_____
2. Perennial Crops	_____	_____
3. Agroforestry System	_____	_____
4. Fallow	_____	_____
C. Permanent Pasture	_____	_____
D. Homesteads/Homegardens	_____	_____
E. Wasteland	_____	_____
F. Fish Ponds/Reservoirs	_____	_____
G. Other	_____	_____

2.4 Village-Level Data

Data Collection

The name of the country, district and village should be recorded for each separate category of village-level data. The district code (a two-character alphanumeric code) and village code (a three-character alphanumeric code) should also be recorded for each separate category of village-level data, so that the correct codes will be used when entering the data in the Farm and Village Forestry Database. If district and village codes have not already been assigned to the district and village being studied, please review the section on District, Village and Household Codes in the Directions to Use the Farm and Village Forestry Database to determine appropriate district and village codes.

The information collected at this level should be obtained through observation, discussion with key informants, and from community records. Before the researcher begins household surveys or any other detailed field research methods, he or she should have an adequate overview of the physical, economic, and social structure and conditions of the community.

Category A: Background Information

Field Methods

I. Population

A. Number of Households

The number of households and total population should be obtained from community records. If possible, these should be verified from district records. The number of households should also be verified from observation. The researcher should walk through the community and draw a simple map with the approximate location and number of houses. This map will prove useful when collecting household information.

The number of school-age children can be verified from local primary school records. Population might also be verified from census data, if the government allows release of such data at the village level.

B. Settlement Pattern

Record whether the community is primarily a cluster settlement, scattered households, a linear settlement, or no distinct pattern. Only the predominant pattern should be recorded. If most houses are clustered and the rest are scattered, then the community should be recorded as "clustered." If there is no clear pattern, this should be recorded. Also briefly describe the settlement pattern of the community. Any important or interesting deviations from the general settlement pattern should be mentioned in the brief description.

II. Infrastructure

A. Electricity

Record a rough estimate of the percentage of households with electricity. This information should be obtained from observation and discussions with key informants.

Availability of electricity can be an important indicator of the level of infrastructure provided to the community and the level of development. It is an important prerequisite for new sources of livelihood and general availability of electronic mass media. It also has major implications for family and community social activities, such as longer and easier study time for children, new centers and times for social gathering, and new forms of entertainment.

B. Major Transportation Links

Record the two most important transportation links to the community in order of importance. If the community is not served directly by a paved road or a railway, the distance to the two nearest roadheads (or railheads) should be recorded. This information is crucial if any commercial production of tree or tree products is planned.

C. Market Center

Record the distance to the nearest important market center(s).

The first record is the distance to the nearest major daily market. This should be the permanent market where most agricultural produce from the community is sold, or where most other outside goods or services are obtained.

The second record is the distance to the nearest occasional market, whether a weekly or other cyclical market.

III. Indicators of Wealth

Indicators of wealth are used to determine the relative level of wealth for households in the village. Each researcher selects the indicators appropriate for the society and the particular community. To the extent possible, the indicators should be selected from among the following general categories:

- 1) the house, homeplot, and/or the materials used to build the house (brick, wood, mud, mats, straw roof, shingles, metal)
- 2) the mode of access to mass media/information in the household (television, radio)
- 3) the mode of transportation used by the household (private car/truck, public transportation, bicycle)
- 4) household items, such as improved stoves, cooking utensils, home furnishings
- 5) savings (bank, jewelry, or other form of savings common to the society)

Describe briefly the basis for selecting the indicators, and how levels of wealth can be assessed from these indicators.

Data Format

CATEGORY A: BACKGROUND INFORMATION (VILLAGE LEVEL)

COUNTRY: _____

DISTRICT: _____ DISTRICT CODE: __ __

VILLAGE: _____ VILLAGE CODE: __ __ __

I. Population

A. Number of Households _____

Total Population _____

B. Settlement Patterns

Clustered/Scattered _____ 1=Clustered 3=Linear
2=Scattered 0=Not Distinct

Brief Description of Pattern

II. Infrastructure

A. Electricity _____ Approximate % of Households w/ Electricity

B. Major Transportation Links _____

1=All-Weather Road 2=Unpaved Road (passable all year)
3=Seasonal Road 4=Trail
5=Waterway 6=Railway

For 2,3,4,5: Distance (in Kms to nearest all-weather road, transportation link) _____ . _____

C. Market Centers. Distance to nearest major market centers (km) _____ . _____

1. Daily Market, major outlet for farm produce _____ . _____
and major source of goods and farm inputs

2. Occasional Market (such as weekly, or other cyclical market) _____ . _____

III. Economic Status

A. Indicators of Wealth

Describe the indicators of wealth selected for the village, with brief explanations of why they were selected and how relative levels of wealth can be differentiated using these indicators.

1. _____

2. _____

3. _____

4. _____

5. _____

Category B: Agro-ecological Information

Field Methods

I. Land Use

This information should be obtained through observation, local records, and discussions with key informants. Where possible, try to use aerial photographs or land-use maps.

Note: The number of hectares and the proportion of area need only be approximate. We are more concerned with general trends rather than exact proportions of land use.

Categories are the same as for the district-level data, however at this level the actual land use should be recorded. For example, agricultural land, even if in an area designated as government forest, should be recorded under the actual agricultural land uses.

II. Topography of the Area

Record the general topography of the area included in the land-use information for the community. Only a rough approximation and the general range of the area under various topographic categories need to be recorded. The categories are:

- A. *Flat Land*: little or no perceptible slope and little, if any, change in elevation.
- B. *Rolling Plain*: range from a gentle, barely rolling surface to a more distinct, wavier landscape.
- C. *Hilly*: uneven, rolling surface. Most of the land is sloping, with distinct changes in elevation, though the slopes are less abrupt and steep than mountains.
- D. *Mountainous*: higher, steeper, more rugged than hilly areas. The "Middle Hills" of Nepal, most of Northern Thailand, the Cordillera in the Philippines are all mountainous areas. Follow geographic designations: if an area is part of a mountain range, it should be classified here as mountainous.

III. Agricultural Land Characteristics

A. Soil Characteristics

This data should be gathered from discussions with key informants, observation (especially by any agricultural scientists assisting the study), and government soil classification records. Record the approximate area that fits each general soil

characteristic. The total should approach, but does not have to equal, 100 %. If, for example, 30-40 % of the land appears to be loamy (recorded as 21-40 %), 25-30 % loamy-clay (also recorded as 21-40 %), another 10-15 % clay (recorded as 1-20 %), and about 20-30 % sandy-loam (again recorded as 21-40 %), do not worry that the total recorded proportion comes to 64-140 %. The main purposes for collecting information on general soil characteristics is (1) to compare general agro-ecological conditions among the study sites and (2) to get a sense of the soil and topographical conditions of the lands where farmers plant trees. A precise soil classification is not needed.

B. Topography

Record the topography of agricultural land only. This should also be based on observation and discussions with key informants. Aerial photographs, if available, can be used. Again, an approximation of the proportion of the area is all that is required.

C. Water Availability

Record the approximate area of irrigated farmland and the approximate area of farmland that depends on rain for its moisture.

IV. Climate

Climatic data are to be obtained from the nearest weather station. Where possible, the data should be 15-year averages. Average monthly rainfall, temperature, maximum temperature, and minimum temperature are to be recorded. Any major annual climatic variations (such as the extreme variability of rains in Northeast Thailand or the typhoons in the Philippines) should be mentioned in the descriptive report of the study communities.

Data Format

CATEGORY B: AGRO-ECOLOGICAL(VILLAGE LEVEL)

COUNTRY: _____

DISTRICT: _____ **DISTRICT CODE:** __ __

VILLAGE: _____ **VILLAGE CODE:** __ __ __

I. Land Use	Area (%)	Hectares
	-----	-----
Total Government Designated Land Use	100	_____
A. Forest (Natural or Plantation)	_____	_____
Plantation		
1. Government	_____	_____
2. Private	_____	_____
3. Commons	_____	_____
B. Agriculture	_____	_____
1. Annual Crops: Rice	_____	_____
Other Annuals	_____	_____
2. Perennial Crops	_____	_____
3. Agroforestry System	_____	_____
4. Fallow	_____	_____
C. Permanent Pasture	_____	_____
D. Homesteads/Homegardens	_____	_____
E. Wasteland	_____	_____
F. Fish Ponds/Reservoirs	_____	_____
G. Other	_____	_____

II. Topography of the Community and Surrounding Area

**Approximate Area of Village Under Various
Topographic Regimes**

	0	1-20	21-40	41-60	61-80	81-100
A. Flat	_____	_____	_____	_____	_____	_____
B. Rolling Plain	_____	_____	_____	_____	_____	_____
C. Hilly	_____	_____	_____	_____	_____	_____
D. Mountainous	_____	_____	_____	_____	_____	_____

Explain briefly how the community land-use patterns and topography are similar to or differ from land-use patterns of the district.

III. Agricultural Land Characteristics

Approximate Area of Agricultural Land with Various Soil Characteristics and Topographic Regimes

A. Soil Characteristics	0	1-20	21-40	41-60	61-80	81-100
1. Sandy	---	---	---	---	---	---
2. Sandy-Loam	---	---	---	---	---	---
3. Loam	---	---	---	---	---	---
4. Loamy-Clay	---	---	---	---	---	---
5. Clay	---	---	---	---	---	---
B. Topography (agricultural area only)	0	1-20	21-40	41-60	61-80	81-100
1. Flat	---	---	---	---	---	---
2. Rolling Plain	---	---	---	---	---	---
3. Hilly	---	---	---	---	---	---
4. Mountainous	---	---	---	---	---	---
C. Water Availability						
1. Irrigated	---	---	---	---	---	---
2. Rainfed	---	---	---	---	---	---

IV. Climate (average for recent 10 years)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A. Rainfall (mm)	---	---	---	---	---	---	---	---	---	---	---	---
B. Temperature (°C)												
1. Average	---	---	---	---	---	---	---	---	---	---	---	---
2. Maximum	---	---	---	---	---	---	---	---	---	---	---	---
3. Minimum	---	---	---	---	---	---	---	---	---	---	---	---

Category C: Government Forestry Development Intervention

Field Methods

I. External Support Systems

This information should be obtained from discussions with key informants.

The first type of information required is the presence or absence, in or near the village, of agricultural or forestry support services.

For extension services, record what services are available in the village. One agency may provide more than one type of service. In that case, both types of extension service should be recorded.

For credit or other forms of financial support, record the type of services available to people in the village. The actual facility (bank, money lender) does not have to be in the village.

Two types of external, financial support services (credit, price support, etc.) should be recorded at this level of data collection:

- 1) services for agricultural activities in general (Financial Support for Agriculture)
- 2) services for tree growing and other forest activities (Financial Support for Tree Growing)

For the section "Physical Support, Nursery, Seedling Source," record the distance from the village to these sites. Record whether tree seedlings or seeds are available from the forestry stations or the demonstration farms (by definition, seedlings and/or seeds are available from nurseries).

For the section "Special Forestry Project or Other Development Project with Tree Component," record the beginning and end years for the most recent forestry project (social forestry, community forestry, farm forestry, etc.) in the village, and for the most recent development project (other than a forestry project) with a tree or forestry component. Based on discussions with key informants, record whether the project is believed to have a generally positive or negative effect, or little or no impact (neutral) on the community.

Data Format

**CATEGORY C: GOVERNMENT FORESTRY DEVELOPMENT INTERVENTION
(VILLAGE LEVEL)**

COUNTRY: _____

DISTRICT: _____ DISTRICT CODE: __ __

VILLAGE: _____ VILLAGE CODE: _ _ _

I. External Support Systems

A. Extension Service	Govt	NGO	Other	
1. Forestry	___	___	___	0 = No, Not Active in Village
2. Agriculture: Crops	___	___	___	
3. Horticulture	___	___	___	1 = Yes, Active Program in Village
4. Livestock	___	___	___	

B. Financial Support for Agriculture (incl. livestock)	Govt	Comm Bank	Coop	Informal	
1. Credit	___	___	___	___	0 = No, Not Available in Village
2. Subsidy					
- inputs	___	___	___	___	1 = Yes, Available in Village
- prices	___	___	___	___	
3. Other					
- cash grants	___	___	___		
- food aid	___	___	___		

C. Financial Support for Tree Growing	Govt	Comm Bank	Coop	Informal	
1. Credit	_____	_____	_____	_____	
2. Subsidy					0 = No, Not Available in Village
- inputs	_____	_____	_____	_____	1 = Yes, Available in Village
- prices	_____	_____	_____	_____	
3. Other					
- cash grants	_____	_____	_____		
- food aid	_____	_____	_____		

D. Physical Support, Nursery, Seedling Source

	Exists in area	Distance from Vil. (in Kms)	Seedling/ Seed Source
	-----	-----	-----
1. Forestry Station	_____	_____	_____
2. Nursery			
- Gov't	_____	_____	_____
- NGO	_____	_____	_____
- Private	_____	_____	_____
3. Demonstration Farm			
- Gov't	_____	_____	_____
- NGO	_____	_____	_____
	0 = No 1 = Yes		0 = No 1 = Yes

E. Special Forestry Project or Other Dev. Project w/Tree Component

	Date Started	Date Ended	Impact
1. Forestry Project	19 ____	19 ____	_____
2. Other Project w/ Tree Component	19 ____	19 ____	_____
	year (last 2 digits)		
			1 = positive 2 = neutral 3 = negative

Category D: Land Use, Tenure, and Property Issues

Field Methods

I. Tree Tenure

This information should be obtained through discussions with key informants and the researcher's own observations. Report the major form of tree tenure in the community. The general categories are:

1. tree ownership is considered separate from land ownership
2. trees are owned by the person who owns the land
3. both forms of tree ownership exist in the community

Common access to parts of trees on private property (such as branches or leaves from trees on individuals' farmland) is **not** considered tree ownership separate from land ownership. The tree is still owned by the landowner, even if parts of the tree can be used by a larger group.

If tree ownership is distinct and separate from land ownership on any land in the community, briefly describe that tree tenure system. A more detailed explanation of the tree tenure systems should be provided in the descriptive report of the village.

II. Access to Common Property

This information should be obtained from observation and discussions with key informants. Record whether there is common use of various types of lands. Briefly describe each common property system that exists. More detailed descriptions of common property systems should be written in the descriptive report of the study community.

Commons are lands under communal ownership or control by a group of people. The group can be the study community, a subgroup in the community, or a larger group that includes the study community.

Fallows are agricultural land left unplanted. The land can be left unplanted for all or part of a year. Rice fields that are not cultivated during the dry season are considered fallows. A system of "commons" using fallows that is frequently found in tropical Asia is the open access to members of a village to let their cattle graze in fallow rice fields during the dry season.

Barren Lands are non-forest and non-agricultural lands, covered with brush or grass.

Village Forests are forests under formal, legal village ownership or control.

State Forests are public forests, owned by or under legal control of the national, state or provincial government.

III. Farm Size

Record here the general ranges of farm sizes for each major farm-size category. This data can be entered after a review of the farm-size data from the household survey.

Since landless households are defined as those without land, there is no need to enter any farm size.

As defined by the Food and Agriculture Organization of the United Nations (the definition used for this study), small-farm households are low-income producers (below the national poverty line, or below the national average farm income) with small-scale holdings. Farming, fishing, and/or agricultural labor is the major occupation of the household and its major source of income. Holdings in this category (whether owned, rented, or used for free) are either inadequate to meet minimum household needs or just sufficient to meet those needs. In most cases, they require income from non-farm or off-farm sources to meet their minimum subsistence requirements. The upper end of the range of small-farm households can include those with enough land to have a slight surplus of farm produce above the amount required to meet minimum needs.

Medium-farm households are those with average landholding of comparable quality in the area. They have enough land to meet their minimum needs. They earn (including imputed income) more than the national poverty level, or near the national average farm income. Medium-farm households may produce a surplus regularly, but not enough to take them well above the national average farm income.

Large-farm households are those with the largest farms. Most of their produce is surplus, considerably more than is required to meet their household needs. They have holdings well over the average landholding of comparable quality in the area, and their incomes are well above the national average farm income.

Data Format

CATEGORY D: LAND USE, TENURE AND PROPERTY ISSUES (VILLAGE LEVEL)

COUNTRY: _____

DISTRICT: _____ DISTRICT CODE: __ __

VILLAGE: _____ VILLAGE CODE: _ _ _

I. Tree Tenure

0 = associated with the land

A. Form of Tree Tenure ____ 1 = separate from the land

2 = both associated with and separate from the land

B. If separate from the land (codes 1 or 2 above), briefly describe the system.

II. Access to Common Property

	Existence 0=No, 1=Yes	If Yes, Brief Description of System
A. Commons	_____	_____ _____ _____
B. Fallows	_____	_____ _____ _____
C. Barren Lands	_____	_____ _____ _____
D. Village Forest	_____	_____ _____ _____
E. State Forests	_____	_____ _____ _____

III. Farm-Size Categories

List the approximate ranges for the following farm-size categories:

A. For those who own all or most of their farmland or those who use all or most of their farmland for free.

1. Landless 0
2. Small > 0 to ____ . ____ hectares
3. Medium > ____ . ____ to ____ . ____ hectares
4. Large > ____ . ____ hectares

B. For those who rent in all or most (over 50 %) of their farmland.

1. Landless 0
2. Small > 0 to ____ . ____ hectares
3. Medium > ____ . ____ to ____ . ____ hectares
4. Large > ____ . ____ hectares

2.5 Household-Level Data

Field Methods

For communities of less than 50 households, all should be covered in the survey. For communities with more than 50 households, the 50 households to be covered in the survey should be selected by simple random sample. The researcher should make sure that all households, including the poorest, are included in the list for selecting the sample households.

The household survey should be conducted by formal and informal interviews, with verification of much of the information through observation or further discussion.

Interview format and content of the questions depend on each researcher's preferences and ability, and the particular social and cultural context. Direct questions on income might be answered fairly openly and accurately in one society (allowing use of more formal interviews), while in another direct questions may be considered impolite or insulting (requiring indirect methods to get information on income). What is called for in the comparative analysis is simply that the information recorded is as near to fact as possible, and that it is recorded in the standard format that allows comparative analysis.

Household Codes

The name of the country, district, and village and the address and/or name of respondent should be recorded for each household and for each separate category of household level data. The alphanumeric codes for the district (two characters), village (three characters), and household (three characters) should also be recorded for each separate category of household-level data for each household, so that the correct codes will be used when entering the data in the Farm and Village Forestry Database.

If district, village and household codes have not already been assigned to those units being studied, please review section 3.4 of this handbook to determine appropriate codes.

Please note that the same household code **must** be used for **all** data collected from that household, even if the data are collected at different times. If only some households are interviewed for particular categories of information (in the first regional study, only 25 of the 50 households were interviewed about their forest-use practices), the same household code **must** be used for that household for all categories of information and for all times information is collected (see section 3.4 for an explanation of why the same code must be used at all times).

Category A: Background Information

I. Population

This study is concerned with six major age/sex groups: male children, female children, adult males, adult females, elderly adult males, and elderly adult females. Children are defined as under 15 years of age on the day of the interview. Elderly are defined as 65 years or older on the day of the interview. Adults are defined as those 15 years and older, and less than 65 years old on the day of the interview. Members of the household consist only of those

- 1) currently living at the house (not temporary visitors) and
- 2) temporarily away from the house for work, study or other activity, who are still economically and socially considered part of the household by the members present. The latter group should not be away from the household for more than nine months of the year.

Record the predominant ethnic group and the religion of the household.

Record the educational background of up to, but no more than, four family members. These are:

- o the household head,
- o his or her spouse (if living in same household),
- o the eldest adult son of the household head, and
- o the eldest adult daughter of the household head.

These last three do not have to be recorded if no one in the household fits the descriptions. Do not record the education levels of sons or daughters who are not yet adults.

II. Economic Status

A. Indicators of Wealth

Relative wealth of the households should be estimated from the three indicators of wealth selected by the researcher and recorded under Background Information, Village Level data.

Describe briefly the three economic indicators, and classify each household income as low, medium or high.

B. Source of Income/Livelihood

List the proportion of the sources of household livelihood. Where applicable, record the approximate cash income from the source.

Note: Several sources of livelihood will not have corresponding cash income (unless the income is imputed). These are all farm goods produced for household consumption and housework and possibly other types of labor that help maintain the household but do not provide it cash income. For this reason, the cash income from various sources does not have to match the proportion of livelihood from those same sources.

The proportions do not have to be exact. For comparison, we are primarily concerned with the general proportion of goods and income that help the household meet its needs. Four general sources and the subcategories are:

1. *Farm Work.* This includes all goods and produce obtained directly from the household farm: crops, livestock, fish.

List separately (a) goods produced for household consumption and (b) goods produced for sale or trade.

Under each of these categories, list separately the proportions obtained from (1) trees and tree crops on the farm, (2) field crops, and (3) other farm produce including livestock.

For goods produced for sale or trade, record the approximate value of the crops and other farm produce sold or traded, if possible.

2. *Non-farm Work.* This includes all work by, for and within the household not directly related to their farm, such as handicrafts, housework, sales from a general store, or charcoal production. Record separately the proportion of household livelihood that can be attributed to 1) handicrafts, 2) housework (cooking, household repairs, etc.), and 3) other activities. List the other activities.
3. *Off-farm Work.* This includes all work, both wage and exchange labor, by household members for other individuals, households, companies, or organizations. List separately the proportion of off-farm work in 1) agriculture (agricultural wage labor, exchange labor if it can be determined), 2) industry (industrial wage labor), and 3) other off-farm work (salaries from teaching, government service, professional jobs, or wages earned from jobs in the service sector).
4. *Other Income Sources.* All other sources of income should be listed here, including 1) remittances from family or household members working elsewhere and 2) any other sources of income.

Record the current rate of exchange between local currency and US Dollars.

III. Labor/Employment

A. Major Activities of Selected Household Members

List the approximate proportion of time spent in each occupation or activity category by up to six household members: the household head, his or her spouse, another adult male in the household, another adult female in the household, a male child and a female child. It is not necessary to provide data for all six if no household members fit the descriptions. The proportions should be approximate. An exact calculation is neither needed nor able to be collected efficiently.

B. Peak Work Periods

Those for each activity should be recorded, from the first month of the work period to the last month. Work periods should be listed for up to four household members whose major activities were listed in the previous table: the household head, his or her spouse, another adult male in the household, and another adult female in the household.

If an activity has more than one peak labor period, record the second peak work period in the same manner.

IV. Livestock

Record the number of livestock owned by the household. Seven categories are listed: Cattle, Water Buffalo, Goats, Sheep, Pigs, Chickens, and Other. "Other" should include horses, mules, camels, elephants, ducks or other farm animals that might feed on tree products.

Record the general types of feed and methods of feeding for each type of farm animal recorded. Four types of feed are listed:

1. Tree products: leaves, flowers and other tree or shrub products
2. Grass and other range products
3. Crop and grain residues
4. Purchased feed

Four methods of feeding are listed:

1. *Stall feeding, or cut and carry, from own source.* The feed is brought to the animals, which are kept in a confined area. The feed comes from the farm, homestead, or other source where the household has rights to use the produce (commons, village woodlot).

2. *Stall feeding, or cut and carry, from other source.* Same method of feeding as in number 1, except the feed's source is other than the farm, homestead, or other location where the household has rights of use. This can be purchased feed, fodder brought from a state forest, etc.
3. *Tethered, controlled.* The animals are kept on a tether and allowed to graze or eat anything within their reach. Or they are otherwise kept in a fairly confined area but allowed to eat anything in that area.
4. *Roam untethered.* The animals are allowed to roam at will, or are kept in a group but left untethered. They can eat whatever food they find as they roam.

Rank each type of feed and method of feeding by its relative importance, using the following scale:

- 1 = most important
- 2 = regularly used
- 3 = occasionally used
- 4 = rarely used
- 0 = never used

In the first regional study, the researchers agreed to ask for detailed information about animal feed from only 25 households, the same households selected for detailed information on tree- and forest-use practices (described under Category E below). Data from most villages covered in this first study will include the number of livestock for all the households surveyed, but will have information on feed from only half the households.

Data Format

CATEGORY A: BACKGROUND INFORMATION (HOUSEHOLD LEVEL)

COUNTRY: _____

DISTRICT: _____ DISTRICT CODE: ____

VILLAGE: _____ VILLAGE CODE: ____

HOUSEHOLD: _____ HOUSEHOLD CODE: ____

I. Population

A. Household Size	Number of
Adult Males	_____
Adult Females	_____
Elderly Males	_____
Elderly Females	_____
Male Children	_____
Female Children	_____

B. Ethnic Group _____

C. Religion

1. Muslim	_____	
2. Buddhist	_____	0 = no 1 = yes
3. Christian	_____	
4. Hindu	_____	
5. Other _____	_____	

D. Education

1. Household Head	_____	1 = illiterate, no formal education
2. Spouse	_____	2 = literate, no formal education
3. Eldest Adult Son	_____	3 = primary school education
4. Eldest Adult Daughter	_____	4 = secondary school education
		5 = vocational school education
		6 = college or above
		9 = do not know

B. Source of Income/Livelihood

1. Farm Work

a. for household needs	Percent of livelihood	Actual Cash Income	Percentage of Cash Income
1) tree products	_____		
2) field crops	_____		
3) other	_____		
b. for sale or trade			
1) tree products	_____	_____	_____
2) field crops	_____	_____	_____
3) other	_____	_____	_____

2. Non-Farm Work

a. handicrafts	_____	_____	_____
b. housework	_____		
c. other _____	_____	_____	_____
_____	_____	_____	_____

3. Off-Farm Work

a. agricultural wage labor _____	_____	_____	_____
b. industrial wage labor _____	_____	_____	_____
c. other _____	_____	_____	_____
_____	_____	_____	_____

4. Other Income Sources

a. remittances	_____	_____	_____
b. other _____	_____	_____	_____
_____	_____	_____	_____

TOTAL 100% _____ 100%

US \$ 1.00 = _____

III. Labor/Employment

A. Major Activities of Selected Household Members

Major Occupations	Age/Sex Group of Workers	Household Head	Spouse of HH Head	Other Adults		Children	
				Male	Female	Male	Female
1. Agriculture		_____	_____	_____	_____	_____	_____
2. Agricultural Wage Labor		_____	_____	_____	_____	_____	_____
3. Industrial Wage Labor		_____	_____	_____	_____	_____	_____
4. Trade		_____	_____	_____	_____	_____	_____
5. Handicrafts		_____	_____	_____	_____	_____	_____
6. Services		_____	_____	_____	_____	_____	_____
7. Professional		_____	_____	_____	_____	_____	_____
8. Seasonal Migrant Labor Outside Community		_____	_____	_____	_____	_____	_____
9. Student		_____	_____	_____	_____	_____	_____
10. Unemployed		_____	_____	_____	_____	_____	_____
11. Other (Name)		_____	_____	_____	_____	_____	_____
_____		_____	_____	_____	_____	_____	_____
_____		_____	_____	_____	_____	_____	_____

B. Peak Work Periods

1. First, or Primary, Work Period

Major Occupations	Household Head		Spouse of HH Head		Other Adult Male		Other Adult Female	
	From	To	From	To	From	To	From	To
1. Agriculture	_____	_____	_____	_____	_____	_____	_____	_____
2. Agricultural Wage Labor	_____	_____	_____	_____	_____	_____	_____	_____
3. Industrial Wage Labor	_____	_____	_____	_____	_____	_____	_____	_____
4. Trade	_____	_____	_____	_____	_____	_____	_____	_____
5. Handicrafts	_____	_____	_____	_____	_____	_____	_____	_____
6. Services	_____	_____	_____	_____	_____	_____	_____	_____
7. Professional	_____	_____	_____	_____	_____	_____	_____	_____
8. Seasonal Migrant Labor (Outside Community)	_____	_____	_____	_____	_____	_____	_____	_____
9. Student	_____	_____	_____	_____	_____	_____	_____	_____
10. Unemployed	_____	_____	_____	_____	_____	_____	_____	_____
11. Other (Name)	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

List first and last month of peak labor periods for each occupation, for each person listed.

- | | | | |
|----------------|---------------|---------------|---------------|
| 01 = January | 02 = February | 03 = March | 04 = April |
| 05 = May | 06 = June | 07 = July | 08 = August |
| 09 = September | 10 = October | 11 = November | 12 = December |

If an activity lasts from May to October, list as 05-10.
 If an activity lasts from October to May, list as 10-05.
 If an activity is throughout year, list as 01-12.

2. Second Work Period (If an activity has more than one peak period, list second peak on this form)

Major Occupations	Household Head		Spouse of HH Head		Other Adult Male		Other Adult Female	
	From	To	From	To	From	To	From	To
1. Agriculture	___	___	___	___	___	___	___	___
2. Agricultural Wage Labor	___	___	___	___	___	___	___	___
3. Industrial Wage Labor	___	___	___	___	___	___	___	___
4. Trade	___	___	___	___	___	___	___	___
5. Handicrafts	___	___	___	___	___	___	___	___
6. Services	___	___	___	___	___	___	___	___
7. Professional	___	___	___	___	___	___	___	___
8. Seasonal Migrant Labor (Outside Community)	___	___	___	___	___	___	___	___
9. Student	___	___	___	___	___	___	___	___
10. Unemployed	___	___	___	___	___	___	___	___
11. Other (Name)	___	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___	___
_____	___	___	___	___	___	___	___	___

List first and last month of peak labor periods for each occupation, for each person listed.

- | | | | |
|----------------|---------------|---------------|---------------|
| 01 = January | 02 = February | 03 = March | 04 = April |
| 05 = May | 06 = June | 07 = July | 08 = August |
| 09 = September | 10 = October | 11 = November | 12 = December |

If an activity lasts from May to October, list as 05-10.
 If an activity lasts from October to May, list as 10-05.
 If an activity is throughout year, list as 01-12.

IV. Livestock

	Number	Types of Feed				Methods of Feeding			
		1	2	3	4	1	2	3	4
1. Cattle	_____	_____	_____	_____	_____	_____	_____	_____	_____
2. Water Buffalo	_____	_____	_____	_____	_____	_____	_____	_____	_____
3. Goats	_____	_____	_____	_____	_____	_____	_____	_____	_____
4. Sheep	_____	_____	_____	_____	_____	_____	_____	_____	_____
5. Pigs	_____	_____	_____	_____	_____	_____	_____	_____	_____
6. Chicken	_____	_____	_____	_____	_____	_____	_____	_____	_____
7. Other	_____	_____	_____	_____	_____	_____	_____	_____	_____
(Other can include horses, mules, camels, elephants, or other live-stock that might feed on tree products.)		1 = leaves, flowers, other tree products	2 = grass, other range products	3 = crop and grain residues	4 = purchased feed	1 = stall feeding/ cut & carry, from own source	2 = stall feeding/ cut & carry, from other source	3 = tethered, controlled	4 = roam untethered

Rank each type of feed and method of feeding by relative importance:

- 1 = most important
- 2 = regularly used
- 3 = occasionally used
- 4 = rarely used
- 0 = never used

EXAMPLE: If crop and grain residues (rice husks) are the most important source of feed for pigs, then enter "1" in column 3 for row "Pigs." If purchased feed is also regularly used, enter "2" in column 4 for row "Pigs."

Category C: Government Forestry Development Intervention

I. Perceptions of Forestry Laws and Regulations

Members of the households should be asked first if they know of various laws or regulations that allow, encourage or restrict forest- and land-use practices. These are the same categories of laws and regulations described at the National Level in "Category C: Government Forestry Development Intervention."

The household members will then be asked if these laws are enforced and whether enforcement is effective.

EXAMPLE: An anti-logging law may be enforced with the occasional arrest of an illegal logger. However, the chance of being caught may be so remote that enforcement does not effectively prevent villagers from logging illegally.

Those being interviewed should be asked both about specific laws that affect forest and land use, and laws/regulations in general that allow, encourage, or restrict various practices.

EXAMPLE: Household members may be asked first if any law restricts use of commercial trees like teak. They might then be asked about specific laws about production and use of teak.

Researchers in the first regional study agreed to ask this information of only 25 households, the same ones that were asked for detailed information about tree and forest-use practices.

II. External Support Services

A. Extension

Record whether household members use forestry, agricultural, horticultural, or livestock extension services. Record who provides those services: government, NGOs or others.

B. Financial Support for All Agricultural Activities

Record whether the household members use credit services, crop subsidies, or other financial support services (cash grants or food aid) for their farm and other household activities. Record by source of the financial support, whether government, commercial bank, cooperative, or from informal sources (money lenders, local merchants, landlords, etc.).

Provide the approximate amount of financial support by type of support and source. Give the amount in local currency.

EXAMPLE: If a household borrows money from a government source, cooperative, and informal sources, list approximate amounts of money borrowed from each source. If the respondent is reluctant to give this information, do not pursue the matter.

C. Financial Support for Forestry or Tree Programs

Record whether the household members use credit services, crop subsidies, or other financial support services (cash grants or food aid) for forestry or tree production activities only. Record by source of the financial support, whether government, commercial bank, cooperative, or informal sources (money lenders, local merchants, landlords, etc.).

Provide the approximate amount of financial support by type of support and source. Give the amount in local currency.

EXAMPLE: If a household borrows money to plant trees from a commercial bank and a cooperative, list the approximate amounts of money borrowed from each source. As with financial support for all agricultural activities, do not pursue questioning on actual amounts of money borrowed if the respondent is reluctant to give this information.

D. Physical Support, Nursery, Seedling Source

Record whether the household has used the forestry and agricultural development support services listed. This would include using these sources for information, such as a farmer who visits a demonstration farm to learn about the crop patterns.

Record whether or not the household has obtained tree seeds or seedlings from each source over the past five years.

E. Special Forestry Project or Other Development Project with Tree Component

If the household participated in a forestry project, list the year it began participating and the year it ended. If the project has not yet ended, leave the record blank.

Record the general impact of the forestry project on the household, as perceived by the respondent. The interviewer should discuss with the respondent how he/she or other household members participated in the project, what they learned, gained, what they felt was good or bad about the project, etc.

Do the same for other development projects with a tree component in which the household may have participated.

Data Format

CATEGORY C: GOVERNMENT FORESTRY DEVELOPMENT INTERVENTION
(HOUSEHOLD LEVEL)

COUNTRY: _____

DISTRICT: _____ DISTRICT CODE: ____

VILLAGE: _____ VILLAGE CODE: ____

HOUSEHOLD: _____ HOUSEHOLD CODE: ____

I. Perceptions of Laws/Regulations

If member of household knows of the following types of laws,
determine if he/she believes the laws are enforced, and if
so, whether the enforcement is effective or not.

	Enforced	Effective	
1. Allow private ownership of trees/forest	_____	_____	
2. Allow common property/community control of forest resources	_____	_____	
3. Encourage homestead forests/homegardens	_____	_____	
4. Encourage farm forests	_____	_____	0 = No
5. Encourage community forests	_____	_____	1 = Yes
6. Restrict access to forests	_____	_____	
7. Restrict use of trees for specific uses	_____	_____	
8. Restrict use of specific trees	_____	_____	
9. Restrict settlement in or near forest areas	_____	_____	

II. External Support Services

A. Extension Service		Govt	NGO	Other					
1. Forestry		_____	_____	_____					
2. Agriculture: Crops		_____	_____	_____	0 = Household does not use services				
3. Horticulture		_____	_____	_____	1 = Household uses services				
4. Livestock		_____	_____	_____					
B. Financial Support (for all activities)		Govt	Comm Bank	Coop	Infor- mal	<u>Amount of Support</u>			
						Govt	Bank	Coop	Informal
1. Credit		_____	_____	_____	_____	_____	_____	_____	_____
2. Subsidy									
- inputs		_____	_____	_____	_____	_____	_____	_____	_____
- prices		_____	_____	_____	_____	_____	_____	_____	_____
3. Other									
- cash grants		_____	_____	_____	_____	_____	_____	_____	_____
- food aid		_____	_____	_____	_____	_____	_____	_____	_____
		0 = Do not use service 1 = Use service				Provide approximate amount in local currency			
C. Financial Support (for forest or tree Programs)		Govt	Comm Bank	Coop	Infor- mal	<u>Amount of Support</u>			
						Govt	Bank	Coop	Informal
1. Credit		_____	_____	_____	_____	_____	_____	_____	_____
2. Subsidy									
- inputs		_____	_____	_____	_____	_____	_____	_____	_____
- prices		_____	_____	_____	_____	_____	_____	_____	_____
3. Other									
- cash grants		_____	_____	_____	_____	_____	_____	_____	_____
- food aid		_____	_____	_____	_____	_____	_____	_____	_____
		0 = Do not use service 1 = Use service				Provide approximate amount in local currency			

D. Physical Support, Nursery, Seedling Source

	Ever Used	Seedling/Seed Source
1. Forestry Station	___	___
2. Nursery		
- Gov't	___	___
- NGO	___	___
- Private	___	___
3. Demonstration Farm		
- Gov't	___	___
- NGO	___	___
	0 = No	
	1 = Yes	

E. Household Participation in Special Forestry Project or Other Development Project with Tree Component

	Date Started	Date Ended	Impact
1. Forestry Project	19 ___	19 ___	___
2. Other Project w/ Tree Component	19 ___	19 ___	___
	year participated in project (last 2 digits)		1 = positive 2 = neutral 3 = negative

Category D: Land Use, Tenure, and Property Issues

I. Land Use, Area and Tenure

All data on land area should be as accurate as possible. This does not mean, however, that it must be extremely precise. In at least a few cases, information on land area and use should be verified through observation -- visiting the household's fields.

Record the total farm size of the household, in hectares, and the total number of plots farmed by the household. A plot should be land with distinct boundaries (not simply banded paddy fields), that the farm household members consider as a separate, distinct plot. It can be adjacent to other plots farmed by the household.

A. Owned

1. Used by Household

This is land legally owned and used by the household. Ask land size and use by plots. Convert size from local land measurements and record as hectares. Up to six plots owned and used by the household can be recorded. If the household owns and uses more than six plots, record the five most important plots (as judged by the farmer) separately, then combine the rest of the plots and record them together in the sixth and last column.

Record the primary and secondary land uses for each plot. The following categories of land use are given:

- 1 = annual crops
- 2 = tree crops
- 3 = other perennial crops
- 4 = agroforestry systems
- 5 = fallow
- 6 = pasture
- 7 = fishponds
- 8 = homestead/homegarden
- 9 = other

2. Rented Out

This is land legally owned by the household and rented out for use by a person or organization outside the household. This includes land given for use to another person with no rental payment (free use).

Record the form of rental payment for each plot. The following categories of rental arrangements are given:

1. *Cash rent, fixed rate:* a fixed cash payment for use of the land.

2. *Cash rent, share of profits*: cash payment of a portion of the sale of the crop.
3. *Rent in kind, fixed*: payment of a fixed amount of the crop.
4. *Rent in kind, share of crop*: payment of a portion of the crop produced on the land.
9. *Other*: any other type of payment or arrangement not covered under the previous categories, including providing the land to another person with no payment (free use).

3. Mortgaged Out

This is land legally owned by the household and mortgaged out. The form of mortgage should be recorded according to these categories:

- a. Land mortgaged on collateral and still used by the household. This land should also be recorded under number 1 above, "used by household," because it remains part of the household's productive farm area.
- b. Use of land given to mortgagee. This is when the right to use the land is also given to the person or firm who has given the loan and received the land as mortgage.
- c. Other. Any other type of mortgage arrangement not covered by the two previous categories.

B. Rented or Mortgaged In

1. Rented In

This includes all land rented in for use by the household, for which some payment is provided to the owner. Land used by the household for free is to be recorded under Free Use of Other Individual's Land.

Record area and the primary and secondary land uses, by plot, by the same method described under land owned and used by the household.

Record rental arrangement, by the same categories as described under land rented out, except for land used for free, which should be listed in later sections.

2. Mortgaged In

This includes all land used by the household, which is kept in mortgage by household member(s) in return for loans provided by those household member(s).

Record area and the primary and secondary land uses, by plot, by the same method described under land owned and used by the household.

Record type of mortgage arrangement for each plot.

C. Use of State Property/Forest Lands

This includes all land legally owned by the state and used by the household.

Record area and the primary and secondary land uses, by plot, by the same method described under land owned and used by the household.

Record type of land and whether land use is legal or illegal, according to the following general categories:

1. State forest lands, under legal use: land declared to be government forest, where the household uses the land under some legal arrangement with the government (usufruct rights to the land, concession, rental or other arrangements)

2. State forest lands, illegally used: land declared to be government forest, where the household uses the land illegally, without permission from the government.

3. Other state land, under legal use: government land other than forest land, where the household uses the land under some legal arrangement with the government.

4. Other state land, illegally used: government land other than forest land, where the household uses the land illegally, without permission from the government.

9. Other: any arrangement not covered by the above categories.

EXAMPLE: A squatter in forest lands would be "2, state forest lands, illegal", while a household with leasehold of state forest lands would be "1, state forest lands, legal."

D. Free Use of Other Individual's Lands

This includes all land legally owned by another individual and used for free (no rental payment) by the household.

Record area and primary and secondary land uses, by plot, by the same method described under land owned and used by the household.

Record whether the landowner (person giving the land for free use) is a relative of the user or is unrelated to the household. People are considered relatives if related by blood or by marriage.

II. Tree Tenure

If and only if community-level data show that tree tenure exists apart from land tenure, record the number of trees owned and rented by the household on (1) common property and (2) privately owned lands.

This should include trees and other woody perennials—bamboo, coconut, palms—that are considered "trees" by the respondents.

Describe briefly the type of tree-tenure system (if separate from land tenure) that the family uses. List briefly the trees and other woody perennials included in the tree-tenure system.

III. Access to Common Property

Record the type of common property systems used by the household, and the type of access the household has to each form. The types of common property are:

Commons. Lands under communal ownership or control by a group of people. The group can be the study community, a subgroup in the community or a larger group that includes the study community.

Fallows. Agricultural land left unplanted. The land can be left unplanted for all or part of a year. Rice fields not cultivated during the dry season are considered fallows.

Barren Lands. Non-forest and non-agricultural lands, covered with brush or grass.

Village Forests. Forests under formal, legal village ownership or control.

State Forests. Public forests, owned by or under legal control of the national, state or provincial government.

List household access to and use of each form of common property as follows:

0 = this form of common property does not exist in the community.

1 = this form of common property exists, and the household has unrestricted access to its use.

2 = this form of common property exists, and the household has access to its use. Household access and use, however, are controlled or regulated by the community.

3 = this form of common property exists, and the household has access to its use. Access and use, however, are limited by season. For example, grazing in paddy fields is often a common resource, but allowed only when the fields are fallow.

9 = this form of common property exists in the community, but the household does not have access to it.

Data Format

CATEGORY D: LAND USE, TENURE AND PROPERTY ISSUES

(HOUSEHOLD LEVEL)

COUNTRY: _____

DISTRICT: _____ **DISTRICT CODE:** ____

VILLAGE: _____ **VILLAGE CODE:** _____

HOUSEHOLD: _____ **HOUSEHOLD CODE:** _____

I. Land Use, Area and Tenure

Total Area Farmed by Household (hectares) _____
(can list up to three decimal places)

Total Number of Plots ____

A. Owned

	Plots					
1. Used by Household	1	2	3	4	5	6
Primary Land Use	_____	_____	_____	_____	_____	_____
Secondary Land Use	_____	_____	_____	_____	_____	_____

List number of hectares for each plot, up to 6 separate plots. If more than six plots, list five separate plots and group the remainder under plot 6. List hectareage up to two digits and one decimal, e.g., 29.4.

List primary and secondary land uses for each plot as follows:

- | | |
|---------------------------|--------------------------|
| 1 = annual crops | 2 = tree crops |
| 3 = other perennial crops | 4 = agroforestry systems |
| 5 = fallow | 6 = pasture |
| 7 = fishponds | 8 = homestead/homegarden |
| 9 = other | |

2. Rented Out

Plot

1 2 3 4 5

Type of Rental Arrangement _____

List number of hectares for each plot, up to five separate plots. If there are more than five plots, list four separate plots and group the remainder under plot 5. List hectarage up to two digits and one decimal, e.g., 29.4.

List rental arrangement for each plot as follows:

- | | |
|---------------------------|---------------------------------|
| 1 = cash rent, fixed rate | 2 = cash rent, share of profits |
| 3 = rent in kind, fixed | 4 = rent in kind, share of crop |
| 9 = other | 0 = not known |

3. Mortgaged Out

Plots

1 2 3 4 5

Type of Mortgage _____

List number of hectares, as for rented-out area above.

List type of mortgage arrangement as follows:

- 1 = collateral, still used by owner
- 2 = use of land given to mortgagee
- 9 = other
- 0 = not known

If mortgage arrangement is "1 = collateral, still used by owner," the land should also be listed under section "A. Used by Owner" above, as land owned and used by the household.

B. Rented or Mortgaged In

1. Rented In

Plots

	1	2	3	4	5
	_____	_____	_____	_____	_____
Primary Land Use	___	___	___	___	___
Secondary Land Use	___	___	___	___	___
Rental Arrangement	___	___	___	___	___

List number of hectares for each plot, up to five separate plots. If there are more than five plots, list four separate plots and group the remainder under plot 5. List hectareage up to two digits and one decimal, e.g., 29.4.

List primary and secondary land uses for each plot as follows:

- | | |
|---------------------------|--------------------------|
| 1 = annual crops | 2 = tree crops |
| 3 = other perennial crops | 4 = agroforestry systems |
| 5 = fallow | 6 = pasture |
| 7 = fishponds | 8 = homestead/homegarden |
| 9 = other | |

List rental arrangement for each plot as follows:

- | | |
|---------------------------|---------------------------------|
| 1 = cash rent, fixed rate | 2 = cash rent, share of profits |
| 3 = rent in kind, fixed | 4 = rent in kind, share of crop |
| 9 = other | 0 = not known |

2. Mortgaged In

Plots

	1	2	3	4	5
	_____	_____	_____	_____	_____
Primary Land Use	_____	_____	_____	_____	_____
Secondary Land Use	_____	_____	_____	_____	_____
Mortgage Arrangement	_____	_____	_____	_____	_____

List number of hectares for each plot, up to five separate plots. If more than five plots, list four separate plots and group remainder under plot 5. List hectareage up to two digits and one decimal place, e.g., 29.4.

List primary and secondary land uses for each plot as follows:

- | | |
|---------------------------|--------------------------|
| 1 = annual crops | 2 = tree crops |
| 3 = other perennial crops | 4 = agroforestry systems |
| 5 = fallow | 6 = pasture |
| 7 = fishponds | 8 = homestead/homegarden |
| 9 = other | |

List type of mortgage arrangement as follows:

- | | |
|----------------|------------------------------------|
| 1 = collateral | 2 = use of land given to mortgagee |
| 9 = other | 0 = not known |

C. Use of State Property/Forest Lands

Plots

	1	2	3	4	5
Primary Land Use	_____	_____	_____	_____	_____
Secondary Land Use	_____	_____	_____	_____	_____
Type of State Land	_____	_____	_____	_____	_____

List number of hectares for each plot, up to five separate plots. If more than five plots, list four separate plots and group rest under plot 5.

List primary and secondary land uses for each plot as follows:

- | | |
|---------------------------|--------------------------|
| 1 = annual crops | 2 = tree crops |
| 3 = other perennial crops | 4 = agroforestry systems |
| 5 = fallow | 6 = pasture |
| 7 = fishponds | 8 = homestead/homegarden |
| 9 = other | |

List type of state land being used:

- 1 = state forest lands, under legal use
- 2 = state forest lands, illegally used
- 3 = other state land, under legal use
- 4 = other state land, illegally used
- 9 = other
- 0 = not known

D. Free Use of Other Individual's Lands

	Plots				
	1	2	3	4	5
Primary Land Use	_____	_____	_____	_____	_____
Secondary Land Use	_____	_____	_____	_____	_____
Person Whose Land is Being Used	_____	_____	_____	_____	_____

List number of hectares for each plot, up to five separate plots. If more than five plots, list four separate plots and group remainder under plot 5.

List primary and secondary land uses for each plot as follows:

- | | |
|---------------------------|--------------------------|
| 1 = annual crops | 2 = tree crops |
| 3 = other perennial crops | 4 = agroforestry systems |
| 5 = fallow | 6 = pasture |
| 7 = fishponds | 8 = homestead/homegarden |
| 9 = other | |

List person whose land is being used:

- 1 = family member 2 = other individual's land

II. Tree Tenure

If a tenure system for trees or other woody perennials exists in which trees are owned or rented separately from land, record the number of trees or other woody perennials owned or rented on land other than land owned and rented by the household:

A. Trees	Owned	Rented
1. on common property	___	___
2. on private property	___	___
B. Other Woody Perennials		
1. on common property	___	___
2. on private property	___	___

Describe briefly the system of tree tenure, and the trees and other woody perennials included in the system.

III. Access to Common Property

	Access	
1. Commons	___	
2. Fallows	___	0 = Common Property System Not Used in Village
3. Barren Lands	___	1 = Unrestricted Use
		2 = Controlled, Regulated Use
		3 = Seasonal Use
		9 = No Access
4. Village Forest	___	
5. State Forests	___	

Category E: Forest Use Practices

Field Methods

The researchers for the first regional study agreed that the survey of forest-use practices would be conducted by formal and informal interviews, with verification through observation or further discussions. Twenty-five households were to be selected by simple random sample out of the 50 households in the survey, though the researchers agreed they would try to ensure adequate inclusion of small-farm households and landless.

Ideally, data should be collected at the household level at least four times (every three months) during a year. This would provide a full year of data to indicate any strong seasonality in use of tree products.

Because of the limited time available for the first study, data were collected only twice. The first time was after the household survey was completed and the 25 households were identified for detailed observation and interviews on forest-use practices. The second time was near the end of field research. In all study communities, the interviews were conducted during two distinct seasons of the year (cold and hot, or wet and dry). This allows some analysis of seasonality for the various uses of the tree and forest products.

A key element of the study is identifying tree species used by villagers. Forestry researchers (preferably those involved in MPTS network research) should assist with the study at key times to help identify tree species and understand tree utilization and seasonality of tree use. One method of identification, to be conducted early in the study, is for the researcher (with assistance from a forestry researcher) to take photographs of trees in various village contexts (near homes, along trails, scattered in fields, as windbreaks, in common areas), then discuss with groups of villagers what the trees are, why they have been planted or kept where they are, how and when they are used, which trees the villagers prefer for each use, etc.

Method of Data Collection

The household head and spouse (where possible) should be asked periodically about their tree product use over the previous months. Questions on how they meet various needs (fodder, fuel, fruit, construction) should first be asked, followed by questions about wood products marketed during the previous months. The major, secondary, and minor sources for each product should be identified. Timing of the harvesting or collection, identification of those who harvested or collected the products, distance to the source, and species used should also be asked every few months. Respondents should be asked what species they prefer to use for each product, including species not now available in or near their community.

When possible, a two-person team—a social scientist and a forester or forestry researcher—should conduct the interviews. The forester will help with understanding the species, the tree parts used, and reasons for various management practices.

The household members should be interviewed and, whenever possible, observed in their use of wood products. If wood is being used to cook a meal, questions can start about the source of the wood being burned at that time. If timber is stacked by the house, the interview might start with questions about plans to use the timber.

Definitions

For this study, use the following definitions to describe farm and village forest-use practices.

Uses

1. *Fodder*: Leaves and branches used for animal feed. Non-tree products include crop residuals, fodder grasses, purchased feed.
2. *Fuelwood*: Twigs, branches, stems used for fuel, except for charcoal.
3. *Charcoal*: Branches, stems used to make charcoal.
4. *Fruit/Food Tree Crops*: Includes fruit, nuts, and other food obtained from trees.
5. *Timber/Construction Materials*: Construction materials can include timber, poles, thatching. Timber includes all logs or lumber produced for local construction or marketed for construction, furniture making, etc. Record only the actual use during the three or four months prior to the interview. Occasional, infrequent use of timber or construction materials should be recorded in another form (see 9 below).
6. *Industrial*: Tree products used primarily for industrial purposes (other than those used directly for timber/construction materials), such as for pulp, wood chips, plywood (the wood must first be processed into plywood before the plywood can be used for construction). List the type of industrial use. Use more than one sheet if more than one industrial purpose.
7. *Handicrafts*: Tree products used primarily for village handicrafts, such as wood carving, furniture making, household utensils, on-farm tools, etc.
8. *Other Regular Uses*: List other important regular use of trees (for example, beekeeping, lac production). More than one use can be recorded.

9. *House Construction:* Some uses of wood or other tree products may be important, but occur so infrequently that there will be no record or observation of this use during the time field research is conducted. This is particularly true for house and other building construction. A separate form should be used to record wood and other tree products used to build the respondent's house. The year when the products were used should be recorded in place of months of use.
10. *Other Occasional Use:* List other important occasional uses of trees. Record years when products were used in place of months of use. More than one use can be recorded.

Sources of Tree Products

1. *Government Forest:* A public forest, owned by or under legal control of the national, state or provincial government. This can be natural forest or government plantation.
2. *Private Forest:* A forest privately owned and controlled by an individual, group of people, company, or other legal entity. This can be a natural forest or a private plantation.
3. *Common Forest:* Forest under communal ownership or controlled by a group of people. The group may be the village community, a subgroup, or a larger group including the village. This can be natural forest or plantation.
4. *Other Commons:* Trees on any other village or commonly owned land. Common grazing areas, trails, temple grounds, streambanks would be considered common areas.
5. *Homegarden:* Trees grown in the house compound.
6. *Farm, Only Tree Crops:* Farm plots where only trees are grown. Can include monoculture or mixed stands of trees.
7. *Farm, Mixed Agroforestry:* Trees grown on farm in combination with non-tree crops under systematic conditions. Can be in border rows, alley cropping, windbreaks, etc.
8. *Farm, Scattered Trees:* Trees found scattered in a field. Can be trees isolated on bunds, left standing in a field, etc.
9. *Non-Tree Products, On Farm:* Non-tree products used for the same purpose and provided from on-farm resources.
10. *Non-Tree Products, Off-Farm:* Non-tree products used for the same purpose and gathered or obtained from off-farm sources.

11. *Purchased Tree Products:* Tree products purchased for this purpose.
12. *Purchased Non-Tree Products:* Non-tree products purchased for the same purpose.

Categories and Methods of Recording Data

Rank: 1. *Primary Source.* The major source for this product during time studied.

2. *Secondary Source.* Product obtained from this source (but not as much as from primary source) during same time studied.

3. *Minor Source.* Product obtained occasionally, and in small amounts from this source during the same time studied.

Many village households obtain tree products from a variety of sources. The relative importance of sources for each product will be recorded at regular intervals during the year. This will also indicate the seasonality of use, by source. Importance of tree products produced or gathered by the household are compared with non-tree products and purchased tree products to indicate the relative importance of trees on farm or elsewhere in the village to the household economy.

At least one primary source should be listed for each tree product used during a particular period. If two or more sources are equally important, they can all be classified as primary sources. One or more sources can also be listed as secondary or minor sources.

Nature of Consumption:

1. *Household Consumption.* Product used entirely by the household members for their own use.

2. *Combined.* Product used by the household members for their own use and also collected or produced for sale or trade.

3. *Sale or Trade.* Product entirely sold or traded by the household members. None of the product is used by the household.

Farmers' strategies toward producing and harvesting trees often vary, depending on whether tree products are for household consumption or sale. An indication whether the products are solely for household consumption, solely for sale or exchange, or a combination of the two will indicate how farmer strategies might differ.

The nature of consumption should be recorded for each product and for each source where the wood is obtained. It is possible that wood from different sources for the same product might be used for different types of consumption.

EXAMPLE: A farmer might collect fuelwood from both a government forest and from the farmer's agroforestry system on his farm. He sells the wood collected from the government forest, but uses the wood from his farm both for his own use and for sale.

Seasonality: Record the period (in months) when the product is collected from its primary, secondary, and/or minor sources.

Data should be gathered on relative importance of each source at regular intervals over the year. Use of tree products and source of the products are expected to vary during the year.

EXAMPLE: If the household is being interviewed about the use of wood for handicrafts from April to July, and they obtained wood from their homegarden from May to July, "05" for May should be put in the column "From" in the box in row "E. Homegarden," and "07" for July should be put in the column "To" in the same row.

Sex/Age Cohort of Collector: Record whether primary collector/harvester/gatherer or collectors/etc. of this product are male or female, adult or children. Children are defined as those below 15 years old. Adults are defined as all 15 years or more of age.

At least two age/sex cohorts can be listed. Any difference by season in sex/age cohort of those collecting or harvesting tree products should be noted.

EXAMPLE: If the major group collecting wood for charcoal from common forests during the past three months is adult males, a "1" should be placed in the first box under "Age/Sex" in row "C. Common Forest". If adult females also collect wood for charcoal from the same source during the same period, a "2" should be placed in the second box. If only one group collected wood from a source, then only that group should be recorded in the first box.

Distance: Record the distance from the household to the source of the product. This should be measured (as accurately as possible) in 1/10 kilometers.

Species Used: The source of the species should be listed in the first column, "1" for "1. Government Forest," "2" for "2. Private Forest," and so on. Record the name of the species used from this source for the product during the period observed. In reporting species, **the scientific name for the species must be used.** Common names of trees are of no use for comparative analysis, and they are often of little use to foresters even in the same country.

Local names should, of course, be used when discussing trees with informants. It is important to record the local names along with the scientific names. Because the same common name is sometimes used for different trees in different communities, researchers should not assume that the common name necessarily refers to a particular species. The trees should be identified in the field by a forestry researcher so the correct species and its scientific name can be used when recording data and in reports. If it is not possible for a forestry researcher to join the study or identify the species in the field, the researcher must take photographs of the species for a forester to identify later.

Tree Parts Used: List the parts of the species identified from this source that are used for the product. List no more than three tree parts for each species from each source. Additional parts, if used, can be mentioned in the descriptive report.

The following is a list of the tree parts:

- 1 = leaves
- 2 = buds
- 3 = flowers
- 4 = fruit
- 5 = green branches
- 6 = woody branches
- 7 = bark
- 8 = wood
- 9 = roots

Parts used should be recorded in order of their importance. If the major part of a tree used for fodder is its leaves, "1" for leaves should be recorded in the first box. If green branches are the second most important part used for fodder, "5" for green branches should be recorded in the second box. If a third part, flowers, is also used, a "3" for flowers should be recorded in the third and last box.

Preferred Species: Where applicable, record the names of species preferred by the villager, in order of preference, from the most important potential sources. Record preferred parts of the species, using the same code described above.

Data Format

CATEGORY E: FOREST AND TREE USE PRACTICES (HOUSEHOLD LEVEL)

COUNTRY: _____

DISTRICT: _____ DISTRICT CODE: ___ ___

VILLAGE: _____ VILLAGE CODE: ___ ___ ___

HOUSEHOLD: _____ HOUSEHOLD CODE: ___ ___ ___

For each use of forest or tree products, complete a set of the following two forms. Enter the appropriate code for each forest- or tree-use practice at the top of the forms:

- 1 = Fodder
- 2 = Fuelwood
- 3 = Charcoal
- 4 = Fruit/Food Tree Crops
- 5 = Timber/Construction Materials
- 6 = Industrial
- 7 = Handicrafts
- 8 = Other Regular Use
- 9 = House Construction
- 10 = Other Occasional Use

FOR 6 (INDUSTRIAL), 7 (HANDICRAFTS), 8 (OTHER REGULAR USE), AND 10 (OTHER OCCASIONAL USE), WRITE TYPE OF USE IN SPACE PROVIDED

FOREST/TREE USE PRACTICE: _____

TYPE OF USE (Practices 6, 7, 8 and 10 only) _____

	Rank	Nature of Consumption	Seasonality of Use		Age/Sex of Collector	Distance from Household (km)
			From	To		
1. Government Forest	_____	_____	_____	_____	_____	_____
2. Private Forest	_____	_____	_____	_____	_____	_____
3. Common Forest	_____	_____	_____	_____	_____	_____
4. Other Commons, Other Common Areas	_____	_____	_____	_____	_____	_____
5. Homestead/Homegarden	_____	_____	_____	_____	_____	_____
6. Farm, Plot with Only Trees	_____	_____	_____	_____	_____	_____
7. Farm, Agroforestry System	_____	_____	_____	_____	_____	_____
8. Farm, Scattered Trees	_____	_____	_____	_____	_____	_____
9. Non-Tree Products, On farm	_____	_____	_____	_____	_____	_____
10. Non-Tree Products, Off farm	_____	_____	_____	_____	_____	_____
11. Purchased Tree Products	_____	_____	_____	_____	_____	_____
12. Purchased Non-Tree Products	_____	_____	_____	_____	_____	_____

1=primary source

1=HH use only

list months

01 = Jan

1=Adult

02 = Feb

Male

03 = March

04 = April

2=Adult

05 = May

Female

06 = June

07 = July

3=Male

08 = August

Child

09 = Sept

10 = Oct

4=Female

11 = Nov

Child

12 = Dec

2=secondary source

2=HH use & sale

3=minor source

3=sale & trade only

FOREST/TREE USE PRACTICE: _____

TYPE OF USE (Practices 6, 7, 8 and 10 only) _____

Actual Source	Species Actually Used	Actual Tree Parts Used
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Sources: Give Scientific Name of Species

- 1=Government Forest
- 2=Private Forest
- 3=Common Forest
- 4=Other Commons
- 5=Homegarden
- 6=Farm, Plot w/ only trees
- 7=Farm, Agroforestry System
- 8=Farm, Scattered Trees
- 9=Non-tree Products, on farm
- 10=Non-tree Products, off farm
- 11=Purchased Tree Products
- 12=Purchased Non-Tree Products

Tree Parts:

- 1=leaves
- 2=buds
- 3=flowers
- 4=fruit
- 5=green branches
- 6=woody branches
- 7=bark
- 8=wood
- 9=roots

PREFERRED SPECIES FOR THIS USE

Preferred Source	Preferred Species	Tree Parts To Be Used
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Use same codes as above

Part Three:
Using the Farm and Village Forestry Database

The Farm and Village Forestry Database was developed as part of the Information and Decision Support System (IADSS) for research on multipurpose trees. The display format and options are similar to those of other IADSS components.

3.1 Equipment Required

IBM-AT computer or fully compatible, with 640 Kb RAM (Random Access Memory)

Hard disk or one 5 1/4 inch, high-density disk drive (1.2 Mb capacity), and one 5 1/4 inch or 3 1/2 inch, double-density drive

3.2 Installation

For a computer with hard disk:

1. Create a new directory, "FVF," on drive C.
2. Place the first 5-and-1/4-inch program diskette in drive A.
3. Copy all files from each of the floppy diskettes to C:\FVF.

For a computer without hard disk: You will need to transfer the following operating files to a 5 1/4 inch, high-density diskette:

```
FVFMAIN.EXE
FVFMAIN.OV1
FVFMAIN.OV2
FVFMAIN.OV3
ERROR .TXT
```

Put your working set of database (*.DBF) and index (*.NDX) files on whatever diskette can be used in your second disk drive. One double-density, 5-and-1/4-inch diskette can store all the database and index files for two villages, with general data from 50 households and detailed information on forest-use practices from 25 households.

Check to see you have the appropriate Configuration System file (files=20, buffers=20 is adequate to work the program).

3.3 Starting the Program

1. For hard disk, type FVFMAIN <ENTER>

*For two floppy disk drives, place the diskette with FVFMAIN.EXE in Drive A. Place the diskette with *.DBF and *.NDX files in Drive B. Shift to Drive B (so that B: prompt is showing). Type A:FVFMAIN <ENTER>*

After the program is called up, the screen should show five categories. The first, "Background Information," should be highlighted.

2. Select a category (e.g., Land Use, Tenure and Property) by using the "up" and "down" arrows, then pressing <ENTER>.
3. Select the level of data you want to input or search by pressing the appropriate letter: "N" for National, "D" for District, "V" for Village, or "H" for Household. Press <Ctrl-W>.

3.4 Codes

Entering District and Village Codes

Before the database can operate properly, the names and codes for all districts and villages for which data will be entered must be recorded in the District File and the Village File.

1. At the bottom of the screen appear the options "Add," "Search," "Modify," "Delete," and "File." Enter the letter "F" to select "File" to add the names and codes of new districts and villages.
2. To add a new district, move the cursor to select "Add/Delete a District." Press <ENTER>.
3. Select "Add a New District." Press <ENTER>.
4. Add District Name (for example, "Muang, Nakhon Ratchasima"), then press <ENTER>.
5. Add a 2-character alphanumeric code for your district, then press <ENTER>.

Note: A district code can only be used for one district, no matter where. You can press <F1> (Help) to see a list of existing districts and district codes in the database. If you enter a name or code already in the database, the program will inform you of the duplication and ask you to enter a new name and code.

FORM A: Background Information (Household)

COUNTRY:		DISTRICT:	
VILLAGE:		<FILE MAINTENANCE>	TH/YEAR:
HOUSEHOLD SIZE:		1. ADD/DELETE A COUNTRY	
		2. ADD/DELETE A DISTRICT	
		<DISTRICT>	
		DISTRICT (26 characters maximum) : MUANG, NAKHON RATCHASIMA	
		DCODE (alphanumeric, 2 chars. max.): NR	
		[Esc] = Exit, [F1] = Help, <Ctrl-W> = Add	
		RELATIVE WEALTH RANK:	
EDUCATION			
1. Household Head.....:			
2. Spouse.....:			
3. Eldest Adult Son.....:			
4. Eldest Adult Daughter..:			
Enter district name and district code above.			
Press [F1] to see existing districts and codes.			

[Esc] = Exit

Page: 1/6

EXAMPLE: You create the alphanumeric district code "NR" for Muang, Nakhon Rachasima. After that, "NR" can only be used for "Muang, Nakhon Ratchasima." It cannot be used for any other district in any country in the database.

6. If you have more than one district to add, enter the name and code for the other districts. After the district code files have been added, press <ESC> to return to the File Management screen.
7. To add a new village, select "Add/Delete A Village." Press <ENTER>.
8. Select "Add a New Village." Press <ENTER>.
9. Add the village name, then press <ENTER>.
10. Add a Village Code. The village code can consist of up to three alphanumeric characters. It is best if your village code uses all three characters spaces, to avoid confusion about the position of the code in data entry and recall. If a village code has only two characters, a blank space must be added at the beginning or the end of the code whenever the village code is entered. The blank space must be in the same place every time the code is entered, otherwise the program will read it as separate codes (for example, _SJ would be read differently from SJ_). As with the district codes, the village code can be used only once. The same village code cannot be used for villages in different countries. You can review all the village codes by pressing <F1> (Help). Press <ENTER> each time you input a new

village name and code. Any duplication in name or code will be reported, and you will be prompted to add a new name and code.

11. After you have entered the village codes, press <ESC> to return to the file management screen.
12. When you have finished entering village and district codes, press <ESC> again to return to the data entry, data search category.

Deleting District and Village Codes

1. To delete district or village codes, go to the File Management Screen as instructed above.
2. To delete a district, move the cursor to select "Add/Delete a District." Press <ENTER>.
3. Select "Delete a District." Press <ENTER>
4. Enter the two-digit district code for the district you want to delete (for example, NR), then press <ENTER>. You can press <F1> (Help) to call up a list of the district codes in the database.
5. The program will show the name and code of the district and ask if you want to delete the district. Press <CNTL-Y> to confirm your choice.
6. If you have more than one district to delete, enter the code for each district to be deleted. After you finish deleting the districts, press <ESC> to return to the File Management screen.
7. To delete a village, move the cursor to select "Add/Delete a Village". Press <ENTER>.
8. Select "Delete a Village." Press <ENTER>
9. Enter the three-digit village code for the village you want to delete (for example, NR1), then press <ENTER>. You can press <F1> to call up a list of the village codes in the database.
10. The program will show the name and code of the village and ask if you want to delete the village. Press <CNTL-Y> to confirm your choice.
11. If you have more than one village to delete, enter the code for each village to be deleted. After you finish deleting the villages, press <ESC> to return to the File Management screen.

12. After the village codes have been deleted, press <ESC> to return to the file management screen.
13. When you finish deleting village and district codes, press <ESC> again to return to the data entry, data search category.

Species Codes

When entering species under Forest-Use Practices, you must use a six-letter code for each species. These species codes must already be in the species file. The Appendix provides a list of species and species codes as they should be entered in the species file. Enter only those species you need in the file -- additional species in the working file cause the program to operate more slowly.

To Add a Species Name and Code in the Forest-Use Practices Category:

1. Enter the letter "F" to select "File" to File Management Screen.
2. Select "Add/Delete a Species." Press <ENTER>.
3. Select "Add a New Species." Press <ENTER>.
4. Add the species name and six-letter code. Any duplication will be reported and you will be prompted to add a new name and code. If you want to see the list of species already in the file, press <F1> (Help). You can move quickly through the file by pressing the first letter of the species you want to search. The program will move to the first entry starting with that letter. You can then move up or down the list with the direction or page prompts.
5. Enter additional species using the same method.
6. To return to the File Management Screen, press <ESC>.
7. To return to Forest-Use Practices Category, press <ESC>.

To Delete a Species Name and Code in the Forest-Use Practices Category:

1. Enter the letter "F" to select "File" to File Management Screen.
2. Select "Add/Delete a Species." Press <ENTER>.
3. Select "Delete a New Species." Press <ENTER>.
4. Enter the species code of the species you want to delete from the file. If you want to see the list of species already in the file, press <F1> (Help). You can

move quickly through the file by pressing the first letter of the species you want to search. The program will move to the first entry starting with that letter. You can then move up or down the list with the direction or page prompts.

5. The program will show the name and codes of the species and ask if you want to delete the species. Press <CNTRL-Y> to confirm your choice.
6. If desired, delete additional species using the same method.
7. To return to the File Management Screen, press <ESC>.
8. To return to Forest-Use Practices Category, press <ESC> again.

If a species is not included in the list in the Appendix, follow these instructions to determine an appropriate species code.

The species code usually consists of the first four letters of the genus plus the first two letters of the species.

EXAMPLE: *Pinus caribaea* would be coded as PINUs CARibaea, or PINUCA.

To maintain unique codes, another letter may have to be substituted for the fourth or sixth letter of the code. Such codes are indicated in the Appendix by an asterisk (*).

If you add a new genus or species, make sure the first four letters of the genus are not already used to indicate another genus.

Please report to the F/FRED Coordinating Unit any new species and species codes you enter.

Household Codes

Unlike country, district, village or species codes, there is no master file of household codes. The same codes can be repeated for different villages, but the same codes cannot be used for the same village.

EXAMPLE: "001" can be the household code for one household in each village in the database, but there cannot be two households coded "001" in the same village record.

The household code is entered whenever household-level data are added or searched. It is a three-character alphanumeric code.

Be sure to use the same code for a household for all the data entered for that household. **Do not use different codes for different categories of data for the same household. Do not use different codes for data collected at different times for the same household.** The database will recognize each different code as a separate household. If that happens, it will not be possible to analyze the data from the households.

EXAMPLE: Data are collected from the same household on three occasions (as with the first regional study). On the first occasion, data are collected for Background Information and Government Forest Development Intervention. On the second occasion, data are collected for Land, Tenure and Property Issues and for Forest-Use Practices. On the third occasion, a second round of data is collected on Forest-Use Practices. If the household is given a code "101" for the data collected the first time, then a code of "201" for the data collected the second time, and another code of "301" for the data collected the third time, the program will read these as three separate households: 101, 201, and 301. As a result, the data under Background Information and Government Forest Development Intervention cannot be analyzed (compared, correlated, etc.) with the data on land, tenure and property issues, or that on forest-use practices. Furthermore, the two sets of data on Forest Use Practices cannot be compared with each other for seasonal variation.

If you select a subsample from the household survey, ensure that the codes are consistent for each household.

EXAMPLE: The original sample consisted of 10 households, and you coded them as 001, 002, 003, 004, 005, 006, 007, 008, 009 and 010. When taking a subsample of 5 households from this group, be sure that the codes for the households in the subsample are consistent with the codes assigned for the same households in the original sample. If the 2nd, 3rd, 5th, 8th and 10th households were selected for the subsample, they should be coded 002, 003, 005, 008 and 010 to match their household codes in the original sample.

The same restriction on codes holds true for the district and village codes: do not use more than one code for one village and do not use more than one code for one district if you want to analyze all the data from that village or from that district.

3.5 Adding Data

1. To add data, enter letter "A" to select "Add." Press <CTRL-W>.
2. Enter the codes in the spaces indicated for the country, district, village, household, and date of data collection, where needed. Note that for national-level data, only the country code is needed. For district-level data, only the country and district codes are needed. For village-level data, only the country, district and village

codes are needed. For household-level data, country, district, village, and household codes are needed, along with the month and year of data collection. Press <ENTER>.

3. After a few moments, the screen displays the name of the country, district, etc., and shows the spaces where the data are to be entered. At the bottom right of the screen, the current number and the total number of screens for this category at this level are shown. For example, 1/7 means the first of seven screens, 3/3 means the third and last of three screens.
4. Enter all data for the screen shown. Then press <PgDn> (Page Down) to move to the next screen. Fill in all the data for all screens at that level for that category.

EXAMPLE: "Background Information, Household Level" has a total of 7 screens for each household. After data are added for the first screen, press <PgDn> to move to the second screen. When that is completed, press <PgDn> to move to the third screen, and so on until all seven screens are completed. If you want to move back to the previous screen, press <PgUp>.

5. After all the data are entered for all the screens at that level in that category, press <CTRL-W> to save the data.
6. If you want to input more than one set of data for that level in that category, repeat steps 1-5 above.

EXAMPLE: If you are adding household-level data, change the household code to that for the next household, then add and save data for that household.

7. If you have finished adding data for that level in that category, press <ESC> to return to the screen to select "[A]dd, [S]earch," etc. To modify, search, or browse data, follow instructions in the respective sections below.
8. To move to another level in the same category, press <ESC> again. Select the new level. To add data, repeat steps 1-5. To modify, search, or browse data, follow steps in the respective sections below.
9. To move to another category, press <ESC> a third time. To select a new category, repeat steps 2 and 3.
10. To exit the program, press <ESC> a fourth time.

3.6 Searching Data

1. To search for previously entered data, press the letter "S" (for [S]earch). Press <CTRL-W>.

2. Add the appropriate national, district, village, and household codes indicated for that level. Press <CTRL-W>.
3. The screens containing that data will be displayed, with the data presented in descriptive form.

EXAMPLE: If "3" was entered for "Education, Household Head", the screen will read "Primary School."

4. Press <PgDn> or <PgUp> to move from one screen to the next at the level in that category.

Note: For the category Forest-Use Practices, if you want to move from one type of use to another for the same household and the same month, press the direction arrows (down arrow to move to the following use, up arrow to move to the previous use).

5. To exit that group of data, press <ESC>.
6. Select another country, district, village, household, or date of data entry, where appropriate. Repeat steps 1-5 above.
7. If you have finished searching data for that level in that category, press <ESC> to return to the screen to select other options. To add, modify, or browse data, follow instructions in the respective sections.
8. To move to another level in the same category, press <ESC> again. Select the new level. To search data, repeat steps 1-5 above. To add, modify, or browse data, follow instructions in the respective sections.
9. To move to another category, press <ESC> a third time. To select a new category, repeat steps 2 and 3.
10. To exit the program, press <ESC> a fourth time.

3.7 Modifying Data

1. To edit or modify previously entered data, first search the data, as described in Section 3.6 above.
2. Press the letter "M" (for "Modify").
3. Move the cursor to the data entry you want to modify. Make the appropriate changes. You can move from one page to another in this mode.

4. When finished, press <CTRL-W> to save the changes. This will return you to the Search mode.

3.8 Deleting Data

1. To delete previously entered data, first search the data, as described in Section 3.5 above.
2. Press the letter "D" (for "Delete").
3. For all categories except Forestry-Use Practices, the records that can be deleted are as follows (note: not every category contains all four levels of data):
 - o National level. All national-level data in the category comprise one record. For Background Information, all three pages of data for a nation together form one record. For Government Forest Development Intervention, the two pages of data for a nation form one record.
 - o District Level. All district level data in the category comprise one record. For Background Information, the three pages of data for each district comprise one record. For Agro-ecological Information, the two pages of data for each district form one record.
 - o Village Level. All village level data in the category comprise one record. For Background Information, the two pages of data for each village make up one record. For Agro-ecological Information, the four pages of data for each village form one record. For Government Forest Development Intervention, the two pages of data for each village form one record.
 - o Household Level. The data for each household in each category comprises one record. For Background Information, the six pages of data for each household form a record. For Government Forestry Development Intervention, the four pages of data for each household comprise a record. For Land Use, Tenure and Property Rights, the seven pages of data for each household make up a record.

After you press "D," you will be asked "Are you sure you want to delete this record?" If you want to delete it, answer "Y" for [Y]es. The program will then delete the record. The next record will appear on the screen, or if there was only one record from the search operation, the screen will ask you to enter new search criteria. If you do not want to delete the record, enter "N" for [N]o. The program will return to Search mode. Once deleted, a record cannot be recalled.

4. For Forest-Use Practices, each line on the screen can be deleted separately. Move the cursor to the data you want to delete. You cannot move from one page to another in this mode.

After highlighting the line to be deleted, press <CTRL-Y>. You will be asked "Are you sure you want to delete this record?" Answer [Y]es or [N]o. Once deleted, the record cannot be recalled. It must be re-entered.

5. When finished with all deletions, press <ESC> to return to Search mode.

Note: If you deleted a record, all the records below it will move up one space on the screen except the final record, which will continue to appear on the screen in its previous place in addition to its new position higher on the screen. To see the corrected listing, you must shift to another record, then return to the altered record.

EXAMPLE: You have three species listed -- *Shorea obtusa* in line 1, *Tamarindus indica* in line 2, and *Shorea siamensis* in line 3. If you delete the first line (*Shorea obtusa*), the data for *Tamarindus indica* will appear in line 1 and the data for *Shorea siamensis* will appear in line 2. The data for *Shorea siamensis* will also appear in its original place in line 3. You must return to the Search mode, move to the next record (household), and then back to the record you changed, to see *Tamarindus indica* on line 1, *Shorea siamensis* on line 2, and nothing on line 3.

If you delete the last line (using the same example, that would be *Shorea siamensis*) the screen will show no change. You must first return to the Search mode, move to the next record (household), and then back to the household record you changed to see that the third line, *Shorea siamensis*, was deleted.

3.9 Browsing Data

1. To browse previously existing data in its database record format, press "B" for "Browse."
2. Options (the various database files) for that category and level will be shown. Move to the desired option using the direction arrows (up and down). Select the option by pressing <ENTER>.
3. The screen will display the database format for that file. Browse by following the instructions at the bottom of the screen.
4. To exit Browse mode, press <ESC> to return to the screen where you may select "[A]dd, [S]earch," etc. To add, search, modify, or delete data, follow instructions in the respective sections.
5. To move to another level in the same category, press <ESC> again. Select the new level. To search data, repeat steps 4-8 in Section 3.5 (Adding Data). To add, search, modify, or delete data, follow instructions in the respective sections.

6. To move to another category, press <ESC> a third time. To select a new category, repeat steps 2 and 3.
7. To exit the program, press <ESC> a fourth time.

3.10 Summary Database

Summary database files can be created for each category that has household data. The program aggregates the household data and reports it in the manner described in Part Four.

1. Before creating the village summaries, be sure village-level data on farm sizes has been entered in Category D: Land Use, Tenure and Property Issues. Much of the summary information is aggregated by farm-size categories, so the program requires the categories to be defined before the summary programs will operate.
2. If you are not yet sure of the range of farm sizes, enter approximations. The farm-size categories can be modified and new summary databases created as analysis progresses.
3. Select the category of information you want summarized. Select Household Level. Search for at least one household from the village for which you want to create a summary database.

Note that the summary database for Category E, Forest-Use Practices, is created along with that for Category D, Land, Tenure and Property Issues. Both are created when in Category D.

4. After the search is completed, the bottom line of the screen will show "<F9> Summary Database." Press <F9> to call up the summary database. If a summary database has not yet been created, the program will inform you of this and request that you press any key. It will then ask if you want to create a summary database. Press "Y" for [Y]es to confirm. The database will be for all households with the same country, district, and village codes, and with data entered in the same month and year -- i.e., from one community and one household survey.
5. The program will then generate a summary database. This may take from several minutes up to more than a half hour, depending on the processing speed of your computer and the category being summarized. The lower part of the screen will show the stages in creating the summary database. The program will prompt you to confirm or provide information at one or two stages during the process. One such prompt encountered when creating the summaries for Land Use, Tenure and Property Issues and Forest-Use Practices asks for the date of the forest-use practices data to be summarized. This enables analysis of data that was collected in months other than the month of the household survey. You can leave the

computer while the program is running, then return at your convenience to answer the prompts.

6. After the calculations are completed, the summary database will appear on the screen. Move from page to page using the keys indicated at the bottom of the screen.
7. If a summary database already exists, it will be recalled when you press <F9>. If you want to recreate the summary database (i.e., if you have new or modified data and want to generate a new summary), press <F9> again. You will be asked if you want to recreate the summary database. Press "Y" to confirm.
8. To exit the summary database, press <ESC>. This will return you to the unaggregated, household-level data.

Part Four:
Village Summaries

Village summaries in the Farm and Village Forestry Database are based on aggregated household data. The summaries provide a clearer picture of the social and economic conditions and the tree- and forest-use practices in each village. Most of the information is self-explanatory. This section is intended as a guide for the less obvious summary information.

If you have questions about the meaning of any codes provided on-screen, press <F1> for Help.

Category A: Background Information

I. Population

Screen 1 shows the aggregate population data.

A. Household size

1. The dependency ratios are calculated as follows:

$$\frac{\text{children}}{\text{adults}} * 100 = \text{child-dependency ratio}$$

$$\frac{\text{children} + \text{elderly}}{\text{adults}} * 100 = \text{dependency ratio}$$

2. The total number of each age/sex cohort (listed below) is shown

Male children	xxx
Female children	xxx
Adult males	xxx
Adult females	xxx
Elderly males	xxx
Elderly females	xxx

B. Ethnic Group

The percentage of each ethnic group in the village is reported for up to three groups, with the rest reported as "Other."

C. Religion

The percentage of each major religious group is reported.

D. Education

The percentage of people at each education level is reported, by the following categories:

	1	2	3	4	5	6	9
1. Household head	xx	xx	xx	xx	xx	xx	xx
2. Spouse	xx	xx	xx	xx	xx	xx	xx
3. Eldest son	xx	xx	xx	xx	xx	xx	xx
4. Eldest daughter	xx	xx	xx	xx	xx	xx	xx

Press <F1> (Help) to "translate" the codes to the appropriate education level.

II. Economic Status

A. Indicators of Wealth

Screen 2. The top line shows the percentage of each "wealth" group, as determined by the indicators of wealth: none, low, medium, or high.

B. Source of Income, Livelihood

Screen 2. The following information covers most of the screen:

1. Percentage of households by proportion of income/livelihood derived from farm work:

No Farm Work	Less than 50% Farm Work	More than 50 % Farm Work
--------------	----------------------------	-----------------------------

2. Percentage of households by proportion of income/livelihood derived from on-farm tree products:

No On-Farm Products	Less than 10% On-Farm Tree Products	10% or More On-Farm Tree Products
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3. Percentage of households by proportion of income/livelihood derived from non-farm work:

No Non- Farm Work	Less than 25% Non-Farm Work	25% or More Non-Farm Work
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4. Percentage of households by proportion of income/livelihood derived from handicrafts:

No Handicrafts	Less than 10% Handicrafts	10% to Less than 25% Handicrafts	25% or More Handicrafts
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5. Percentage of households by proportion of income/livelihood derived from off-farm work:

No Off- Farm Work	Less than 25% Off-Farm Work	25% or More Off-Farm Work
----------------------	--------------------------------	------------------------------

6. Percentage of households by proportion of income/livelihood derived from off-farm, agricultural wage labor (off-farm work):

No Agricultural Wage Labor	Less than 10% Agricultural Wage Labor	10% to Less than 25% Agricultural Wage Labor	25% and More Agricultural Wage Labor
-------------------------------	---	--	--

At the bottom of the screen, the range of cash incomes is given:

Lowest Quartile (range of income of bottom 25% households)	2nd Quartile (range of income of next 25% households)	3rd Quartile (range of income of next 25% households)	Top Quartile (range of income of top 25% households)
xx,xxx,xxx to xx,xxx,xxx	xx,xxx,xxx to xx,xxx,xxx	xx,xxx,xxx to xx,xxx,xxx	xx,xxx,xxx to xx,xxx,xxx

Screen 3. Shows sources of income/livelihood, divided among the four quartiles of levels of cash incomes (shown on the previous screen). The average percentages for sources of income/livelihood are provided for each quartile.

	Bottom Quartile	Second (Quartile	Third Quartile	Top Quartile
1. Farm Work				
a. Household needs				
1) tree products	___%	___%	___%	___%
2) field crops	___%	___%	___%	___%
3) other	___%	___%	___%	___%
b. For sale or trade				
1) tree products	___%	___%	___%	___%
2) field crops	___%	___%	___%	___%
3) other	___%	___%	___%	___%
2. Non-Farm Work				
a. Handicrafts	___%	___%	___%	___%
b. Housework	___%	___%	___%	___%
c. Other	___%	___%	___%	___%
3. Off-Farm Work				
a. Agricultural	___%	___%	___%	___%
b. Industrial	___%	___%	___%	___%
c. Other	___%	___%	___%	___%
4. Other Income Sources				
a. Remittances	___%	___%	___%	___%
b. Other	___%	___%	___%	___%

III. Labor/Employment

A. Major Occupations of Selected Household Members

Screen 4. Shows the percentage of respondents in each group who spend 50% or more of their time on the various major occupations. The total for each group does not have to equal 100% because some may not spend up to 50% of their time on any single occupation.

EXAMPLE:

Major Occupations \ Age/Sex Group of Workers	Household Head	Spouse of HH Head	Other Adult Male	Other Adult Female	Male Child	Female Child
1. Agriculture	33	42				
2. Agricultural Wage Labor	8	26				
3. Industrial Wage Labor	0	3				
4. Trade	15	5				
5. Handicrafts	0	0				
6. Services	8	2				
7. Professional	1	0				
8. Seasonal Migrant Labor Outside Community	0	0				
9. Student	0	0				
10. Unemployed	0	0				
11. Other (Name)	6	2				

B. Secondary Occupations of Selected Household Members

Screen 5. Shows the percentage of respondents in each group who spend between 10 and 50% of their time on each type of occupation. The total for each group does not have to equal 100%. In fact it may total more than 100% because some may spend 10-50% of their

time on more than one occupation. Multiple responses are allowed. The screen structure is the same as for Major Occupations of Selected Household Members.

C. Minor Occupations of Selected Household Members

Screen 6. Looks the same as the table on secondary occupations, except it shows the percentage of respondents in each group who spend between 0 and 10% of their time on a particular occupation. Again, the total for each group does not have to equal 100%. It may also total more than 100% because some may spend 0-10% of their time on more than one occupation.

D. Peak Work Periods

Screen 7. Shows the the modal peak work periods for each occupation, by each type of household member. The work periods are given by months of the year (01=January, 02=February, etc.).

Screen 8. Shows the modal second peak work periods for each occupation by each type of household member.

IV. Livestock

Screen 9. Provides basic data on livestock. The average number of each type of livestock per household, the modal number, and the range (least to highest number/household) are given.

FORM A: Background Information (Household)

SUMMARY

COUNTRY: BANGLADESH		DISTRICT: PABA		
VILLAGE: SAMSADIPUR		HOUSEHOLDS: 50 UPDATE: 05/02/90		
LIVESTOCK				
	Average Number	Mode	Range Minimum	Maximum
Cattle	2	0	0	6
Water Buffalo . . .	0	0	0	2
Goats	3	0	0	16
Sheep	0	0	0	0
Pigs	0	0	0	0
Chickens	7	2	0	25
Other	0	0	0	0
[PgUp] = Page Up, [PgDn] = Page Down				

[Esc] = Exit, [F9] = Recreate Village Summary

Page: 9/17

Screen 10. Presents the average number of each type of livestock for landless households, along with the percentage of landless households using each type of feed and each method of feeding.

Screen 11. Shows the relative rank of importance for each type of livestock feed and each method of feeding used by landless households.

Screen 12. Shows the average number of each type of livestock for small-farm households, along with the percentage of small-farm households using each type of feed and each method of feeding.

Screen 13. Shows the relative rank of importance for each type of livestock feed and each method of feeding used by small-farm households.

Screen 14. Gives the average number of each type of livestock for medium-farm households, along with the percentage of medium-farm households using each type of feed and each method of feeding.

Screen 15. Shows the relative rank of importance for each type of livestock feed and each method of feeding used by medium-farm households.

Screen 16. Gives the average number of each type of livestock for large-farm households, along with the percentage of large-farm households using each type of feed and each method of feeding.

Screen 17. Shows the relative rank of importance for each type of livestock feed and each method of feeding used by large-farm households.

Category C: Government Forest Development Intervention

External Support Services

Screen 1. The top shows the percentage of households using each type of extension service provided by government, NGO, or other organization.

The rest of the screen shows the percentage of households using various financial support services for all agricultural activities.

Screen 2. Provides the average amounts of financial support reported for various services for all agricultural activities.

Screen 3. Presents the range of financial support reported for various services, for all agricultural activities. If no households use a service, the range is reported as 999999 to 0.

Screen 4. Presents the percentage of households using various financial support services for forestry or tree production.

Screen 5. Provides the average amounts of financial support reported for various services for forestry or tree production.

Screen 6. Shows the range of support reported for financial support services for forestry or tree production. If no households use a service the range is reported as 999999 to 0.

Screen 7. The top part shows the percentage of households that have used various technical or physical support services (nurseries, demonstration farms, forest stations). The bottom part of the seventh screen reports the percentage of households that have participated in forestry projects and in other projects with a tree component. These are reported by the perceived impact of the project: No participation, Positive, Neutral, or Negative.

Screens 8 and 9. Show the perception of respondents toward various types of forestry laws and regulations. Screen 8 reports the percentage of respondents who believe the various laws and regulations are being enforced. Screen 9 shows the percentage of respondents who believe the enforcement of each of the laws and regulations is effective.

Category D: Land Use, Tenure, and Property Issues

I. Land Use, Area, and Tenure

Screen 1. The top gives the percentage of households with farms. The average, maximum, and minimum farm sizes, and the average, maximum, and minimum number of plots are reported.

The remainder of the first screen shows the percentage of households in each farm-size category (landless, small, medium and large), and the average holding in each category, by those who:

- 1) fully own their farms
- 2) own most and rent some of their farms
- 3) rent most and own some of their farms
- 4) fully rent their farms

Screen 2. Presents the percentage of households that farm their own land (that is, at least a portion of their farms is their own land). The average area of farmland owned by the household is shown. Finally, the percentage of household without their own land is given. This information is divided by farm-size category.

Screens 3 and 4. Show the percentage of households renting out land and the average area rented out, by each type of rental arrangement. They also show the percentage of households not renting out land. This information is divided by farm-size categories, with

landless and small-farm households presented in the Screen 3 and medium- and large-farm households in Screen 4.

Screens 5 and 6. Show the percentage of households mortgaging out land and the average area mortgaged out, by each type of mortgage arrangement. They also show the percentage of households not mortgaging out land. This information is presented by farm-size categories, with landless and small-farm households shown in Screen 5 and medium- and large-farm households in Screen 6.

Screens 7 and 8. Show the percentage of households renting in land and the average area rented in, by each type of rental arrangement. They also show the percentage of households not renting in land. This information is presented by farm-size categories, with landless and small-farm households shown in Screen 7 and medium- and large-farm households in Screen 8.

Screens 9 and 10. Show the percentage of households mortgaging in land and the average area mortgaged in, by each type of mortgage arrangement. They also show the percentage of households not mortgaging in land. This information is presented by farm-size categories, with landless and small-farm households shown in Screen 9 and medium- and large-farm households in Screen 10.

Screens 11 and 12. Show the percentage of households using state land and the average area of state land being used, by the type of state land and legality of use. They also show the percentage of households not using state land. This information is presented by farm-size categories, with landless and small-farm households presented in Screen 11 and medium- and large-farm households in Screen 12.

Screen 13. Shows the percentage of households using other individuals' land for free and the average area of other individuals' land being used for free, by the relationship of the land user to the land owner. It also shows the percentage of households not using other individuals' land for free. This information is divided by farm-size categories.

Screens 14 and 15. Show the percentage of households under various land tenure arrangements, by the main farm-size categories. Each possible combination of tenure arrangements is listed. The five forms of tenure arrangements are:

- 1 = Owned and Farmed by Household
- 2 = Rented In by Household
- 3 = Mortgaged In by Household
- 4 = State Land Used by Household
- 5 = Other Individual's Land Used by Household

The possible combinations of these tenure arrangements are:

- 1 = Owned Only
 - 2 = Rented In Only
 - 1, 2 = Owned and Rented In
 - 3 = Mortgaged In Only
 - 1, 3 = Owned and Mortgaged In
 - 2, 3 = Rented In and Mortgaged In
 - 1, 2, 3 = Owned and Rented In & Mortgaged In
 - 4 = State Land Only
 - 1, 4 = Owned and State Land
 - 2, 4 = Rented In and State Land
 - 1, 2, 4 = Owned and Rented In and State Land
 - 3, 4 = Mortgaged In and State Land
 - 1, 3, 4 = Owned and Mortgaged In and State Land
 - 2, 3, 4 = Rented In and Mortgaged In and State Land
 - 1, 2, 3, 4 = Owned and Rented In and Mortgaged In and State Land
 - 5 = Other Individual's Land Used for Free, Only
 - 1, 5 = Owned and Other Individual's Land for Free
 - 2, 5 = Rented In and Other Individual's Land Used for Free
 - 1, 2, 5 = Owned and Rented In and Other Individual's Land for Free
 - 3, 5 = Mortgaged In and Other Individual's Land Used for Free
 - 1, 3, 5 = Owned and Mortgaged In and Other Ind's Land Used for Free
 - 2, 3, 5 = Rented In and Mortgaged In and Other Ind. Land Used for Free
 - 1, 2, 3, 5 = Owned and Rented In and Mortgaged In and Other Ind's Land
 - 4, 5 = State Land and Other Individual's Land Used for Free
 - 1, 4, 5 = Owned and State Land and Other Ind's Land Used for Free
 - 2, 4, 5 = Rented In and State Land and Other Ind. Land Used for Free
 - 1, 2, 4, 5 = Owned and Rented In and State Land and Other Ind's Land
 - 3, 4, 5 = Mortgaged In and State Land and Other Ind. Land Used for Free
 - 1, 3, 4, 5 = Owned and Mortgaged In and State Land and Other Ind's Land
 - 2, 3, 4, 5 = Rented In and Mortgaged In and State Land and Other Ind Land
 - 1, 2, 3, 4, 5 = Owned and Rented In and Mort. In and State Land and Other Ind's Land
- NONE = No Farm Land

Screens 16 - 19. Show the land area by primary agricultural land use, divided by the different types of land tenure.

Screen 16. Presents the land area farmed by landless households.

Screen 17. Reports the land area farmed by small-farm households.

Screen 18. Shows the area farmed by medium-farm households.

Screen 19. Reports the area farmed by large-farm households.

Screens 20 - 23. Show the land area by secondary agricultural land use, divided by the different types of land tenure.

Screen 20. Gives the land area farmed by landless households.

Screen 21. Reports the land area farmed by small-farm households.

Screen 22. Shows the area farmed by medium-farm households.

Screen 23. Reports the area farmed by large-farm households.

Screen 24. Shows the aggregate data on tree tenure that is separate from land tenure. The percentage of households that own and rent trees under tree tenure systems separate from land, and the average number of trees they own and rent are reported. The same information is given for other woody perennials. All the data are given by farm-size categories.

Screen 25. Presents aggregate data on access to various types of common property systems. The percentage of households that have unrestricted access, controlled access, and seasonal access to the different common property systems is given, again divided by the main farm-size categories.

Category E: Forest-Use Practices

The Village Summary for Forest-Use Practices calls up a menu of the following nine selections:

- 1 = Village Summary by Forest Use
- 2 = Summary for Landless Households
- 3 = Summary for Small Households
- 4 = Summary for Medium Households
- 5 = Summary for Large Households
- 6 = Species Summary for Landless Households
- 7 = Species Summary for Small Households
- 8 = Species Summary for Medium Households
- 9 = Species Summary for Large Households

Each selection consists of 10 pages, one for each of the forest-use practices categories.

Village Summary by Forest Use

The Village Summary by Forest Use appears in the following format:

FORM E: Forest Use Practices (Household)

SUMMARY

COUNTRY: BANGLADESH		DISTRICT: PABA			
VILLAGE: SAMSADIPUR		HOUSEHOLDS: 25 UPDATE: 05/02/90			
NUMBER OF RECORDS FOR: TREE FODDER		SUMMARY FOR: 04/89			
	Landless	Small	Medium	Large	TOTAL
Government Forest	0	0	0	0	0
Private Forest	0	4	1	0	5
Common Forest.	0	0	0	0	0
Other Commons, Common Areas	0	0	0	0	0
Homestead/Homegarden.	0	16	5	1	22
Farm, Plot with Only Trees	0	0	0	0	0
Farm, Agroforestry System.	0	0	0	0	0
Farm, Scattered Trees	0	3	1	0	4
Non-Tree Products, On Farm	0	18	4	1	23
Non-Tree Products, Off Farm	0	13	3	1	17
Purchased Tree Products.	0	1	1	0	2
Purchased Non-Tree Products	0	2	0	0	2
TOTAL NUMBER OF HOUSEHOLDS	0	19	5	1	25

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Page: 1/10

The number of households that get the product from each source is reported. The total number of households in each farm-size category that use this product is listed in the last line. The number of households using the product does not necessarily equal the number of households reported in all the source rows, since one household can get a product from several sources.

Summaries by Farm-Size Categories

The Summaries by farm-size categories (Summary for Landless Households, Summary for Small Households, Summary for Medium Households and Summary for Large Households) appears in the following format:

FORM E: Forest Use Practices (Household)		SUMMARY				
COUNTRY: BANGLADESH		DISTRICT: PABA				
VILLAGE: SAMSADIPUR		HOUSEHOLDS: 19 UPDATE: 05/02/90				
NUMBER OF RECORDS FOR: TREE FODDER		SUMMARY FOR: 04/89				
BY SMALL HOUSEHOLDS						
		Use Only	Use and Sale	Sale Only	1st Peak	2nd Peak
Government Forest	0	0	0			
Private Forest	3	1	0	11	5	
Common Forest	0	0	0			
Other Commons, Common Areas	0	0	0			
Homestead/Homegarden	15	1	0	11	5	
Farm, Plot with Only Trees . . .	0	0	0			
Farm, Agroforestry System . . .	0	0	0			
Farm, Scattered Trees	3	0	0	11	5	
Non-Tree Products, On Farm . .	14	4	0	11	5	
Non-Tree Products, Off Farm . .	13	0	0	11	5	4 5
Purchased Tree Products	1	0	0	11	5	
Purchased Non-Tree Products . .	2	0	0	11	5	4 5
[PgUp] = Page Up, [PgDn] = Page Down [N]ext Summary, [P]rev. Summary						
[Esc] = Exit			Page: 1/10			

Screens are available for each type of forest-use practice, by each farm-size category.

Species Summaries by Farm-Size Categories

Species Summaries by Farm-size Categories (Landless, Small, Medium, and Large Households) provide information in the following format:

		No. of Households		
(Name of Forest-Use Practice)		By (Farm size) Households		
No. Households Using Species	Major Fodder Tree Species Used	Main Sources (top 3 sources)		
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Screens are available for each type of forest-use practice, by each farm-size category.

Appendix

Species Codes

Code	Genus	Species	Family
ABELES	<i>Abelmoschus</i>	<i>esculentus</i> Moench.	<i>Malvaceae</i>
ABUTIN	<i>Abutilon</i>	<i>indicus</i>	<i>Malvaceae</i>
ACACAL	<i>Acacia</i>	<i>albida</i> = FAIDAL	
ACACAM	<i>Acacia</i>	<i>ampliceps</i> B.R. Maslin	<i>Mimosaceae</i>
ACACAN	<i>Acacia</i>	<i>aneura</i> F. Muell.	<i>Mimosaceae</i>
ACACAP*	<i>Acacia</i>	<i>angustissima</i>	<i>Mimosaceae</i>
ACACAR	<i>Acacia</i>	<i>arabica</i> = ACACNI	
ACACAS*	<i>Acacia</i>	<i>aulacocarpa</i>	<i>Mimosaceae</i>
ACACAU	<i>Acacia</i>	<i>auriculiformis</i> A.Cunn.	<i>Mimosaceae</i>
ACACCA	<i>Acacia</i>	<i>catechu</i> Willd.	<i>Mimosaceae</i>
ACACCE	<i>Acacia</i>	<i>centralis</i>	<i>Mimosaceae</i>
ACACCI	<i>Acacia</i>	<i>cincinnata</i>	<i>Mimosaceae</i>
ACACCO	<i>Acacia</i>	<i>confusa</i> Merr.	<i>Mimosaceae</i>
ACACCR	<i>Acacia</i>	<i>crassicarpa</i>	<i>Mimosaceae</i>
ACACCY	<i>Acacia</i>	<i>cyanophylla</i> Lindl.	<i>Mimosaceae</i>
ACACDA*	<i>Acacia</i>	<i>dealbata</i> Link	<i>Mimosaceae</i>
ACACDD*	<i>Acacia</i>	<i>deanii</i> W.C.McG.	<i>Mimosaceae</i>
ACACDE	<i>Acacia</i>	<i>decurrens</i> Willd.	<i>Mimosaceae</i>
ACACDI	<i>Acacia</i>	<i>difficilis</i> Maiden	<i>Mimosaceae</i>
ACACFE	<i>Acacia</i>	<i>ferruginea</i>	<i>Mimosaceae</i>
ACACFI	<i>Acacia</i>	<i>filicifolia</i> Bth.	<i>Mimosaceae</i>
ACACHO	<i>Acacia</i>	<i>holosericea</i> A.Cunn.	<i>Mimosaceae</i>
ACACLC*	<i>Acacia</i>	<i>leptocarpa</i>	<i>Mimosaceae</i>
ACACLE	<i>Acacia</i>	<i>leucophloea</i> Willd.	<i>Mimosaceae</i>
ACACMA	<i>Acacia</i>	<i>mangium</i> Willd.	<i>Mimosaceae</i>
ACACME	<i>Acacia</i>	<i>mearnsii</i> De Willd.	<i>Mimosaceae</i>
ACACMF*	<i>Acacia</i>	<i>melanophloia</i>	<i>Mimosaceae</i>
ACACML*	<i>Acacia</i>	<i>melanoxylon</i> R.Br.	<i>Mimosaceae</i>
ACACMO	<i>Acacia</i>	<i>modesta</i>	<i>Mimosaceae</i>
ACACNI	<i>Acacia</i>	<i>nilotica</i> Willd.	<i>Mimosaceae</i>
ACACOR	<i>Acacia</i>	<i>oraria</i>	<i>Mimosaceae</i>
ACACPA	<i>Acacia</i>	<i>paramattensis</i> Tind.	<i>Mimosaceae</i>
ACACPE	<i>Acacia</i>	<i>pennatula</i>	<i>Mimosaceae</i>
ACACPL	<i>Acacia</i>	<i>planiformis</i>	<i>Mimosaceae</i>
ACACPM*	<i>Acacia</i>	<i>polyacantha</i> = ACACCA?	
ACACPN*	<i>Acacia</i>	<i>polybotrya</i>	<i>Mimosaceae</i>
ACACPO	<i>Acacia</i>	<i>polystachya</i>	<i>Mimosaceae</i>
ACACRO	<i>Acacia</i>	<i>rothii</i>	<i>Mimosaceae</i>
ACACSA	<i>Acacia</i>	<i>saligna</i> Wendl.	<i>Mimosaceae</i>
ACACSE	<i>Acacia</i>	<i>senegal</i> Willd.	<i>Mimosaceae</i>
ACACSL*	<i>Acacia</i>	<i>seyal</i> Del.	<i>Mimosaceae</i>
ACACST	<i>Acacia</i>	<i>stenophylla</i>	<i>Mimosaceae</i>
ACACSZ*	<i>Acacia</i>	<i>sylvestris</i>	<i>Mimosaceae</i>

Code	Genus	Species	Family
ACACTO	<i>Acacia</i>	<i>tortilis</i> Hayne	Mimosaceae
ACACTU	<i>Acacia</i>	<i>tumida</i>	Mimosaceae
ACACVC*	<i>Acacia</i>	<i>victoriae</i> Bth.	Mimosaceae
ACACVI	<i>Acacia</i>	<i>villosa</i> Willd.	Mimosaceae
ACROFR	<i>Acrocarpus</i>	<i>fraxinifolius</i> W.&A.	Caesalpiniaceae
ACTIDE	<i>Actinidia</i>	<i>deliciosa</i> CFL&ARF	Actinidiaceae
ADANDI	<i>Adansonia</i>	<i>digitata</i> L.	Bombacaceae
ADENPA	<i>Adenanthera</i>	<i>pavonina</i> L.	Mimosaceae
AFROEL	<i>Afromosia</i>	<i>elata</i> = PERIEL	
AFZESP	<i>Afzelia</i>	spp.	Caesalpiniaceae
AGATAL	<i>Agathis</i>	<i>alba</i> Foxw.	Araucariaceae
AGATDA	<i>Agathis</i>	<i>dammara</i>	Araucariaceae
AGAVSI	<i>Agave</i>	<i>sisal</i> Perrine	Agavaceae
AGUICR	<i>Aguilaria</i>	<i>crassna</i>	
AGUIMA	<i>Aguilaria</i>	<i>malaccensis</i> Lamk.	
AILAAL	<i>Ailanthus</i>	<i>altissima</i>	Simaroubaceae
AILAEX	<i>Ailanthus</i>	<i>excelsa</i>	Simaroubaceae
AILAGL	<i>Ailanthus</i>	<i>glandulosa</i>	Simaroubaceae
ALBIAD	<i>Albizia</i>	<i>adinocephala</i>	Mimosaceae
ALBIAM	<i>Albizia</i>	<i>amara</i> Boiv.	Mimosaceae
ALBIFA	<i>Albizia</i>	<i>falcata</i> = PARAF	
ALBIGU	<i>Albizia</i>	<i>guachapele</i>	Mimosaceae
ALBILE	<i>Albizia</i>	<i>lebbek</i> Bth.	Mimosaceae
ALBILK*	<i>Albizia</i>	<i>lebbekioides</i> Bth.	Mimosaceae
ALBILO	<i>Albizia</i>	<i>longipedata</i>	Mimosaceae
ALBILP*	<i>Albizia</i>	<i>lophantha</i> Bth.	Mimosaceae
ALBIOD	<i>Albizia</i>	<i>odoratissima</i> Bth.	Mimosaceae
ALBIPR	<i>Albizia</i>	<i>procera</i> Bth.	Mimosaceae
ALBISA	<i>Albizia</i>	<i>saman</i>	Mimosaceae
ALBIST	<i>Albizia</i>	<i>stipulata</i> Boiv.	Mimosaceae
ALEUFO	<i>Aleurites</i>	<i>fordii</i> Hemsl.	Euphorbiaceae
ALEUMO	<i>Aleurites</i>	<i>moluccana</i> Willd.	Euphorbiaceae
ALLIAS	<i>Allium</i>	<i>ascalonicum</i>	Amaryllidaceae
ALLISA	<i>Allium</i>	<i>sativum</i>	Amaryllidaceae
ALLODE	<i>Allocasuarina</i>	<i>decaisneana</i>	Casuarinaceae
ALNUAC	<i>Alnus</i>	<i>acuminata</i> Kunth	Betulaceae
ALNUGL	<i>Alnus</i>	<i>glutinosa</i>	Betulaceae
ALNUNE	<i>Alnus</i>	<i>nepalensis</i> D.Don.	Betulaceae
ALOCSP	<i>Alocasia</i>	spp.	Araceae
ALTIEX	<i>Altingia</i>	<i>excelsa</i>	
AMARSP	<i>Amaranthus</i>	spp.	Amaranthaceae
AMOMCA	<i>Amomum</i>	<i>cardamomum</i> Willd.	Zingiberaceae
AMORFR	<i>Amorpha</i>	<i>fruticosa</i>	Papilionaceae
ANACOC	<i>Anacardium</i>	<i>occidentale</i> L.	Anacardiaceae
ANANCO	<i>Ananas</i>	<i>comosus</i> Merr.	Bromeliaceae
ANNOCH	<i>Annona</i>	<i>cherimolia</i> Mill.	Annonaceae
ANNOMU	<i>Annona</i>	<i>muricata</i> L.	Annonaceae
ANNORE	<i>Annona</i>	<i>reticulata</i> L.	Annonaceae
ANNOSO	<i>Annona</i>	<i>squamosa</i> L.	Annonaceae
ANTHCH	<i>Anthocephalus</i>	<i>chinensis</i> A.Rich	Rubiaceae
ANTIBU	<i>Antidesma</i>	<i>bunius</i> Spreng.	Euphorbiaceae
ARACHY	<i>Arachis</i>	<i>hypogaea</i> L.	Papilionaceae

Code	Genus	Species	Family
ARECCA	<i>Areca</i>	<i>catechu</i> L.	<i>Aracaceae</i>
ARENPI	<i>Arenga</i>	<i>pinnata</i> Merr.	<i>Aracaceae</i>
ARTOAL	<i>Artocarpus</i>	<i>altilis</i> Fosb.	<i>Moraceae</i>
ARTOBL	<i>Artocarpus</i>	<i>blancoi</i>	<i>Moraceae</i>
ARTOCO	<i>Artocarpus</i>	<i>communis</i> Forst.	<i>Moraceae</i>
ARTOHE	<i>Artocarpus</i>	<i>heterophyllus</i> Lam.	<i>Moraceae</i>
ARTOIN	<i>Artocarpus</i>	<i>integra</i> = ARTOHE	
ARTOIT*	<i>Artocarpus</i>	<i>integrifolia</i> = ARTOHE	
ARTOLA	<i>Artocarpus</i>	<i>lakoocha</i> Roxb.	<i>Moraceae</i>
ARTORI	<i>Artocarpus</i>	<i>rigida</i>	<i>Moraceae</i>
ASPAOF	<i>Asparagus</i>	<i>officinalis</i> L.	<i>Liliaceae</i>
AVERBI	<i>Averrhoa</i>	<i>bilimbi</i> L.	<i>Oxalidaceae</i>
AVERCA	<i>Averrhoa</i>	<i>carambola</i> L.	<i>Oxalidaceae</i>
AVICAL	<i>Avicennia</i>	<i>alba</i> = AVICMA	
AVICIN	<i>Avicennia</i>	<i>intermedia</i>	<i>Avicenniaceae</i>
AVICMA	<i>Avicennia</i>	<i>marina</i> Vierh.	<i>Avicenniaceae</i>
AVICOF	<i>Avicennia</i>	<i>officinalis</i> L.	<i>Avicenniaceae</i>
AZADIN	<i>Azadirachta</i>	<i>indica</i> A. Juss.	<i>Meliaceae</i>
BACCMO	<i>Baccaurea</i>	<i>motleyana</i>	<i>Euphorbiaceae</i>
BACTGA	<i>Bactris</i>	<i>gasipaes</i> H.B.K.	<i>Aracaceae</i>
BALAAE	<i>Balanites</i>	<i>aegyptica</i> Delille	<i>Balanitaceae</i>
BAMBAR	<i>Bambusa</i>	<i>arundinacea</i>	<i>Gramineae</i>
BARRAS	<i>Barringtonia</i>	<i>asiatica</i> Kurz	<i>Barringtoniaceae</i>
BARRPR	<i>Barringtonia</i>	<i>procera</i> Kunth	<i>Barringtoniaceae</i>
BASSBU	<i>Bassia</i>	<i>butyracea</i>	<i>Chenopodiaceae</i>
BAUHPU	<i>Bauhinia</i>	<i>purpurea</i> L.	<i>Caesalpiniaceae</i>
BAUHVA	<i>Bauhinia</i>	<i>vahlil</i>	<i>Caesalpiniaceae</i>
BAUHVG*	<i>Bauhinia</i>	<i>variegata</i> L.	<i>Caesalpiniaceae</i>
BERTEX	<i>Bertholettia</i>	<i>excelsa</i> Humb.&Bonpl.	<i>Lecythidaceae</i>
BETUAL	<i>Betula</i>	<i>alnoides</i>	<i>Betulaceae</i>
BIXAOR	<i>Bixa</i>	<i>orellana</i> L.	<i>Bixaceae</i>
BOEHNI	<i>Boehmeria</i>	<i>nivea</i>	<i>Urticaceae</i>
BOEHRU	<i>Boehmeria</i>	<i>rugulosa</i>	<i>Urticaceae</i>
BOMBQU	<i>Bombacopsis</i>	<i>quinatum</i>	<i>Bombacaceae</i>
BOMXCE*	<i>Bombax</i>	<i>ceiba</i>	<i>Bombacaceae</i>
BOMXMA*	<i>Bombax</i>	<i>malabaricum</i>	<i>Bombacaceae</i>
BORAAE	<i>Borassus</i>	<i>aethiopicum</i> C.Mart.	<i>Palmaceae</i>
BRACBR	<i>Brachiaria</i>	<i>brizantha</i>	<i>Poaceae</i>
BRACHU	<i>Brachiaria</i>	<i>humidicola</i>	<i>Poaceae</i>
BRAPGL*	<i>Brassaiopsis</i>	<i>glomerulata</i>	
BRAPHA*	<i>Brassaiopsis</i>	<i>hainla</i>	
BRASJU	<i>Brassica</i>	<i>juncea</i>	<i>Cruciferae</i>
BROSAL	<i>Brosimum</i>	<i>alicastrum</i> Swartz	<i>Moraceae</i>
BROSUT	<i>Brosimum</i>	<i>utile</i> Pitt.	<i>Moraceae</i>
BROUPA	<i>Broussonetia</i>	<i>papyrifera</i> Vent.	<i>Moraceae</i>
BUTEFR	<i>Butea</i>	<i>frondosa</i> = BUTEMO	
BUTEMO	<i>Butea</i>	<i>monosperma</i> Taub.	<i>Papilionaceae</i>
BUTYPA	<i>Butyrospermum</i>	<i>paradoxum</i> Hepper	<i>Sapotaceae</i>
CAESBO	<i>Caesalpinia</i>	<i>bonducella</i>	<i>Caesalpiniaceae</i>
CAESER	<i>Caesalpinia</i>	<i>eriostachys</i>	<i>Caesalpiniaceae</i>
CAESSA	<i>Caesalpinia</i>	<i>sappan</i> L.	<i>Caesalpiniaceae</i>
CAESVE	<i>Caesalpinia</i>	<i>velutina</i>	<i>Caesalpiniaceae</i>

Code	Genus	Species	Family
CAJACA	<i>Cajanus</i>	<i>cajan</i> Millsp.	<i>Papilionaceae</i>
CALASP	<i>Calamus</i>	<i>rotang</i> L., et al.	<i>Palmaceae</i>
CALLCA	<i>Calliandra</i>	<i>calothyrsus</i> Meiss.	<i>Mimosaceae</i>
CALLHO	<i>Calliandra</i>	<i>houstoniana</i> Bth.	<i>Mimosaceae</i>
CALLTE	<i>Calliandra</i>	<i>tetragona</i>	<i>Mimosaceae</i>
CALOPR	<i>Calotropis</i>	<i>procera</i> Aiton.	<i>Asclepiadaceae</i>
CAMESI	<i>Camellia</i>	<i>sinensis</i> L.	<i>Theaceae</i>
CANAOD	<i>Cananga</i>	<i>odorata</i> Hook&Th.	<i>Anonaceae</i>
CANICO*	<i>Canarium</i>	<i>comune</i> L.	<i>Burseraceae</i>
CANIIN*	<i>Canarium</i>	<i>indicum</i> L.	<i>Burseraceae</i>
CANIOV*	<i>Canarium</i>	<i>ovatum</i> Engl.	<i>Burseraceae</i>
CANLEN*	<i>Canavalia</i>	<i>ensiformis</i> DC.	<i>Papilionaceae</i>
CANNED*	<i>Canna</i>	<i>edulis</i> Ker.	<i>Cannaceae</i>
CAPPDE	<i>Capparis</i>	<i>decidua</i> Edgew.	<i>Capparidaceae</i>
CAPSAN	<i>Capsicum</i>	<i>annuum</i> L.	<i>Solanaceae</i>
CAPSFR	<i>Capsicum</i>	<i>frutescens</i> L.	<i>Solanaceae</i>
CARIPA	<i>Carica</i>	<i>papaya</i> L.	<i>Caricaceae</i>
CARSCA*	<i>Carissa</i>	<i>carandas</i> L.	<i>Apocynaceae</i>
CARSCI*	<i>Carissa</i>	<i>congesta</i> Wight	<i>Apocynaceae</i>
CARSM*	<i>Carissa</i>	<i>macrocarpa</i> A.DC.	<i>Apocynaceae</i>
CARSSP*	<i>Carissa</i>	<i>spinorum</i>	<i>Apocynaceae</i>
CARUVI*	<i>Caryocar</i>	<i>villosum</i> Pers.	<i>Caryocaraceae</i>
CARYOR	<i>Caryodendron</i>	<i>orinocense</i> Karst.	<i>Euphorbiaceae</i>
CARZCU*	<i>Caryota</i>	<i>cumingii</i>	<i>Palmaceae</i>
CASIED	<i>Casimiroa</i>	<i>edulis</i> Llave&Lex.	<i>Rutaceae</i>
CASIAL*	<i>Cassia</i>	<i>alata</i> L.	<i>Caesalpinaceae</i>
CASIFI*	<i>Cassia</i>	<i>fistula</i> L.	<i>Caesalpinaceae</i>
CASIGR*	<i>Cassia</i>	<i>grandis</i> L.	<i>Caesalpinaceae</i>
CASIJA*	<i>Cassia</i>	<i>javanica</i> L.	<i>Caesalpinaceae</i>
CASISI*	<i>Cassia</i>	<i>siamea</i> Lam.	<i>Caesalpinaceae</i>
CASISP*	<i>Cassia</i>	<i>spectabilis</i> DC.	<i>Caesalpinaceae</i>
CASPIN*	<i>Castanopsis</i>	<i>indica</i>	<i>Fagaceae</i>
CASPTR*	<i>Castanopsis</i>	<i>tribuloides</i>	<i>Fagaceae</i>
CASTAU	<i>Castanospermum</i>	<i>australe</i> A.Cunn.	<i>Papilionaceae</i>
CASUCU	<i>Casuarina</i>	<i>cunninghamiana</i>	<i>Casuarinaceae</i>
CASUDE	<i>Casuarina</i>	<i>decaisneana</i> = ALLODE	
CASUEQ	<i>Casuarina</i>	<i>equisetifolia</i> L.	<i>Casuarinaceae</i>
CASUGL	<i>Casuarina</i>	<i>glauca</i> Sieb.	<i>Casuarinaceae</i>
CASUJU	<i>Casuarina</i>	<i>junghuhniana</i> Miq.	<i>Casuarinaceae</i>
CATABI	<i>Catalpa</i>	<i>bignonioides</i>	<i>Bignoniaceae</i>
CATALO	<i>Catalpa</i>	<i>longissima</i>	<i>Bignoniaceae</i>
CEDROD	<i>Cedrela</i>	<i>odorata</i> L.	<i>Meliaceae</i>
CEDRTO	<i>Cedrela</i>	<i>toona</i> = TOONCI	
CEIBPE	<i>Ceiba</i>	<i>pentandra</i> Gaertn.	<i>Bombacaceae</i>
CELTAU	<i>Celtis</i>	<i>australis</i>	<i>Ulmaceae</i>
CENTPU	<i>Centrosema</i>	<i>pubescens</i> Bth.	<i>Papilionaceae</i>
CERASI	<i>Ceratonia</i>	<i>siliqua</i> L.	<i>Caesalpinaceae</i>
CHAMPA	<i>Chamaecytisus</i>	<i>palmensis</i>	
CHAMPR	<i>Chamaecytisus</i>	<i>proliferus</i>	
CHLOGA	<i>Chloris</i>	<i>gayana</i>	<i>Graminae</i>
CHOEAX	<i>Choerospondias</i>	<i>axillaris</i>	<i>Anacardiaceae</i>
CHROOD	<i>Chromolaena</i>	<i>odorata</i>	

Code	Genus	Species	Family
CHRYCA	<i>Chrysophyllum</i>	<i>cainito</i> L.	Sapotaceae
CICEAR	<i>Cicer</i>	<i>arietinum</i> L.	Papilionaceae
CINNVE	<i>Cinnamomum</i>	<i>verum</i>	Lauraceae
CITRAF*	<i>Citrus</i>	<i>aurantifolia</i> Sw.	Rutaceae
CITRAU	<i>Citrus</i>	<i>aurantium</i> L.	Rutaceae
CITRCI	<i>Citrus</i>	<i>citrofortunella</i> J&H	Rutaceae
CITRGR	<i>Citrus</i>	<i>grandis</i>	Rutaceae
CITRLA	<i>Citrus</i>	<i>latifolia</i> Tan.	Rutaceae
CITRLI	<i>Citrus</i>	<i>limettioides</i> Tan.	Rutaceae
CITRMA	<i>Citrus</i>	<i>maxima</i> Merr.	Rutaceae
CITRME	<i>Citrus</i>	<i>medica</i> L.	Rutaceae
CITRMI	<i>Citrus</i>	<i>microcarpa</i>	Rutaceae
CITRPA	<i>Citrus</i>	<i>paradisi</i>	Rutaceae
CITRRE	<i>Citrus</i>	<i>reticulata</i> Blanco	Rutaceae
CITRSI	<i>Citrus</i>	<i>sinensis</i> Osbeck	Rutaceae
CLEYOC	<i>Cleyera</i>	<i>ochracea</i>	Theaceae
COCCUV	<i>Coccoloba</i>	<i>uvifera</i>	Polygonaceae
COCONU	<i>Cocos</i>	<i>nucifera</i> L.	Palmaceae
COFFAR	<i>Coffea</i>	<i>arabica</i> L.	Rubiaceae
COFFCA	<i>Coffea</i>	<i>canephora</i> Pierre	Rubiaceae
COFFRO	<i>Coffea</i>	<i>robusta</i>	Rubiaceae
COLOES	<i>Colocasia</i>	<i>esculenta</i> Schott	Araceae
COLUAR	<i>Colubrina</i>	<i>arborescens</i>	Rhamnaceae
COLUFE	<i>Colubrina</i>	<i>ferruginosa</i>	Rhamnaceae
COMBQU	<i>Combretodendron</i>	<i>quadrialat</i> = PETEQU	
CONOLA	<i>Conocarpus</i>	<i>lancifolius</i>	Combretaceae
CORAED*	<i>Cordeauxia</i>	<i>edulis</i> Hemsley	Caesalpiniaceae
CORDAL	<i>Cordia</i>	<i>alliodora</i> Cham.	Boraginaceae
CORDDE	<i>Cordia</i>	<i>dentata</i>	Boraginaceae
CORDSE	<i>Cordia</i>	<i>sebestena</i>	Boraginaceae
CORDSU	<i>Cordia</i>	<i>subcordata</i> Lamk.	Boraginaceae
COULED	<i>Coula</i>	<i>edulis</i> Baill.	Coulacaceae
CRESAL	<i>Crescentia</i>	<i>alata</i>	Bignoniaceae
CRESCU	<i>Crescentia</i>	<i>cujete</i> L.	Bignoniaceae
CROTJU	<i>Crotalaria</i>	<i>juncea</i> L.	Papilionaceae
CTENPH	<i>Ctenolophon</i>	<i>philippinensis</i>	
CUCUSA	<i>Cucumis</i>	<i>sativus</i> L.	Cucurbitaceae
CUPRLU	<i>Cupressus</i>	<i>lusitanica</i> Mill.	Cupressaceae
CYBIDO	<i>Cybistax</i>	<i>donnell-smithii</i>	Bignoniaceae
CYMBCI	<i>Cymbopogon</i>	<i>citratius</i>	Gramineae
CYMBFL	<i>Cymbopogon</i>	<i>flexuosa</i>	Gramineae
CYMBNA	<i>Cymbopogon</i>	<i>nardus</i>	Gramineae
CYPHBE	<i>Cyphomandra</i>	<i>betacea</i> Sendt.	Solanaceae
DACRED	<i>Dacryodes</i>	<i>edulis</i>	Burseraceae
DALBCO	<i>Dalbergia</i>	<i>cochinchinensis</i> P.	Papilionaceae
DALBCU	<i>Dalbergia</i>	<i>cubilquitensis</i> Pier.	Papilionaceae
DALBLA	<i>Dalbergia</i>	<i>latifolia</i> Roxb.	Papilionaceae
DALBME	<i>Dalbergia</i>	<i>melanoxylon</i> Guil.&P.	Papilionaceae
DALBPI	<i>Dalbergia</i>	<i>pinnata</i>	Papilionaceae
DALBRE	<i>Dalbergia</i>	<i>retusa</i> Hemsl.	Papilionaceae
DALBSI	<i>Dalbergia</i>	<i>sissoo</i> Roxb.	Papilionaceae
DENDHA	<i>Dendrocalamus</i>	<i>hamiltonii</i>	Gramineae

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DENDLO	<i>Dendrocalamus</i>	<i>longispathis</i>	Gramineae
DENDST	<i>Dendrocalamus</i>	<i>strictus</i>	Gramineae
DERRIN	<i>Derris</i>	<i>indica</i> Bth.	Papilionaceae
DESHVI*	<i>Desmanthus</i>	<i>virgatus</i> Willd.	Mimosaceae
DESMHE	<i>Desmodium</i>	<i>heterophyllum</i> DC.	Papilionaceae
DESMOV	<i>Desmodium</i>	<i>ovalifolium</i> Wall.	Papilionaceae
DESMRE	<i>Desmodium</i>	<i>renssoni</i>	Papilionaceae
DESMTR	<i>Desmodium</i>	<i>triflorum</i> DC.	Papilionaceae
DETAMI	<i>Detarium</i>	<i>microcarpum</i>	Caesalpineaceae
DIMOLO	<i>Dimocarpus</i>	<i>longan</i> Lour.	Sapindaceae
DINIEX	<i>Dinizia</i>	<i>excelsa</i> Ducke	Mimosaceae
DIOCSP*	<i>Dioscorea</i>	spp.	Dioscoreaceae
DIOSEB	<i>Diospyros</i>	<i>ebenaster</i> Retz.	Ebenaceae
DIOSKA	<i>Diospyros</i>	<i>kaki</i> L.	Ebenaceae
DIOSPH	<i>Diospyros</i>	<i>philippinensis</i>	Ebenaceae
DIPLPA	<i>Diplodiscus</i>	<i>paniculatus</i> Turc.	Tiliaceae
DIPTGR	<i>Dipterocarpus</i>	<i>grandiflorus</i> Bl.	Dipterocarpaceae
DODOVI	<i>Dodonea</i>	<i>viscosa</i>	Sapindaceae
DOVYCA	<i>Dovyalis</i>	<i>caffra</i> Warb.	Flacourtiaceae
DOVYHE	<i>Dovyalis</i>	<i>hebecarpa</i> Warb.	Flacourtiaceae
DRACDA	<i>Dracontomelon</i>	<i>dao</i> M.&R.	Anacardiaceae
DURIZI	<i>Durio</i>	<i>zibethinus</i> Murr.	Bombacaceae
ELAEGU	<i>Elaeis</i>	<i>guineensis</i> Jacq.	Aracaceae
ELEAAN	<i>Eleagnus</i>	<i>angustifolia</i>	Eleagnaceae
ELEALA	<i>Eleagnus</i>	<i>latifolia</i> L.	Eleagnaceae
ENTECY	<i>Enterolobium</i>	<i>cyclocarpum</i> Griseb.	Mimosaceae
ERIODU	<i>Eriobotrya</i>	<i>dubia</i>	Rosaceae
ERIOJA	<i>Eriobotrya</i>	<i>japonica</i> Lindl.	Rosaceae
ERYTBE	<i>Erythrina</i>	<i>berteroana</i> Urb.	Papilionaceae
ERYTED	<i>Erythrina</i>	<i>edulis</i> Triana	Papilionaceae
ERYTFU	<i>Erythrina</i>	<i>fusca</i> Lour.	Papilionaceae
ERYTIN	<i>Erythrina</i>	<i>indica</i>	Papilionaceae
ERYTOR	<i>Erythrina</i>	<i>orientalis</i>	Papilionaceae
ERYTPO	<i>Erythrina</i>	<i>poepigiana</i> O.F. Cook	Papilionaceae
ERYTVA	<i>Erythrina</i>	<i>variegata</i> L.	Papilionaceae
ETLIEL	<i>Etilingera</i>	<i>elatiior</i>	Zingiberaceae
EUCAAL	<i>Eucalyptus</i>	<i>alba</i> Reinw.	Myrtaceae
EUCAAS	<i>Eucalyptus</i>	<i>astringens</i>	Myrtaceae
EUCACA	<i>Eucalyptus</i>	<i>camaldulensis</i>	Myrtaceae
EUCACI	<i>Eucalyptus</i>	<i>citriodora</i> Hook.	Myrtaceae
EUCACL	<i>Eucalyptus</i>	<i>cladocalyx</i>	Myrtaceae
EUCACO*	<i>Eucalyptus</i>	<i>cloeziana</i>	Myrtaceae
EUCACR	<i>Eucalyptus</i>	<i>crebra</i>	Myrtaceae
EUCADE	<i>Eucalyptus</i>	<i>dehupta</i> Bl.	Myrtaceae
EUCADU	<i>Eucalyptus</i>	<i>dunii</i>	Myrtaceae
EUCAGL	<i>Eucalyptus</i>	<i>globulus</i> Labill.	Myrtaceae
EUCAGR	<i>Eucalyptus</i>	<i>grandis</i>	Myrtaceae
EUCAHO	<i>Eucalyptus</i>	<i>houseana</i>	Myrtaceae
EUCAKI	<i>Eucalyptus</i>	<i>kirtoniana</i>	Myrtaceae
EUCAMA	<i>Eucalyptus</i>	<i>maculata</i>	Myrtaceae
EUCAMI	<i>Eucalyptus</i>	<i>microtheca</i> F.Muell.	Myrtaceae
EUCAMO	<i>Eucalyptus</i>	<i>moluccana</i>	Myrtaceae

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EUCAPA	<i>Eucalyptus</i>	<i>paniculata</i>	Myrtaceae
EUCAPB*	<i>Eucalyptus</i>	<i>papuana</i>	Myrtaceae
EUCAPE	<i>Eucalyptus</i>	<i>pellita</i>	Myrtaceae
EUCAPI	<i>Eucalyptus</i>	<i>pilularis</i>	Myrtaceae
EUCAPO	<i>Eucalyptus</i>	<i>populnea</i>	Myrtaceae
EUCARE	<i>Eucalyptus</i>	<i>resinifera</i>	Myrtaceae
EUCARO	<i>Eucalyptus</i>	<i>robusta</i>	Myrtaceae
EUCASA	<i>Eucalyptus</i>	<i>saligna</i> Smith	Myrtaceae
EUCASM*	<i>Eucalyptus</i>	<i>salmonophloia</i>	Myrtaceae
EUCAST	<i>Eucalyptus</i>	<i>staigerana</i>	Myrtaceae
EUCATE	<i>Eucalyptus</i>	<i>tereticornis</i>	Myrtaceae
EUCATO	<i>Eucalyptus</i>	<i>torelliana</i>	Myrtaceae
EUCAUR	<i>Eucalyptus</i>	<i>wrophylla</i>	Myrtaceae
EUGEAR	<i>Eugenia</i>	<i>aromatica</i> = SYZYAR	
EUGEBR	<i>Eugenia</i>	<i>brasiliensis</i> Lam.	Myrtaceae
EUGEJA	<i>Eugenia</i>	<i>jambolana</i> = SYZYCU	
EUGEJB*	<i>Eugenia</i>	<i>jambos</i> = SYZYJA	
EUGELU	<i>Eugenia</i>	<i>luschnathiana</i> Kl.	Myrtaceae
EUGEUN	<i>Eugenia</i>	<i>uniflora</i> L.	
EUPHLO	<i>Euphoria</i>	<i>longan</i> = DIMOLO	Myrtaceae
EURYAC	<i>Eurya</i>	<i>acuminata</i>	Theaceae
EURYJA	<i>Eurya</i>	<i>japonica</i> Thunb.	Theaceae
FAIDAL	<i>Faidherbia</i>	<i>albida</i>	Mimosaceae
FEIJE	<i>Feijoa</i>	<i>sellowiana</i> Berg.	Myrtaceae
FICUAU	<i>Ficus</i>	<i>auriculata</i>	Moraceae
FICUBE	<i>Ficus</i>	<i>bengalensis</i>	Moraceae
FICUBJ*	<i>Ficus</i>	<i>benamina</i> L.	Moraceae
FICUCA	<i>Ficus</i>	<i>carica</i> L.	Moraceae
FICUCL	<i>Ficus</i>	<i>clavata</i> Wall.	Moraceae
FICUCU	<i>Ficus</i>	<i>cunia</i> Ham.	Moraceae
FICUGL	<i>Ficus</i>	<i>glaberrima</i>	Moraceae
FICUHI	<i>Ficus</i>	<i>hispida</i> L.	Moraceae
FICUIN	<i>Ficus</i>	<i>indica</i>	Moraceae
FICUIR*	<i>Ficus</i>	<i>infectoria</i> Roxb.	Moraceae
FICULA	<i>Ficus</i>	<i>lacor</i> Buch.-Ham.	Moraceae
FICUNE	<i>Ficus</i>	<i>nemorialis</i> Wall.	Moraceae
FIGURE	<i>Ficus</i>	<i>religiosa</i> L.	Moraceae
FICURO	<i>Ficus</i>	<i>roxburghii</i> Wall.	Moraceae
FICUSE	<i>Ficus</i>	<i>semicordata</i> Buch.-Ham.	Moraceae
FICUSP*	<i>Ficus</i>	<i>septica</i>	Moraceae
FLEMCO	<i>Flemingia</i>	<i>congesta</i> Roxb.	Papilionaceae
FLEMMA	<i>Flemingia</i>	<i>macrophylla</i>	Papilionaceae
FLUEFL	<i>Flueggea</i>	<i>flexuosa</i> Willd.	Euphorbiaceae
FORTSP	<i>Fortunella</i>	spp.	Rutaceae
FRAGVE	<i>Fragaria</i>	<i>vesca</i> L.	Rosaceae
FRAXFL	<i>Fraxinus</i>	<i>floribunda</i> Wall.	Oleaceae
FRAXUH	<i>Fraxinus</i>	<i>uhdei</i>	Oleaceae
GARCMA	<i>Garcinia</i>	<i>mangostana</i> L.	Guttiferae
GARUPI	<i>Garuga</i>	<i>pinnata</i> Roxb.	Burseraceae
GENIAM	<i>Genipa</i>	<i>americana</i> L.	Rubiaceae
GLIRSE	<i>Glinicidia</i>	<i>sepium</i> Steud.	Papilionaceae
GLYCMA	<i>Glycine</i>	<i>max</i> Merr.	Papilionaceae

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GLYCWI	<i>Glycine</i>	<i>wightii</i> Verdc.	<i>Papilionaceae</i>
GMELAR	<i>Gmelina</i>	<i>arborea</i> Roxb.	<i>Verbenaceae</i>
GNETGN	<i>Gnetum</i>	<i>gnemon</i> L.	<i>Gnetaceae</i>
GREVRO	<i>Grevillea</i>	<i>robusta</i> A.Cunn.	<i>Proteaceae</i>
GREWOP	<i>Grewia</i>	<i>oppositifolia</i>	<i>Tiliaceae</i>
GREWOT*	<i>Grewia</i>	<i>optiva</i> Drummond	<i>Tiliaceae</i>
GREWSU	<i>Grewia</i>	<i>subinaequalis</i> DC.	<i>Tiliaceae</i>
GREWTI	<i>Grewia</i>	<i>tiliaefolia</i>	<i>Tiliaceae</i>
GUAZUL	<i>Guazuma</i>	<i>ulmifolia</i> Lamk	<i>Sterculiaceae</i>
GUILGA	<i>Guilielma</i>	<i>gasipaes</i> = BACTGA	
HAEMBR	<i>Haemataxylon</i>	<i>brasiletto</i> Karst.	<i>Caesalpiniaceae</i>
HAEMCA	<i>Haemataxylon</i>	<i>campechianum</i> L.	<i>Caesalpiniaceae</i>
HARDBI	<i>Hardwickia</i>	<i>binata</i> Roxb.	<i>Caesalpiniaceae</i>
HEVEBR	<i>Hevea</i>	<i>brasiliensis</i> Muel	<i>Euphorbiaceae</i>
HIBISA	<i>Hibiscus</i>	<i>sabdariffa</i> L.	<i>Malvaceae</i>
HIBITI	<i>Hibiscus</i>	<i>sabdariffa</i> L.	<i>Malvaceae</i>
HOPPAC	<i>Hoppea</i> ?	<i>acuminata</i>	<i>Gentianaceae</i>
HYLOUN	<i>Hylocereus</i>	<i>undatus</i> Britt&Rose	<i>Cactaceae</i>
HYMECO	<i>Hymenaea</i>	<i>courbaril</i> L.	<i>Caesalpiniaceae</i>
HYMEEX	<i>Hymenolobium</i>	<i>excelsum</i> Ducke	<i>Papilionaceae</i>
ILEXDI	<i>Ilex</i>	<i>dipyrena</i>	<i>Aquifoliaceae</i>
ILEXDO	<i>Ilex</i>	<i>doniona</i>	<i>Aquifoliaceae</i>
INGADU	<i>Inga</i>	<i>dulce</i>	<i>Mimosaceae</i>
INGAED	<i>Inga</i>	<i>edulis</i> Mart.	<i>Mimosaceae</i>
INGAPA	<i>Inga</i>	<i>paterna</i>	<i>Mimosaceae</i>
INGASP	<i>Inga</i>	<i>spectabilis</i>	<i>Mimosaceae</i>
INGAVE	<i>Inga</i>	<i>vera</i> Willd.	<i>Mimosaceae</i>
IPOMBA	<i>Ipomea</i>	<i>batatus</i> Poir.	<i>Convolvulaceae</i>
JATRCU	<i>Jatropha</i>	<i>curcas</i> L.	<i>Euphorbiaceae</i>
JUGLSP	<i>Juglans</i>	<i>neotropica</i> Diels	<i>Juglandaceae</i>
KHAYSE	<i>Khaya</i>	<i>senegalensis</i>	<i>Meliaceae</i>
LACTSA	<i>Lactuca</i>	<i>sativa</i> L.	<i>Compositae</i>
LAGESP	<i>Lagerstroemia</i>	<i>speciosa</i> Pers.	<i>Lythraceae</i>
LANNAC	<i>Lannea</i>	<i>acida</i> A.Rich.	<i>Anacardiaceae</i>
LANSDO	<i>Lansium</i>	<i>domesticum</i> Corr.	<i>Meliaceae</i>
LECYMI	<i>Lecythis</i>	<i>minor</i> Jacq.	<i>Lecythidaceae</i>
LECYOL	<i>Lecythis</i>	<i>ollaria</i>	<i>Lecythidaceae</i>
LEUCCO	<i>Leucaena</i>	<i>collinsii</i>	<i>Mimosaceae</i>
LEUCCU	<i>Leucaena</i>	<i>cunninghamia</i>	<i>Mimosaceae</i>
LEUCDI	<i>Leucaena</i>	<i>diversifolia</i>	<i>Mimosaceae</i>
LEUCES	<i>Leucaena</i>	<i>esculenta</i> Bth.	<i>Mimosaceae</i>
LEUCLA	<i>Leucaena</i>	<i>lanceolata</i>	<i>Mimosaceae</i>
LEUCLE	<i>Leucaena</i>	<i>leucocephala</i> de Wit	<i>Mimosaceae</i>
LEUCMA	<i>Leucaena</i>	<i>macrophylla</i>	<i>Mimosaceae</i>
LEUCPA	<i>Leucaena</i>	<i>pallida</i>	<i>Mimosaceae</i>
LEUCPU	<i>Leucaena</i>	<i>pulverulenta</i> Bth.	<i>Mimosaceae</i>
LEUCSA	<i>Leucaena</i>	<i>salvadorensis</i> Stand	<i>Mimosaceae</i>
LEUCSH	<i>Leucaena</i>	<i>shannoni</i> D.Smith	<i>Mimosaceae</i>
LEUSCA*	<i>Leucosyke</i>	<i>capitellata</i>	
LICAPL	<i>Licania</i>	<i>platypus</i> Fritsch.	<i>Chrysobalanaceae</i>
LITCCH	<i>Litchi</i>	<i>chinensis</i> Sonn.	<i>Sapindaceae</i>
LITSCI	<i>Litsea</i>	<i>citrata</i>	<i>Lauraceae</i>

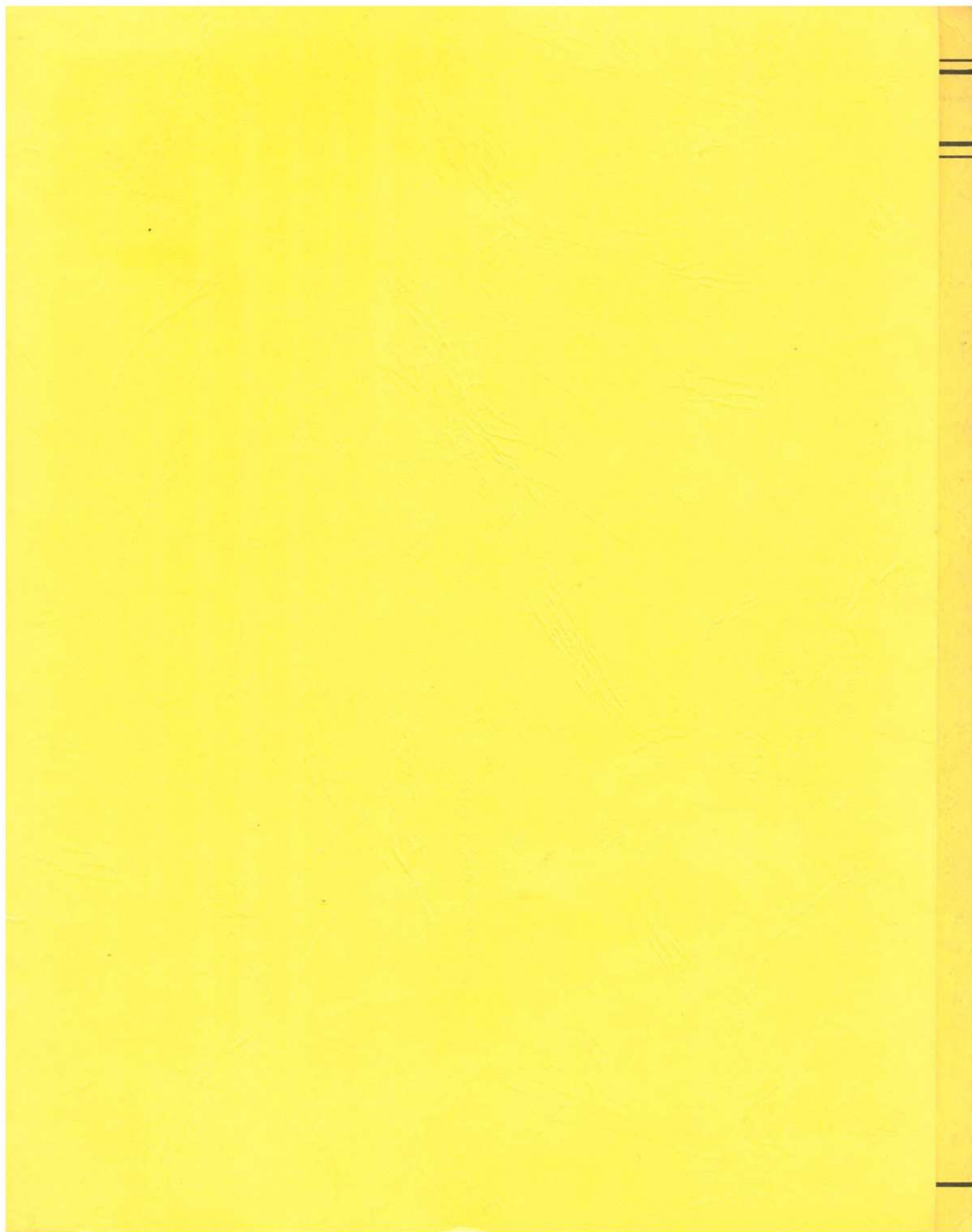
Code	Genus	Species	Family
LITSMO	<i>Litsea</i>	<i>monopetala</i>	<i>Lauraceae</i>
LITSP0	<i>Litsea</i>	<i>polyantha</i>	<i>Lauraceae</i>
LUCUMA	<i>Lucuma</i>	<i>mammosa</i> Gaertn.	<i>Sapotaceae</i>
LYCOES	<i>Lycopersicon</i>	<i>esculentum</i> Mill.	<i>Solanaceae</i>
LYSIBA	<i>Lysiloma</i>	<i>bahamensis</i> Bth.	<i>Mimosaceae</i>
LYSILA	<i>Lysiloma</i>	<i>latisiliqua</i> Bth.	<i>Mimosaceae</i>
MACAIN	<i>Macadamia</i>	<i>integrifolia</i> Maid.&Betche	<i>Proteaceae</i>
MACATE	<i>Macadamia</i>	<i>temifolia</i> F.V.Muell.	<i>Proteaceae</i>
MACATF*	<i>Macadamia</i>	<i>tetraphylla</i> L.Johnson	<i>Proteaceae</i>
MACGTA*	<i>Macaranga</i>	<i>tanarius</i>	<i>Euphorbiaceae</i>
MACHGA	<i>Machilus</i>	<i>gamblei</i>	<i>Lauraceae</i>
MACHOD	<i>Machilus</i>	<i>odoratissima</i> Nees.	<i>Lauraceae</i>
MAESEM	<i>Maesopsis</i>	<i>eminii</i> Engl.	
MALLPH	<i>Mallotus</i>	<i>philippinensis</i> Mu.	<i>Euphorbiaceae</i>
MALPPU	<i>Malpighia</i>	<i>punicifolia</i> L.	<i>Malpighiaceae</i>
MAMMAM	<i>Mammea</i>	<i>americana</i> L.	<i>Guttiferae</i>
MANGIN	<i>Mangifera</i>	<i>indica</i> L.	<i>Anacardiaceae</i>
MANIDU	<i>Manihot</i>	<i>dulcis</i>	<i>Euphorbiaceae</i>
MANKKA*	<i>Manilkara</i>	<i>kauki</i> Dubard	<i>Sapotaceae</i>
MANKZA*	<i>Manilkara</i>	<i>zapota</i> van Royen	<i>Sapotaceae</i>
MELALE	<i>Melaleuca</i>	<i>leucadendra</i> L.	<i>Myrtaceae</i>
MELAU	<i>Melaleuca</i>	<i>quinquenervia</i>	<i>Myrtaceae</i>
MELIAZ	<i>Melia</i>	<i>azedarach</i> L.	<i>Meliaceae</i>
MELIDU	<i>Melia</i>	<i>dubia</i> Cav.	<i>Meliaceae</i>
MELOBI*	<i>Melicoccus</i>	<i>bijugatus</i> Jacq.	<i>Sapindaceae</i>
MESUFE	<i>Mesua</i>	<i>ferrea</i> L.	<i>Guttiferae</i>
MICHCH	<i>Michelia</i>	<i>champaca</i>	<i>Magnoliaceae</i>
MIMOSC	<i>Mimosa</i>	<i>scabrella</i>	<i>Mimosaceae</i>
MITROR	<i>Mitragyna?</i>	<i>orientales</i>	<i>Rubiaceae</i>
MORAEX	<i>Mora</i>	<i>excelsa</i> Bth.	<i>Caesalpiniaceae</i>
MORIOL	<i>Moringa</i>	<i>oleifera</i> Lamk	<i>Moringaceae</i>
MORUAL	<i>Morus</i>	<i>alba</i> L.	<i>Moraceae</i>
MORUIN	<i>Morus</i>	<i>indica</i>	<i>Moraceae</i>
MUCUMA	<i>Mucuna</i>	<i>macrocarpa</i>	<i>Papilionaceae</i>
MUNTCA	<i>Muntingia</i>	<i>calabura</i> L.	<i>Elaeocarpaceae</i>
MUSAPA	<i>Musa</i>	<i>paradisica</i> L.	<i>Musaceae</i>
MUSASA	<i>Musa</i>	<i>sapientum</i> L.	<i>Musaceae</i>
MYRCSP	<i>Myrciaria</i>	spp.	<i>Myrtaceae</i>
MYRIFR	<i>Myristica</i>	<i>fragrans</i> Hoult.	<i>Myristicaceae</i>
MYRSCA	<i>Myrsine</i>	<i>capitellata</i>	<i>Myrsinaceae</i>
MYRSSE	<i>Myrsine</i>	<i>semiserrata</i>	<i>Myrsinaceae</i>
NAUCOR	<i>Nauclea?</i>	<i>orientales</i> = MITROR?	
NEPHLA	<i>Nephelium</i>	<i>lappaceum</i> L.Ramb.	<i>Sapindaceae</i>
NEPHMU	<i>Nephelium</i>	<i>mutabile</i> Bl.Pula	<i>Sapindaceae</i>
NICOTA	<i>Nicotiana</i>	<i>tabacum</i>	
OLEAFE	<i>Olea</i>	<i>ferruginea</i>	<i>Oleaceae</i>
OPUNSP	<i>Opuntia</i>	spp.	<i>Cactaceae</i>
ORBIMA	<i>Orbignya</i>	<i>martiana</i> Barb.Rod.	<i>Aracaceae</i>
ORYZSA	<i>Oryza</i>	<i>sativa</i> L.	<i>Graminae</i>
OUGEDA	<i>Ougeineia</i>	<i>dalbergioides</i>	<i>Papilionaceae</i>
PAHURH	<i>Pahudia</i>	<i>rhomboidea</i>	
PALILU	<i>Paliqium</i>	<i>luzoniense</i> Vidal	<i>Sapotaceae</i>

Code	Genus	Species	Family
PANDGR	<i>Pandanus</i>	<i>graminifolius</i>	<i>Pandanaceae</i>
PANDTE	<i>Pandanus</i>	<i>tectorius</i> Sol.	<i>Pandanaceae</i>
PANIMA	<i>Panicum</i>	<i>maximum</i> Jacq.	<i>Poaceae</i>
PARAFA	<i>Paraserianthes</i>	<i>falcataria</i>	<i>Mimosaceae</i>
PARALO	<i>Paraserianthes</i>	<i>lophantha</i>	<i>Mimosaceae</i>
PARKBI	<i>Parkia</i>	<i>biglobosa</i> Bth.	<i>Mimosaceae</i>
PARKCL	<i>Parkia</i>	<i>clappertoniana</i> Keay	<i>Mimosaceae</i>
PARKJA	<i>Parkia</i>	<i>javanica</i> Merr.	<i>Mimosaceae</i>
PARKRO	<i>Parkia</i>	<i>roxburghii</i>	<i>Mimosaceae</i>
PARKSP	<i>Parkia</i>	<i>speciosa</i> Hassk.	<i>Mimosaceae</i>
PARNAC*	<i>Parkinsonia</i>	<i>aculeata</i> L.	<i>Caesalpiniaceae</i>
PARTAR	<i>Parthenium</i>	<i>argentatum</i>	<i>Compositae</i>
PASPDI	<i>Paspalum</i>	<i>dilatatum</i> Poir.	<i>Poaceae</i>
PASSED	<i>Passiflora</i>	<i>edulis</i> Sims.	<i>Passifloraceae</i>
PASSLA	<i>Passiflora</i>	<i>laurifolia</i> L.	<i>Passifloraceae</i>
PASSLI	<i>Passiflora</i>	<i>ligularis</i> Jull.	<i>Passifloraceae</i>
PASSMA	<i>Passiflora</i>	<i>maliformis</i> L.	<i>Passifloraceae</i>
PASSMO	<i>Passiflora</i>	<i>mollissima</i> Bailey	<i>Passifloraceae</i>
PASSQU	<i>Passiflora</i>	<i>quadrangularis</i> L.	<i>Passifloraceae</i>
PAULEX	<i>Paulownia</i>	<i>excelsa</i>	<i>Scrophulariaceae</i>
PAULFO	<i>Paulownia</i>	<i>fortunii</i>	<i>Scrophulariaceae</i>
PAULTA	<i>Paulownia</i>	<i>taiwanii</i>	<i>Scrophulariaceae</i>
PAULTO	<i>Paulownia</i>	<i>tomentosa</i>	<i>Scrophulariaceae</i>
PELTIN	<i>Peltophorum</i>	<i>inerme</i> Roxb. = PELTPT	
PELTPT	<i>Peltophorum</i>	<i>pterocarpum</i> Naves	<i>Caesalpiniaceae</i>
PENNCL	<i>Pennisetum</i>	<i>clandestinum</i>	<i>Poaceae</i>
PENNPV	<i>Pennisetum</i>	<i>purpureum</i> S.&T.	<i>Graminae</i>
PENTMA	<i>Pentaclethra</i>	<i>macroloba</i> Ktze.	<i>Mimosaceae</i>
PENTMC*	<i>Pentaclethra</i>	<i>macrophylla</i> Bth.	<i>Mimosaceae</i>
PEREAC	<i>Pereskia</i>	<i>aculeata</i> Mill.	<i>Cactaceae</i>
PERIEL	<i>Pericopsis</i>	<i>elata</i> van Meeuw.	<i>Papilionaceae</i>
PERSAM	<i>Persea</i>	<i>americana</i> Mill.	<i>Lauraceae</i>
PETEQU	<i>Petersianthus</i>	<i>quadrialatus</i> Merr.	<i>Lecythidaceae</i>
PHASVU	<i>Phaseolus</i>	<i>vulgaris</i> L.	<i>Papilionaceae</i>
PHOEDA	<i>Phoenix</i>	<i>dactylifera</i> L.	<i>Palmaceae</i>
PHYLAC	<i>Phyllanthus</i>	<i>acidus</i> skeels	<i>Euphorbiaceae</i>
PHYLEM	<i>Phyllanthus</i>	<i>emblica</i> L.	<i>Euphorbiaceae</i>
PIMEDI	<i>Pimenta</i>	<i>dioica</i>	<i>Myrtaceae</i>
PIMERA	<i>Pimenta</i>	<i>racemosa</i>	<i>Myrtaceae</i>
PINUCA	<i>Pinus</i>	<i>caribaea</i> Morelet	<i>Pinaceae</i>
PINUCAHO	<i>Pinus</i>	<i>caribaea</i> v <i>hondurensis</i>	<i>Pinaceae</i>
PINUIN	<i>Pinus</i>	<i>insularis</i>	<i>Pinaceae</i>
PINUKE	<i>Pinus</i>	<i>kesiya</i> Royle	<i>Pinaceae</i>
PINUME	<i>Pinus</i>	<i>merkusii</i> Jung&V.	<i>Pinaceae</i>
PINUOC	<i>Pinus</i>	<i>occidentalis</i>	<i>Pinaceae</i>
PINUOO	<i>Pinus</i>	<i>oocarpa</i>	<i>Pinaceae</i>
PINUTE	<i>Pinus</i>	<i>tecunumanii</i>	<i>Pinaceae</i>
PISOAL	<i>Pisonia</i>	<i>alba</i>	<i>Nyctaginaceae</i>
PISTVE	<i>Pistacia</i>	<i>vera</i>	<i>Anacardiaceae</i>
PITHDU	<i>Pithecellobium</i>	<i>dulce</i> Bth.	<i>Mimosaceae</i>
PITHSA	<i>Pithecellobium</i>	<i>saman</i> = ALBISA	
PLATOC	<i>Platanus</i>	<i>occidentalis</i> L.	<i>Platanaceae</i>

Code	Genus	Species	Family
PLATOR	<i>Platanus</i>	<i>orientalis</i>	Platanaceae
PLAVIN*	<i>Platonia</i>	<i>insignis</i> Mart.	Guttiferae
PLAYPI*	<i>Platymiscium</i>	<i>pinnatum</i>	Papilionaceae
POLYPE	<i>Polyalthia</i>	<i>pendula</i>	Annonaceae
PONGPI	<i>Pongamia</i>	<i>pinnata</i> Pierre	Papilionaceae
POPUEP*	<i>Populus</i>	<i>euphratica</i> Olivi.	Salicaceae
POPUEU	<i>Populus</i>	<i>euramericana</i>	Salicaceae
POURCE	<i>Pourouma</i>	<i>cecropiaefolia</i> M.	Moraceae
POUTCA	<i>Pouteria</i>	<i>caimito</i> Radlk.	Sapotaceae
POUTCP*	<i>Pouteria</i>	<i>campechianum</i> Baehni	Sapotaceae
POUTSA	<i>Pouteria</i>	<i>sapota</i> HEM&Stearn	Sapotaceae
PREMBE	<i>Premna</i>	<i>bengalensis</i>	Verbenaceae
PREMIN	<i>Premna</i>	<i>integrifolia</i>	Verbenaceae
PREMLA	<i>Premna</i>	<i>latifolia</i>	Verbenaceae
PROSAF	<i>Prosopis</i>	<i>africana</i> Taub.	Mimosaceae
PROSAL	<i>Prosopis</i>	<i>alba</i>	Mimosaceae
PROSCH	<i>Prosopis</i>	<i>chilensis</i> Stuntz	Mimosaceae
PROSCI	<i>Prosopis</i>	<i>cineraria</i> Druce	Mimosaceae
PROSJU	<i>Prosopis</i>	<i>juliflora</i> DC.	Mimosaceae
PROSPA	<i>Prosopis</i>	<i>pallida</i>	Mimosaceae
PROSTA	<i>Prosopis</i>	<i>tamarugo</i>	Mimosaceae
PRUNCE	<i>Prunus</i>	<i>cerasoides</i>	Rosaceae
PRUNSA	<i>Prunus</i>	<i>salicifolia</i> H.B.K.	Rosaceae
PSIDCA	<i>Psidium</i>	<i>cattleianum</i> Sab.	Myrtaceae
PSIDFR	<i>Psidium</i>	<i>friedrichsthalianum</i>	Myrtaceae
PSIDGU	<i>Psidium</i>	<i>guajava</i> L.	Myrtaceae
PTECIN*	<i>Pterocarpus</i>	<i>indicus</i> Willd.	Pterocarpaceae
PTERJA	<i>Pterospermum</i>	<i>javanicum</i> Jungh.	Sterculiaceae
PUERJA	<i>Pueraria</i>	<i>javanica</i> Bth.	Papilionaceae
PUNIGR	<i>Punica</i>	<i>granatum</i> L.	Punicaceae
PUTRRO	<i>Putranjiva</i>	<i>roxburghii</i>	Euphorbiaceae
PYRUCO	<i>Pyrus</i>	<i>communis</i>	Rosaceae
QUARCO	<i>Quararibea</i>	<i>cordata</i> Vischer	Bombacaceae
QUERFE	<i>Quercus</i>	<i>fenestrata</i>	Fagaceae
QUERIN	<i>Quercus</i>	<i>incana</i>	Fagaceae
QUERLA	<i>Quercus</i>	<i>lamellosa</i>	Fagaceae
QUERLN*	<i>Quercus</i>	<i>lanata</i>	Fagaceae
QUERLP*	<i>Quercus</i>	<i>leucotrichophora</i>	Fagaceae
QUERLT*	<i>Quercus</i>	<i>lineata</i>	Fagaceae
QUERSE	<i>Quercus</i>	<i>semicarpifolia</i>	Fagaceae
RHIZAP	<i>Rhizophora</i>	<i>apiculata</i>	Rhizophoraceae
RHIZMA	<i>Rhizophora</i>	<i>mangle</i>	Rhizophoraceae
RHIZMU	<i>Rhizophora</i>	<i>mucronata</i> Lamk.	Rhizophoraceae
RHIZST	<i>Rhizophora</i>	<i>stylosa</i> Griff.	Rhizophoraceae
RHUSJA	<i>Rhus</i>	<i>javanica</i>	Anacardiaceae
RHUSSU	<i>Rhus</i>	<i>succedanea</i>	Anacardiaceae
RICICO	<i>Ricinus</i>	<i>communis</i> L.	Euphorbiaceae
ROBIPS	<i>Robinia</i>	<i>pseudoacacia</i> L.	Papilionaceae
ROLLMU	<i>Rollinia</i>	<i>mucosa</i> Baille	Annonaceae
RUBUNI	<i>Rubus</i>	<i>niveus</i> Thunb.	Rosaceae
SALIBA	<i>Salix</i>	<i>babylonica</i>	Salicaceae
SALMMA	<i>Salmalia</i>	<i>malabarica</i>	Bombacaceae

Code	Genus	Species	Family
SALVOL	<i>Salvadora</i>	<i>oleoides</i>	Salvadoraceae
SALVPE	<i>Salvadora</i>	<i>persica</i> L.	Salvadoraceae
SAMASA	<i>Samanea</i>	<i>saman</i> = ALBISA	
SANDIN	<i>Sandoricum</i>	<i>indicum</i> Cav.	Meliaceae
SANDKO	<i>Sandoricum</i>	<i>koetjape</i> Merr.	Meliaceae
SANTAC	<i>Santalum</i>	<i>acuminatum</i> A.DC.	Santalaceae
SANTAL	<i>Santalum</i>	<i>album</i> L.	Santalaceae
SAURNA	<i>Saurauia</i>	<i>napaulensis</i> DC.	Saurauiaceae
SAUSAN*	<i>Sauropus</i>	<i>androgynus</i>	Euphorbiaceae
SCHIWA	<i>Schima</i>	<i>wallichii</i>	Theaceae
SCHLOL	<i>Schleichera</i>	<i>oleosa</i> Merr.	Sapindaceae
SCHNMO*	<i>Schinus</i>	<i>molle</i> L.	Anacardiaceae
SECUFL	<i>Securinea</i>	<i>flexuosa</i> = FLUEFL?	
SESAIN	<i>Sesamum</i>	<i>indicum</i> L.	Pedaliaceae
SESBAE	<i>Sesbania</i>	<i>aegypticum</i> Pers.	Papilionaceae
SESBAR	<i>Sesbania</i>	<i>arboreum</i>	Papilionaceae
SESBBI	<i>Sesbania</i>	<i>bispinosa</i> W.F.Wight	Papilionaceae
SESBFO	<i>Sesbania</i>	<i>formosa</i>	Papilionaceae
SESBGR	<i>Sesbania</i>	<i>grandiflora</i> Poir.	Papilionaceae
SESBSE	<i>Sesbania</i>	<i>sesban</i> Merr.	Papilionaceae
SETAAN	<i>Setaria</i>	<i>ancep</i>	Poaceae
SHORGI	<i>Shorea</i>	<i>gisok</i>	Dipterocarpaceae
SHORMA	<i>Shorea</i>	<i>malibato</i>	Dipterocarpaceae
SHORRO	<i>Shorea</i>	<i>robusta</i>	Dipterocarpaceae
SHORSP	<i>Shorea</i>	spp.	Dipterocarpaceae
SOLAME	<i>Solanum</i>	<i>melongena</i> L.	Solanaceae
SOLAQU	<i>Solanum</i>	<i>quitoense</i> Lamk.	Solanaceae
SOLASE	<i>Solanum</i>	<i>sessiliflorum</i> Dun.	Solanaceae
SOLATO	<i>Solanum</i>	<i>topiro</i> H.B.K.	Solanaceae
SOLATU	<i>Solanum</i>	<i>tuberosum</i> L.	Solanaceae
SORGVU	<i>Sorghum</i>	<i>vulgare</i> Pers.	Graminae
SPONCY	<i>Spondias</i>	<i>cytherea</i> Sonn.	Anacardiaceae
SPONDU	<i>Spondias</i>	<i>dulcis</i> Forst.	Anacardiaceae
SPONMO	<i>Spondias</i>	<i>mombin</i> L.	Anacardiaceae
SPONPI	<i>Spondias</i>	<i>pinnata</i> Kurz.	Anacardiaceae
SPONPU	<i>Spondias</i>	<i>purpurea</i> L.	Anacardiaceae
STERAP	<i>Sterculia</i>	<i>apetala</i>	Sterculiaceae
STYLGU	<i>Stylosanthes</i>	<i>guienensis</i>	Papilionaceae
STYLHA	<i>Stylosanthes</i>	<i>hamata</i> Taub.	Papilionaceae
STYLSL	<i>Stylosanthes</i>	<i>scabra</i>	Papilionaceae
SWIEMC*	<i>Swietenia</i>	<i>macrophylla</i> King	Meliaceae
SWIEMH*	<i>Swietenia</i>	<i>mahogani</i>	Meliaceae
SYMPCR	<i>Symplocos</i>	<i>crataegoides</i>	Symplocaceae
SYNCGL	<i>Syncarpia</i>	<i>glomulifera</i>	Myrtaceae
SYZYAR	<i>Syzygium</i>	<i>aromaticum</i>	Myrtaceae
SYZYCU	<i>Syzygium</i>	<i>cuminii</i> Skeels	Myrtaceae
SYZYJU	<i>Syzygium</i>	<i>jambos</i> Alston	Myrtaceae
SYZYMA	<i>Syzygium</i>	<i>malaccense</i> Merr.&Perry	Myrtaceae
SYZYPO	<i>Syzygium</i>	<i>polyantha</i> Wight	Myrtaceae
SYZYUN	<i>Syzygium</i>	<i>uniflora</i> L.	Myrtaceae
TABERO	<i>Tabebuia</i>	<i>rosea</i>	Bignoniaceae
TAMAIN	<i>Tamarindus</i>	<i>indica</i> L.	Caesalpinaceae

Code	Genus	Species	Family
TAMXAP*	<i>Tamarix</i>	<i>aphylla</i> Karsten	<i>Tamaricaceae</i>
TECTGR	<i>Tectona</i>	<i>grandis</i> L.	<i>Verbenaceae</i>
TEPHCA	<i>Tephrosia</i>	<i>candida</i> DC.	<i>Papilionaceae</i>
TEPHVO	<i>Tephrosia</i>	<i>vogelii</i> Hook.	<i>Papilionaceae</i>
TERMAR	<i>Terminalia</i>	<i>arjuna</i>	<i>Combretaceae</i>
TERMBE	<i>Terminalia</i>	<i>belerica</i>	<i>Combretaceae</i>
TERMCA	<i>Terminalia</i>	<i>catappa</i> L.	<i>Combretaceae</i>
TERMCH	<i>Terminalia</i>	<i>chebula</i>	<i>Combretaceae</i>
TERMTO	<i>Terminalia</i>	<i>tomentosa</i>	<i>Combretaceae</i>
THEOCA	<i>Theobroma</i>	<i>cacao</i> L.	<i>Sterculiaceae</i>
THEVPE	<i>Thevetia</i>	<i>peruviana</i>	<i>Apocynaceae</i>
TOONCI	<i>Toona</i>	<i>ciliata</i>	<i>Meliaceae</i>
TOONSU	<i>Toona</i>	<i>sureni</i> Merr.	<i>Meliaceae</i>
TRIFAL	<i>Trifolium</i>	<i>alexandrianum</i>	<i>Papilionaceae</i>
TRISCO	<i>Tristania</i>	<i>conferta</i>	<i>Myrtaceae</i>
TRITSA	<i>Triticum</i>	<i>sativum</i> Lamk.	<i>Graminae</i>
VANIFR	<i>Vanilla</i>	<i>fragrans</i>	<i>Orchidaceae</i>
VETIZI	<i>Vetiveria</i>	<i>zizanioides</i> Stap.	<i>Graminae</i>
VIGNUN	<i>Vigna</i>	<i>unguiculata</i>	<i>Papilionaceae</i>
VITENE	<i>Vitex</i>	<i>negundo</i>	<i>Verbenaceae</i>
VITEPA	<i>Vitex</i>	<i>parviflora</i>	<i>Verbenaceae</i>
VITIVI	<i>Vitis</i>	<i>vinifera</i> L.	<i>Vitaceae</i>
VOANSU	<i>Voandzeia</i>	<i>subterranea</i> Thou.	<i>Papilionaceae</i>
VOCHHO	<i>Vochysia</i>	<i>hondurensis</i>	<i>Vochysiaceae</i>
WENDEX	<i>Wendlandia</i>	<i>exserta</i> DC.	<i>Rubiaceae</i>
WOODFR	<i>Woodfordia</i>	<i>fruticosa</i> S.Kurz	<i>Lythraceae</i>
WRIGAN	<i>Wrightia</i>	<i>antidysenterica</i>	<i>Apocynaceae</i>
WRIGTI	<i>Wrightia</i>	<i>tinctoria</i>	<i>Apocynaceae</i>
XANTSA	<i>Xanthosoma</i>	<i>sagittifolium</i> Schott	<i>Araceae</i>
XANTVI	<i>Xanthosoma</i>	<i>violaceum</i> Schott	<i>Araceae</i>
XYLOLA	<i>Xylosma</i>	<i>latifolium?</i>	<i>Flacourtaceae</i>
ZALAED	<i>Zalacca</i>	<i>edulis</i> Reinw.	<i>Palmaceae</i>
ZEAMAY*	<i>Zea</i>	<i>mays</i> L.	<i>Graminae</i>
ZINGOF	<i>Zingiber</i>	<i>officinale</i> Rosc.	<i>Zingiberaceae</i>
ZIZIIN	<i>Ziziphus</i>	<i>incurva</i>	<i>Rhamnaceae</i>
ZIZIJU	<i>Ziziphus</i>	<i>jujuba</i> Mill.	<i>Rhamnaceae</i>
ZIZIMA	<i>Ziziphus</i>	<i>mauritiana</i>	<i>Rhamnaceae</i>
ZIZITI	<i>Ziziphus</i>	<i>timorensis</i>	<i>Rhamnaceae</i>



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The Forestry/Fuelwood Research and Development (F/FRED) Project is designed to help scientists address scale farmers in the developing world for fuelwood and other tree products. It provides a network through which to exchange research plans, methods, and results on the production and use of trees that meet the household needs of farmers. These trees, in project terms, are multipurpose tree species (MPTS).

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