Working Report of the First Stage Development of a Needs Based Forestry Extension Information System for the DFW Forestry Extension Unit

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List Of Abbreviations

CAAEP Cambodia Australia Agricultural Extension Project
CFU Community Forestry Unit, Department of Forestry and Wildlife
GTZ-CGFP GTZ Cambodian German Forestry Project
DAE Department of Agricultural Extension, Ministry of Agriculture Forests & Fisheries
DFW Department of Forestry and Wildlife, Ministry of Agriculture Forests & Fisheries
FEU Forestry Extension Unit, Department of Forestry and Wildlife
FEIS Forestry Extension Information System
GTZ German Technical Cooperation Agency
IMU Information Management Unit, Department of Forestry and Wildlife
MAFF Ministry of Agriculture Forests & Fisheries
Executive Summary

1. This is a working report of institutional strengthening activities undertaken with the aim of establishing a Forestry Extension Information System (FEIS) in the Forestry Extension Unit (FEU) of the Department of Forestry and Wildlife.

2. The development of the FEIS is at an initial stage. The approach to the assignment was participatory, involving the FEU staff in determining short-term FEIS development priorities. The approach was also needs-based, with FEIS development tasks being structured around information system related obstacles and problems now being encountered by FEU teams following the current FEU Work Plan.

3. The current status of FEU information systems is underdeveloped. Major obstacles identified to information systems development for forestry extension include: the English language barrier; low staff computer literacy; and underdeveloped paper-based information systems. There is also a lack of an information system to support field extension workers evolving information needs during the implementation phase of the pilot forestry extension project in Oudong, Kampong Speu province.

4. A definition of aims and objectives for FEIS development is provided. Objectives are described for both the short and long term.

5. The short-term strategy to develop the FEIS focuses on the full range of factors that are inhibiting the free flow of information needed to develop the FEU to fulfill its role in extension. The most important inhibiting factors at this stage are typically in the form of a lack of defined procedures for staff and a lack of simple forms and paper-based information systems.

6. A framework for the FEIS is provided, structured around the current FEU Work Plan. Information system components of the FEIS are: Institutional Development and Training; Forestry Information System Development; Extension Strategy Development; Extension Materials Production and Stakeholder Coordination and Dissemination.

7. The major findings for the FEIS Institutional Development and Training component are that there are few needs at this stage for developing internal information systems due to the small number of staff and institutions covered. However, three key issues for FEIS development within the FEU as a whole are identified. Firstly, that the findings of this assignment in terms of recommended changes to staff working procedures and responsibilities are utilised to update job descriptions and the current FEU Work Plan. Secondly, that an institutional agreement be made to allow the support of the Information Management Unit (IMU) in FEIS development. Thirdly, that the findings of this assignment are incorporated into the FEU training needs analysis and that recommended training, particularly in computer skills, is undertaken at the earliest opportunity.

8. The major findings for the FEIS Forestry Information System Development component identified recommendations for a more specific set of roles for the team involved in this component and their specific training needs. In particular, a backup role for the other FEU teams is outlined in addition to defining a specific set of internal team responsibilities including servicing ad hoc information requests from field extension staff. Training focuses on building lead- team level computer skills to support other FEU teams and to lead FEIS upgrades in future.

9. The major findings for the FEIS Extension Strategy Development component relate to recommended new methods to boost the English-Khmer language translation capacity of the FEU and to provide new systems to collate, catalogue and analyse extension resource materials.

10. The major findings for the FEIS Extension Materials Production component relate to recommendations for improving information flows with field extension workers and rural people concerning their priority information needs and to improve feedback on already disseminated extension materials.

11. There are three major results for the FEIS Stakeholder Coordination and Dissemination component. Firstly, methods and tools for a new stakeholder information system have been put in place. Secondly, a new system and tools have been developed for PFO field extension workers to gain FEU support in meeting their ad hoc information needs from the field during forestry extension project implementation. Thirdly, a new system has been devised to begin to systematically collate data on forestry extension projects being undertaken throughout Cambodia.

12. A final section of the report addresses some key issues for longer-term development of the FEIS. These issues include institutional capacity building, future FEIS upgrades within the FEU, FEIS coverage expansion to support other PFO forestry extension workers and further building of coordination and networking mechanisms with stakeholders.

1. Introduction

GTZ through the Cambodian-German Forestry Project has been providing institutional strengthening support for the Department of Forest and Wildlife Forestry Extension Unit since 2000. The goal of this project is to develop a forestry extension system in a pilot area located in Oudong District, Kampong Speu Province. February-March 2000 saw preparations for the first national workshop on forestry extension. Results from the workshop in May 2000 are recorded in the report Forestry Extension in Cambodia: Proceedings from the First National Forestry Extension Workshop by Paul Mason. This report contains a detailed analysis of steps required to develop forestry extension in Cambodia. One of the key needs identified was the future development of a forestry information system.

Following this workshop, the planning process was commenced within GTZ-CGFP and FEU leading to the adoption of the first FEU Work Plan in August 2000. This work plan contained as one of its five priority objectives the development of a forestry information system. Activities for this objective included provision for contracting a consultant to support the development of this information system.

This consultancy has been undertaken and this is the working report of the assignment over a four week period during March-April 2001. A Terms of Reference for the assignment is found in the Annex to this report. During the course of the assignment Major Tasks shown in the original TOR were achieved through development of practical solutions and recommendations for particular FEU Work Plan FEIS development tasks, rather than as discreet task outputs. This change reflected early experience during the assignment that indicated the need to shift emphasis from more conceptual systems design approach to the more practical tasks of developing information system tools and procedures for the benefit of the FEU team.

2. The Approach adopted to FEIS Development during the Assignment

The approach adopted to FEIS development was participatory. For the period of the assignment a core FEIS Working Group was formed consisting of the consultant, one member of the FEU and one member of the Information Management Unit (IMU) of the Community Forestry Unit. These two staff worked almost exclusively on the FEIS assignment. Further, most members of the FEU worked with this core team through a series of meetings and exercises. The FEU is organised into five teams with each team responsible for a particular work plan objective. The FEIS team worked with each of the five teams in turn concerning information systems dimensions of their current activities. Face to face small group meetings, discussions and exercises with these teams accounted for more than half the total assignment time.

The approach to FEIS development was needs-based. The most important current stakeholder groups identified by the GTZ-CGFP at this early stage are the FEU itself, Provincial Forestry Office Extension workers and Cambodian rural people (particularly those involved in CGFP's pilot forestry extension project site in Oudong District, Kampong Speu province).

To begin FEIS development in a practical way the focus of activities became the current information needs of the FEU teams, and to a limited extent, PFO Kampong Speu extension workers, undertaking their current work plan activities. Part of the FEIS development also involved making recommendations to promote better information exchanges with rural people involved in forestry extension projects in future.

The meetings and exercises with FEU staff of each team focused upon determining information system related achievements and problems, and deriving
actions and recommendations to establish components of an FEIS to meet these current needs.

3. The Current Status of FEU Information Systems and Major Current Obstacles to Development of a Forestry Extension Information System

To contextualise the tasks ahead for FEIS development a necessary starting point is to understand the current status of information systems the FEU and obstacles for the development of an FEIS. Five major issues are highlighted here.

➤ The FEU is in the early stage of receiving technical support

- The FEU has only been operational with GTZ support and a defined work plan for nine months to date.
- This support has provided additional resources for equipment and staffing for institutional development.
- Information systems and related staff capacities however remain generally underdeveloped.

➤ The English Language Barrier- Is A Key Obstacle for FEIS Development

- Most information needed to develop the FEIS is in English language.
- English literacy levels among FEU staff, while variable, are generally low, effectively preventing the accessing of knowledge and information in English language media for many staff.
- PFO forestry Extension workers and rural people need information in Khmer language.
- The availability of information and knowledge concerning forestry extension in written Khmer language is extremely limited nation-wide.
- FEU staff are not fully aware of this limited range of Khmer language materials produced by other organisations for forestry extension, and the wider range of materials produced for non-forestry extension applications.
- Internal FEU English- Khmer translation capacity is very limited either due to lack of English language skills or a lack of time among those who can undertake translation.
- A Khmer- English translation system, in effect a type of information processing system, has not yet been put into operation.

➤ Low Computer Literacy & FEIS Development

- Computer literacy levels among FEU staff are generally low.
- Most staff can do basic word processing in Khmer (and some individuals in English) on MS Word.
- Only one FEU and two IMU staff have basic skills in MS Excel or other spreadsheet applications.
- None of the staff have skills in MS Access or other database applications.
- None of the staff have skills in Geographical Information System applications.
- Two IMU staff have received basic Internet training through the CFU.
- One staff member has strong skills in publication software for extension materials.
- Typing speeds are slow due to a lack of training and practice.
- Internal FEU data entry capacity for information systems is therefore limited.
- Currently FEU staff do not have capacity for computer-based analysis of statistical and other quantitative information.
- PFO forestry extension staff have not had the opportunity to develop computer literacy and do not have access to computers.
- In these circumstances short-term development of the FEIS must be largely based on paper systems.
- FEU and IMU staff have the capacity to learn and are keen to receive further computer training.

➤ Existing FEU mainly paper-based Information Systems are underdeveloped

- The limited available information related to extension held by FEU is typically compartmentalised between individual staff members, between teams and between units rather than being open and shared. Mechanisms for sharing such information are lacking.
- Paper based information systems for storing, classifying and communicating information are underdeveloped. Some ad hoc files, listings and reports have been made.
- Information stored is typically not categorised for easy access.
- Reports of compiled and stored in PFO offices (Khmer language) are not copied, stored or utilised by FEU in Phnom Penh.
- FEU staff lack experience in developing more systematic paper filing and distribution systems. There is a lack of standard procedures and forms for information collection.
- Computer based information systems are limited to MS word documents. (The exception is the Library Catalogue, an MS Excel spreadsheet maintained by the IMU).
- Attempts have been made to gather information on an ad hoc and individual basis according to immediate needs.
- The FEU and PFO Kampong Speu staff recognise a range of information needs for their extension functions but are not sure how to proceed to develop new simple systems.
- PFO information systems in most provinces will remain paper based into at least the medium term.

➤ Development of information linkages between FEU Phnom Penh and PFO Kampong Speu field extension workers working on the pilot project are at an initial stage

- A major achievement has been the completion of comprehensive field research on the project site in Oudong during the project planning phase and the dissemination of that information to stakeholders.
- Ongoing activities by PFO extension workers in conjunction with FEU and CGFP support are producing further important information exchange with FEU and DFW in English and Khmer language concerning project implementation.
- PFO extension workers have needs for further information service support from FEU Phnom Penh during the project implementation phase. The role of FEU in support of information needs of extension workers during this stage needs further development.
- Project monitoring and evaluation information systems are currently under developed.

4. Defining the Aim and Objectives for the Development of the Forestry Extension Information System

At this stage it is useful to provide an initial definition of the aims and objectives of the FEIS from experience gained during this technical support assignment. Objectives are divided into those for the short and longer term. Most work during this technical support assignment related to the short-term objectives.

Long Term Aim: The FEIS will serve to make forestry extension information freely and readily available for exchange among stakeholders to facilitate and support effective forestry extension work in Cambodian rural communities.

Short Term Objectives:

- Initial FEIS development tasks should be based upon providing improved information system components to support achievement of current FEU Work Plan Objectives and Activities.
• Initial stages of FEIS development will therefore concentrate on building pilot information system components to match short-term needs during the early phase of FEU institutional strengthening and the pilot stage of implementation of the field forestry extension project with PFO Kampong Speu.
• The FEIS should first be developed to serve the needs and build information exchange capacity for the four key client groups in the forestry extension process at this stage: 1.) FEU staff 2.) Provincial Forestry Office Forestry Extension Workers (Kampong Speu PFO pilot Extension Project) 3.) Cambodian rural people engaged in this forestry extension project 4.) The GTZ CGFP management team.
• FEIS components developed for the short term should be useable by FEU staff now within the limits of their current capacities and experience.

**Longer Term Objectives**

• Capacity building of FEU staff and an agreed support role for the IMU in FEIS development will be necessary to develop the FEIS over the medium to longer term.
• The FEIS at the central level in FEU Phnom Penh will move from simple mainly paper based systems to more sophisticated computer based systems.
• The FEIS will be scaled up to support forestry extension work in other PFO’s in Cambodia, using the experience gained in operating the FEIS paper based information systems.
• FEIS coverage will be expanded to provide improved national level information resources for forestry extension.
• The FEIS will increasingly play a role in networking in the broader community of forestry extension stakeholders.

5. Short Term Strategy to Develop the FEIS

A short-term strategy to develop the FEIS focuses on the full range of factors that are inhibiting the free flow of information needed to develop the FEU to fulfil its role in forestry extension.

These inhibiting factors at this stage typically relate to lack of systems, lack of procedures, a lack of simple tools and a lack of staff capacities or experience. Once these basic obstacles have been overcome more attention can be focused on developing more sophisticated, computer based information systems for the FEIS.

6. Defining an FEIS Framework

A framework is specified by setting out FEIS components, component content, stakeholders, language and media. The initial framework for the FEIS closely follows the current FEU Work Plan Framework. It is based upon working with existing staff capacities and needs in the FEU in pursuit of Work Plan Objectives.

6.1.1 FEIS Components

The FEIS has five components, which equate to the Objectives of the Current FEU Work Plan.

1. Institutional Development and Training Component.
2. Forestry Information System Development Component.
5. Stakeholder Coordination and Dissemination Component.

It can be observed that components 1) and 2) are support components of the FEIS to enable it to service the core information components of the FEIS-components 3) to 5).

6.1.2 FEIS Component Content

The content of each component must meet the following criteria at this stage.

• The content to be initially developed for each component is determined by the information needs of the teams working on the respective FEU Work Plan Objectives.
• Content must be simple and useable.
• Content will consist of new simple information system tools and/or new procedures as appropriate.
• Content to establish each component can include new system tools and/or new working procedures.

6.1.3 FEIS Stakeholders

The major stakeholders for FEIS development at this stage are;

• The FEU Unit itself.
• PFO extension staff on the Kampong Speu pilot forestry extension project.
• The GTZ CGFP management team.

6.1.4 FEIS Language

• The principal language platform for the FEIS at the initial stage is Khmer.
• Given the predominance of English language information sources on the input side of the system English-Khmer translation will be an important task in developing the FEIS.
• GTZ-CGFP support staff will require information outputs from the system in English language, there will therefore need to be capacity for Khmer-English translation.
• Translation should be mostly undertaken by contracted external translation services.

6.1.5 FEIS Media

The initial FEIS will be based on;

• Mostly on paper systems.
• These paper systems will consist mainly of new standardised forms and filing systems.
• Data entry for these paper systems should initially mostly be hand-written.
• Upgrades of these paper systems to computer based systems should be achieved with the support of external data entry services.
• Changes to work procedures.
7. Assignment Outcomes for Short term FEIS Development

The majority of assignment time was spent meeting with FEU teams working on each of the five FEU Work Plan Objectives. Initial meetings focused upon documenting information system related achievements and problems encountered by each team. This was done by going through the Activities in the Work Plan one by one. After this initial meeting the design of new information system tools and procedures to address these problems was undertaken by the consultant. In a follow-up meeting with the FEU Objective team the new tools were discussed and procedures were explained for implementation of the changes. At times revisions to the tools and procedures were made to improve design.

This method proved satisfactory to gain an understanding of FEIS related problems and to design tools to address those problems. However, time to practice the new procedures and tools was very limited. A further problem was that while the participation of all FEU Objective teams was achieved individual staff from those teams were sometimes busy with other duties and were unable to attend all such meetings.

The outcomes of this process are documented in more detailed Findings Summary tables for each Objective/ Component in the Annex to this report. These Annex tables are in the following format:

- FEU Work Plan Objective /Activity.
- Identified Problems in Information Processing.
- Action Implemented During This March/ April 2001 Assignment.
- Recommended Follow-Up and Future Actions.
- Follow-up Action by Whom.
- Follow-up Action by When.

Here in the main body of this report a summary is presented of the main FEIS development issues and outcomes related to each FEU team/ component. This summary for each FEIS component consists of:

- Major needs identified to develop the FEIS.
- Main actions taken to address these needs during this Assignment.
- Follow-up recommendations.

The summaries include references to content, stakeholders and language and media issues for each component.

7.1. Development of the FEIS Institutional Development and Training Component

7.1.1 Major Needs Identified to Develop this FEIS Component

This FEIS component is a support component to enable development of core FEIS Components 3) to 5). Discussions with the team indicated that internal information system improvements were not required at this stage to undertake institutional development and training activities. This is because the number of staff and the size of the institutions involved are small.

Because of the small scale of these activities there was no need for new formal information systems to store relevant information such as personnel listings, performance appraisals, manpower planning information, training service provider listings, training activity monitoring and training evaluations. Nor was there a need for information systems for the production of FEU extension training modules as this activity has not yet commenced. Therefore simple existing reports and plans were judged sufficient to meet current needs. In future, however, as training and institutional development activities are expanded to cover other Provincial Forestry Offices such systems will be required.

At the same time, there are needs for immediate improvements to procedures within this component of the FEIS. These improvements are crucial to enable the function and development of the whole FEIS through improving staff capacity and work methods. Without staff and institutional capacity in information management the FEIS cannot be developed.

The major needs within this component in this sense are as follows;

- Current job descriptions need to better specify FEIS tasks and responsibilities for FEU staff members.
- The FEU Work Plan needs to be updated to specify the new FEIS activities and responsibilities for each FEU team/ Objective. This includes better specifying team/ individual responsibilities for component information systems as separate sub-activities.
- The existing training needs analysis and training plans now being formulated need to more explicitly define training needs of staff for managing and operating information systems.
- A formal institutional agreement between FEU and the Community Forestry Unit (CFU) needs to be reached to allow the Information Management Unit (IMU) of the Office of Reforestation to provide support to the development of the FEIS within FEU and to share results with CFU.
- Translation services, using external service providers, need to be operationalised to begin overcoming the barrier of language to FEIS development.

7.1.2 Main Actions Taken to Address These Needs During This Assignment

- The specification of new FEIS tasks can be utilised to update job description tasks and responsibilities for FEU staff members.
- The FEU Work Plan can be updated to specify the new FEIS activities and responsibilities for each FEU team/ Objective.
- Training needs analysis and training plans can now be updated to more explicitly address training needs of staff for operating and managing the FEIS.
- A member of the IMU (Monu) participated as a core FEIS Working Group member almost full-time for the duration of the assignment, gaining exposure to issues of FEIS development.
- Recommendations for an IMU support role in FEIS were devised.
- The need and importance of external English-Khmer translation services has been clearly established and various means to operationalise the use of these services are suggested.

7.1.3 Elaboration of Selected Main Actions

Refer to Annex Table Findings Summary for Objective 1.

7.1.4 Follow-up Recommendations

- Job descriptions, the FEU Work Plan and training plans are to be updated to incorporate the newly specified FEIS tasks and training needs.
- A formal institutional agreement for IMU to support FEIS development is reached between CFU and FEU.
- Computer skills training should be implemented as a priority for all FEU staff.
7.1.5 Follow- up Recommendation Elaboration

Institutional Agreement for the Participation of the IMU in FEIS development

The Information Management Unit is a recently created unit within the DFW Office of Reforestation and is composed of two staff. It was established as a sub-unit within the Community Forestry Unit for the purpose of information processing support. In theory the IMU has a role in also supporting the FEU, one other main unit of the Reforestation Office alongside the CFU.

The participation of the IMU in this assignment indicated that IMU team members could make important contributions to the development of FEIS through their skills and participation. In particular this support is envisaged to be for the FEU Objective 2 (Forestry Information Systems Development) team. Effectively this FEU team is under-resourced for FEIS development with only one team member effectively available for office-based development tasks full time.

A suggested starting point is an agreement of a 50% time-share of the IMU between CFU and FEU, with FEU in exchange contributing extra resources to IMU in addition to those committed by CFU. IMU's role would be circumscribed by the tasks set out under the FEIS Forestry Information Systems Development Component. A second (external to FEU) role of IMU would be as a linkage with CFU to share results of FEIS development and the products from its information systems for CFU's benefit.

Computer Skills Training:

Training to develop computer skills of FEU staff is fundamental for future FEIS development and should be incorporated into current FEU training plans using the following guidelines:

- The most effective modality for computer training would be to hire external trainers who can also rent desktop PC's for training sessions outside the FEU. Training content should be based upon adaptation of FEIS paper systems to computer-based information systems.
- For FEU team members in general, key training tasks are identified as listed below. (see Component 2 for additional computer skills training recommendations for the FEIS Development team):
  - Further typing speed training.
  - Further training in table and form design.
  - Further training in MS Word functions including Tables functions.
  - Basic training in MS Excel.
  - Introduction to MS Access.

7.2 Forest Extension Information System Development Component

7.2.1 Major Needs Identified to Develop This FEIS Component

This FEIS component is a support component to enable development of core FEIS Components 3) to 5). This component is naturally the core for continued development of the FEIS itself. Effectively, this component is an information system about the FEIS information system.

To establish this FEIS component the major needs are determined as follows:

- The Objective 2-team need a clearer role defined for FEIS development.
- The other FEU teams need to be delegated responsibility for running components of the FEIS directly related to their own activities under the different Objectives. The FEIS team themselves cannot and should not directly undertake implementation of all FEIS component tasks.
- There is a major need for capacity building of staff to operate and supervise paper and computer-based information systems.
- There is a need for extra staff capacity for this team to develop the FEIS. While the team is nominally of two persons, effectively on one person is available for office-based FEIS development tasks on a regular basis (Sorun). The second team member (Sopy) has a busy field work schedule on other duties.
- An institutional agreement for the IMU (see Component 1) is needed to augment FEU staff capacity for FEIS development.
- Standard procedures, tools and systems need to be developed to collect, store and exchange information for all FEIS components.
- Critical to the FEIS is the improvement of information exchange between the FEU and PFO field extension workers. There is a need for the team responsible for this FEIS development component to take a lead role in building this functionality into the FEIS.
- A further core area of responsibility under this component should be the Library. Currently this is a CFU/IMU responsibility with minimal access to FEU staff to library resources. There is a need to open access to the library to FEU and to take steps to make it more user-friendly.
- There is a need for a new system to gather information on forestry extension projects being undertaken by other agencies in Cambodia.

7.2.2 Main Actions Taken to Address These Needs During this Assignment

The main actions taken during the assignment for this component were to involve two staff in a wide range of learn-by-doing exercises related to FEIS development, as the members of the FEIS Working Group. This experience was then used to as a basis for planning more clearly what the FEI team would need to do in future to enable development of the FEIS. Specific actions undertaken included the following:

- One Objective 2-team member (Sorun) and One IMU team member (Monu) formed the FEIS Working Group along with the consultant for the entire assignment.
- The FEIS Working Group participated in five days training and participatory exercises concerning concepts of information systems and exploring possible models for the FEIS.
- The FEIS Working Group participated in all the sessions with FEU Objective teams, thereby learning their FEIS related problems and needs. They also participated in discussions and training with the teams on new FEIS procedures designed to overcome these problems.
- The team participated in an initial meeting with PFO Kampong Speu extension workers to learn their needs for information to support their field extension work.
- The team met with four key external stakeholder organisations to discuss development of components of the FEIS.
- The team gained exposure to file, form and procedures design for information capture and dissemination with all FEU teams.
- The team received supplementary computer training and exposure to computer spreadsheet and database applications (see Actions Elaboration below).
- Simple but important improvements were made to the MS Excel Library catalogue by adding new classifying fields for existing data. A new version of the Library catalogue was then created (see new MS Excel file).
- The consultant designed a new form and procedures for the Forestry Extension Project Listing for Cambodia. However, there was not time to train the person who will be responsible for this activity (Sopy-who was undertaking field work.)
- The team, along with the consultant, were able to formulate a clearer role and set of responsibilities for this team in FEIS development by the conclusion of the assignment.

Elaboration of Selected Main Actions

Computer Skills Training:

- Basic training in MS Excel.
- Further training in table and form design.
- Further training in MS Word functions including Tables functions.
The team was given initial training in how to perform information system upgrades (paper systems to MS Word or MS Excel, MS Word Tables to MS Excel spreadsheets, MS Excel spreadsheets to MS Access database tables).

The team were given extra training in using selected tools in MS Excel (Data Form, Auto filters, Sort tools). Issues related to Khmer language input in MS Excel (cell formatting, table design) and information storage (limited sort capability) were also covered.

The team participated in simple redesign of the MS Excel Library catalogue involving adding new classifying fields for existing data to increase the usefulness of the catalogue.

The team was given introductory training on the Microsoft Access database.

Follow-up Recommendations:

- The FEIS Development team needs an institutional agreement for IMU participation (as described under FEIS Component 1).
- GTZ and FEU management need to examine the recommended new roles for the team and if found suitable approve them.
- The team should commence monitoring forthwith the implementation of new FEIS components by other FEU teams through fortnightly meetings with each team to check progress and implementation problems.
- The team should provide backup where implementation problems are encountered by the FEU teams.
- The team should implement the new PFO Information Request System to service field extension worker's information needs (See FEIS Component 5 section).
- The team should begin compilation of the Forestry Extension Project Listing for Cambodia (See FEIS Component 5 section).
- The new version of the MS Excel Library catalogue should be utilised and classifying fields for each record should be completed.
- The team should further build skills and experience in using paper-based information systems (see Recommendation Elaboration below).
- The team should receive additional computer skills training (see Recommendation Elaboration below).

7.2.5 Follow-Up Recommendation Elaboration

Recommended roles for the FEIS Development Team:

- The team should perform the key role of monitoring the implementation of the new information system components determined during this assignment by all FEU Objective teams.
- They should provide backup to the other FEU teams where necessary to achieve successful implementation of the new FEIS components.
- This team should take direct responsibility for the new PFO Information Request System designed to facilitate FEU servicing of the ad hoc information demands from the PFO Kampong Speu extension team during the implementation phase (See FEIS Component 5 section).
- Given the importance of English-Khmer Translation as a key information processing activity of the FEIS, the team should monitor and log any translation activities being undertaken in the FEU by various teams. They should be capable of arranging external translation services for new translation tasks. They should utilise these translation services to service the ad hoc Information Requests from PFO Kampong Speu where necessary.
- This team (with IMU participation) should assume direct responsibility for the Library and the proposed upgrades and changes to make it more user-friendly and accessible to FEU (and CFU) staff.
- The team (primarily through Soppy) should be responsible for compilation of the new Forestry Extension Project Listing for Cambodia using the new file and form for this purpose (See further elaboration section below).
- On completion of additional training the team should perform the function of peer trainers/technical backup for other FEU teams in operating and developing paper and computer-based information systems.
- This team should lead future upgrades of FEIS components from paper to computer based systems in the FEU.
- In future this team should lead extension of the coverage of the FEIS (paper) systems to other Provincial Forestry Offices in Cambodia.

Paper-based Information Systems Skill Building:

The team can start to build their skills in operating and developing simple paper-based systems through on-the-job experience implementing the new FEIS systems and through building further on these. Backup can be called upon where external support is necessary.

- Learn to recognise needs among FEU teams for new paper systems to overcome obstacles to information exchange.
- Design new centralised filing systems where required using the new FEIS files as examples.
- Design category systems for information in new files using the new existing FEIS categorisation systems as examples.
- Design standard forms where needed using the existing FEIS forms as examples.
- Design new procedures where needed using the new FEIS procedures as examples.

Computer Skills Training:

The Objective 2 team should form the lead team in building capacity for computer based information processing within the FEU. Key training tasks for this team are identified as are as follows:

- Further typing speed training.
- Further training in table and form design.
- Further mid level training in MS Word functions including Tables functions and Mail Merge.
- Post basic MS Excel training especially in Spreadsheet and Workbook design and the use of MS Excel Tools (Data Filter, Data Form, Pivot Tables).
- Basic training in MS Access.

7.3 Development of the FEIS Extension Strategy Component

7.3.1 Major Needs Identified to develop this FEIS Component

While the longer-term focus of this FEIS component is information systems for the development of an extension strategy, most short-term activities in fact relate to the planning and supporting the production of forestry extension materials.

Major information systems needs identified at this stage for this FEIS component are as follows:

- A Khmer-English Translation system is needed as a priority information processing system in this component of the FEIS. The predominance of English language extension resource materials limits their usefulness, accessibility and applicability for analysis and planning new FEU extension packages for field extension worker and rural population stakeholders.
- Adaptation and translation and of key extension materials in English language into Khmer language.
- A more systematic approach to collection of forestry extension and other extension materials from other stakeholders.
- A central cataloguing system of extension resource materials.
- Standardised forms and procedures for making Abstracts of collected resource materials.
- Methods and procedures for analysing resource materials for use in design of FEU extension material packages.
- Further speed-typing training to boost productivity in using MS Word for data entry and word processing.
- Basic MS Excel training would be useful for their work.

7.3.2 Main Actions Taken to Address these Needs During this Assignment
7.3.3 Follow-up Recommendations

- Meet key external stakeholders with the express aim of collecting samples of all their produced extension materials in a systematic manner.
- Enter all extension materials collected in the new Extension Materials Catalogue.
- Commence using the Abstract Summary form to summarise extension resource material content.
- Trial use of the new information processing form to assist conversion of external extension material resource inputs to new FEU extension product outputs.
- Form a Key Extension Materials Khmer Translation Committee. The committee is at first to choose one high priority material available only in English for translation into Khmer and then carry out this translation process using external translators and publishers.

7.3.4 Follow-Up Recommendation Elaboration

Key Extension Materials Khmer Translation Committee:

The aim of this Committee is two-fold. First it is to facilitate rapid access to important English Language materials for Khmer language stakeholders. Second it is to begin institutionalising a translation system within the FEU, based on the use of external translation services, that can be applied to any other translation tasks in future.

It is suggested that the committee consist of members from the FEU Objective 3 and Objective 4 teams and Ly Chou Beang of the CFU. As a first step, the committee is to choose one high priority training or extension material available only in English, for translation into Khmer. They are then to carry out this translation process using external translators and publishers. If a success this process can be repeated in future (Based on Ly Chou Beang’s original idea).

7.4 Development of the FEIS Extension Materials Production Component

7.4.1 Major Needs Identified to Develop This FEIS Component

This Objective team is directly concerned with the current production of extension materials. This team is experienced in extension materials production and therefore has more developed information systems for their work.

They themselves, however, identify problems and needs for new information systems;

- An information system to better identify the evolving extension material needs and priorities of extension workers and rural people as the key stakeholders;
- An information system to provide feedback from extension workers and rural people stakeholders for extension materials already produced and disseminated in the past.
- Translation and adaptation support systems to process English language/sophisticated content resource materials into a Khmer language/simplified content extension materials, which are of use for Cambodian extension workers and rural people.
- A system to catalogue extension resource materials already collected.
- Internet training for staff to search for and gather material on the net for FEU extension material.
- Further refinement of the new stakeholder by media matrix.

7.4.2 Main Actions Taken to Address These Needs During This Assignment

- Discussed with the team using future periodic field visits to PFO Kampong Speu extension workers and rural people as a means of better gauging demand for extension materials from these stakeholders and to obtain feedback on extension materials already distributed.
- Discussed with Concern a role for them in assisting FEU to determine extension materials demand and to obtain feedback on produced extension materials among extension workers and rural people on their community forestry projects. They are interested in pursuing this cooperation through further meetings.
- Improved design of the stakeholder x media matrix by providing i) a more generic classification of media types and ii) additional categories of stakeholders from the conceptual training component of this assignment (see Annexes).
- New Extension Resource Materials Cataloguing System as per Component 3.
- Introduced the new procedures for materials dissemination now to be undertaken by Component 5 team under the FEU Work Plan including how to use the new forms/lists to organise future distributions.

7.4.3 Follow-up Recommendations

- Enter obtained extension resource materials in the new Extension materials catalogue.
- Monitor information demand from field extension workers by checking the new log of Information Requests to FEU held by Objective team 2.
- Formulate a plan for regular field visits to Kampong Speu PFO extension workers and periodic meetings with villagers to gain a clearer understanding of demand for new extension materials and to gain feedback on produced materials.
- Meet Concern to discuss their role in assisting extension materials needs identification and feedback from their community forestry projects.
- Work with Objective team 5 for organising future materials dissemination.
- Arrange extra Internet training with Monu from IMU focusing on Internet searches and book-marking key Internet sites.

7.5 Development of the FEIS Coordination among Stakeholders Component

7.5.1 Major Needs Identified to Develop This FEIS Component

The team working on this Objective has two very different tasks. In terms of the FEIS the first task is to boost information flows between the FEU and PFO forestry extension project. The second task is to create a system for information sharing to a broader stakeholder community working in areas related to forestry extension at the national level in Cambodia.

The main needs for this component of the FEIS related to information exchange with PFO Kampong Speu are;
PFO Extension workers on the Kampong Speu pilot project are now implementing the pilot forestry extension project. They expressed interest in gaining FEU support in seeking out information that they find they need on an ad hoc basis as they proceed with implementation with their different rural communities.

- By establishing such an extension worker information servicing capacity in FEU for this pilot extension project valuable long term lessons will be learned, and capacities built, to service other PFO extension workers on other forestry extension projects in future.

The main needs for this component of the FEIS related to information needs on stakeholders at the national level are:

- A centralised, standardised and categorised listing of stakeholders containing contact information.
- In particular, a listing of stakeholders involved in implementing forestry and non-forestry extension projects in Cambodia.
- An information system of Forestry Extension Projects in Cambodia.

7.5.2 Main Actions Taken to Address These Needs During This Assignment

Related to FEIS systems for Coordination with PFO Kampong Speu.

- A new PFO Information Request system has been developed to aid PFO extension workers obtain backup from FEU Phnom Penh to meet their ad hoc information needs during project implementation (see Recommendations Elaboration section and form in Annexes).

Related to FEIS systems for National level Coordination and dissemination to stakeholders:

- A new centralised Stakeholder Listing file has been designed to enable uniform collection of stakeholder contact information. The listing includes a categorisation system to group individual stakeholders by type (see Annexes).
- Photocopies of this Stakeholder Listing will be used to organise details of future dissemination. The Stakeholder Listing Forms include blank fields to record dissemination details after they are photocopied for each new dissemination job (dissemination job name, number of copies by organisation, receipt confirmation).
- Several informal training sessions were held with the team member responsible for the Stakeholder Listing (Meng) to explain how to follow procedures and how to acquire relevant information.
- Work on building the Stakeholder Listing has already started.
- The team member responsible for the Stakeholder Listing (Meng) attended meetings and visits along with the FEIS Working Group to CCC, and Concern and CAAEP/DAE to obtain new information and ideas for the Stakeholder Listing.

For less familiar categories of stakeholders, procedures for obtaining information for these categories of stakeholders were gone through with Meng.

- Design for a Forestry Extension Project Listing for Cambodia has been completed.

7.5.3 Follow-Up Recommendations

- Implement the new PFO Information Request system.
- Complete compilation of the Stakeholder Listing.
- Consider entering the Stakeholder Listing on MS Excel using external data entry support.
- Use photocopies of the Stakeholder Listing to plan and organise upcoming dissemination.
- Ensure that all new FEU dissemination are undertaken using Objectives team as is laid down in the Work Plan.
- Commence compilation of the Forestry Extension Project Listing for Cambodia.

7.5.4 Follow-Up Recommendation Elaboration

The PFO Information Request System:

This is a proposed system to aid PFO extension workers obtain backup from FEU Phnom Penh to meet their ad hoc information needs during project implementation with rural communities.

This new system consists of two parts:

- New, twice monthly information exchange meetings with PFO Kampong Speu extension workers to discuss evolving information needs and to collect new information requests from extension workers and deliver results from previous requests. It is proposed that one meeting per month be held in Kampong Speu (alternating between the PFO Office and the Oudong District Office) and the other in FEU Phnom Penh (preferably as an add-on meeting to other PFO meetings the same day).
- A simple Information Request Form for completion by PFO extension workers. This form also contains space for FEU Phnom Penh to record processing information on receipt of the request. The completed forms will be returned with the information obtained by FEU to PFO staff and a copy filed in FEU for future reference.

Steps to implement the PFO Information Request System are as follows:

- Sopy and Monu should train copy of FEU and PFO Kampong Speu extension workers on the PFO Information Request System and use of the new PFO Information Request Forms. This can be done at the first information exchange meeting at PFO Kampong Speu.
- Sopy should then fulfill the role of link person between PFO Kampong Speu and FEU by i) arranging and attending the twice-monthly meetings with PFO staff concerning their information needs ii) communicating the PFO Information Requests to FEU and iii) delivering information request results to PFO Kampong Speu.
- Sopy and Monu should process the Information Requests received from PFO Kampong Speu in FEU and dispatch results for each Information Request to PFO Kampong Speu through Sopy.

Forestry Extension Project Listing for Cambodia

Many FEU staff keenly expressed the need for this type of information to assist them in their work. A system has been developed to build this listing. While this activity relates to component 5 (Coordination among stakeholders) it is best housed as a task for the Component 2 team.

The compilation of the Forestry Extension Project Listing for Cambodia can be commenced through the following steps under the direction of Sopy. He is a member of both the Component 2 and Component 5 teams. Sopy has not to date received training on this task as he was out of the FEU office undertaking fieldwork.

- Sopy will first need to familiarise himself with the new form and procedures for compiling the listing. He should be able to do this himself given his experience.
- Sopy will then need to provide training to other FEU (and possibly CFU) staff who undertake regular field project visits in using the new Forestry Extension Project Listing system and form.
- Sopy will need to establish and later maintain the Forestry Extension Project Listing as a central paper file consisting of returned completed Forestry Project Information forms.
- Sopy will add to this listing himself through completing the form on his own field visits.
- Sopy will liaise with SMRP in their compilation of their Natural Resource Management Project Listing for Cambodia.
• Sorun and Monu should provide backup support to Sopy in this activity.

8. Issues for Longer Term Development of the FEIS

Most of this assignment focused necessarily on short term objectives for initial FEIS development. In this section some longer-term FEIS development issues are raised.

8.1 Institutional Capacity Building for FEIS

There needs to be a strong and ongoing commitment to capacity building of FEU staff to operate and manage information systems for forestry extension. Capacity building will need to be planned and implemented ahead of proposed FEIS upgrades within the FEU, particularly in terms of computer skills. It should be noted that internal desktop computer availability is already inadequate to sustain a program of computer skills training for FEU staff internally. Nor is there office space for training. A solution is to hire external computer training facilities.

Building capacity for Khmer-English language translation within FEU using external translation services is a key task in promoting extension information flows. Over the longer term and with experienced gained in this activity consideration should be given to establishing an internal translation unit within FEU if warranted.

An institutional agreement to formalise a role for the IMU in FEIS development is a short-term priority to provide needed extra staffing capacity to the FEU team responsible for FEIS development. Over the longer term the IMU can function to a greater extent as a link to share the benefits of FEIS development with the Community Forestry Unit. It will also have enhanced capacity to meet demand for new information systems from within the CFU.

8.2 FEIS Upgrades Within the FEU

Once paper-based FEIS systems are operational a medium term task will be to start to upgrade component systems to more sophisticated computer based applications such as MS Excel and MS Access. This upgrading will require the previous completion of the computer training suggested here by FEU staff. It will also involve a heavy one-time data entry load as data is transferred. Consideration should be given to hiring external data entry support for during these upgrades.

FEIS upgrades in future will also involve the addition of new components to the FEIS. These new components may be for the purpose of providing improved national level information resources for forestry extension. Other new components may be added to service increasingly sophisticated information flows between FEU, extension workers and rural people. One medium term need will be to establish project monitoring and evaluation information components for the information system.

As upgrades proceed the existing availability of desktop personal computers in FEU will soon become inadequate and more desktops will need to be purchased. Backup systems for these computer based FEIS components will also need to be established. Eventually networking of FEU desktops will need consideration.

8.3 FEIS Expansion to Support Extension in Other Provincial Forestry Offices

In this initial pilot phase the FEIS is being developed to service PFO extension workers in only one province, Kampong Speu. A very important task for the future is to extend FEIS support to more, and eventually all, Provincial Forestry Offices in Cambodia.

This expansion to other PFO's will be based largely on the paper-based FEIS information systems now being developed and experience gained with their implementation. PFO's will most likely not have access to computers even in the medium to long term. This is an important additional rational for the development of effective simple paper-based FEIS components.

Within Provinces in future a network of District Forestry Offices, Commune Development Committees and Village Development Committees may well be established to facilitate the extension process. These will lead to more demands for FEIS services and the likely decentralisation of some FEIS functions.

8.4 Coordination and Networking with Stakeholders

This assignment has incorporated some initial actions and recommendations to build horizontal networks with other agencies involved in forestry extension. These actions and recommendations are reported individually in the preceding section on assignment outcomes. Even at this early stage building relationships with key stakeholders such as CAAEP/DAE, Concern and the SMPR of the Ministry of Environment have been shown to be of great assistance to FEU. These organisations are also very supportive of the FEU and look forward to its contribution in the area of forestry extension to the extension community in Cambodia.

An initial meeting was held with each of the above organisations to explore the information systems they have developed and to explore avenues of future collaboration. Members of the FEIS Working Group from FEU attended these meetings along with the consultant. The major outcomes of these meetings and implications for future collaboration are summarised below.

Cambodia Australia Extension Project/Department of Agricultural Extension

CAAEP/DAE Strengths for collaboration with FEU

• DAE with institutional support from CAAEP is the lead agency in government agricultural extension activities in Cambodia.
• CAAEP/DAE has high standard institutional and staff capacity in extension resulting from long term support of the agricultural extension system in Cambodia. CAAEP inputs have built on previous support by Australian Catholic Relief to agricultural extension workers and to Prek Leap College, the tertiary institution training agricultural extension workers in Cambodia.
• While the application of CAAEP/DAE is agricultural rather than to forestry extension it is their institutional knowledge and experience of developing the extension process itself in Cambodia that is of high value to the FEU. There are also overlaps between agricultural and forestry extension applications (see below).
• It has well developed and institutionalised information exchange systems between field extension workers and the district, province and national levels.
• The DAE at the national level has a well-established operational role supporting field extension workers demands for information and servicing such information requests on a routine basis.
• CAAEP/DAE has established technical support units for extension including a library system, training unit, a Media Office for producing extension materials, a farming systems research team and mapping and analysis capacity.
• The DAE Media Office is a source of a range of agricultural extension materials produced in Khmer language using different media in response to demands from field extension workers.
• CAAEP/DAE has developed a range of training packages for Cambodian extension workers.
• CAAEP/DAE has an experienced extension team operating in six provinces at the province, district and community levels. They have also just commenced operations in Kampong Speu province, the site of the GTZ-CGFP pilot forestry extension project.
• The CAAEP/DAE has many cooperative agreements with partner agencies for extension activities at the provincial level.
Thus CAAEP/DAE has much to offer FEU as a collaborative partner.

**CAAEP/DAE Information Systems**

- Strong decentralised information exchange systems from national and provincial levels to community level extension workers.
- Written and meetings based report systems form the basis of information requests from extension workers to provincial and national levels, including information demands from farmers.
- Decentralised library system to the province level (and just commencing at district level) for storing and disseminating extension materials and other information resources for extension workers.
- DAE shares the language problem with FEU that most extension resource materials are in English language.
- Experienced Media unit producing extension materials on the basis of demand from extension workers.
- Existing extension information systems for decentralised planning, project implementation, large-scale training and institutional development, and monitoring and evaluation.
- Farming systems research and analysis for extension including Geographical Information Systems (GIS) capacity.
- Developed linkages with technical and research support agencies for accessing technical information in agriculture.

**CAAEP/DAE Interests in FEU and the Development of Forestry Extension**

- CAAEP/DAE is keenly interested in supporting the development of forestry extension in general as a component of the Cambodian extension system.
- DAE extension workers themselves are interested in establishing forestry related projects in response to demand from the rural communities they are working in. However, they lack forestry training and extension material packages and technical expertise to undertake such projects.
- Improvements in access to such information would be very useful to agricultural extension workers in the field.
- Particular forestry-related demands for information expressed by DAE included community forestry but also other applications related to tree crop cultivation such as agro-forestry systems, fruit tree cultivation, wood fuel, and fodder trees.
- DAE would like samples of all FEU forestry extension materials produced to date and to be advised of plans for current extension materials production.

**Next Steps in Collaboration for FEU:**

- Regular quarterly information exchange meetings with CAAEP/DAE.
- Form a working group to discuss information needs for tree crop production.
- FEU teams to arrange meetings with various specific technical support units of DAE as specified in the recommendations by component in this report.

**Concern**

**Concern Strengths for collaboration with FEU**

- Concern is an international (Irish) NGO that has been active over the long term in community development projects in Cambodia. These activities have included community forestry projects as one component. Concern can be regarded as one of the lead NGO’s in community forestry in the national context in Cambodia.
- Concern has established community forestry projects in Kampong Chhnang, Pursat and Banteay Meanchey provinces.
- Community forestry projects have involved cooperative agreements with provincial level forestry offices and the capacity building of these local staff.
- Forestry projects in each community are undertaken over the long term and considerable institutional knowledge has been accumulated concerning the implementation of community level forestry projects.
- Concern has been an active participant and facilitator in the Community Forestry Network at the national level and has advocated and participated in national level policy debates on forestry.

**Concern Information Systems**

- A developed stakeholder information system including a comprehensive file of contact information, business card files, email and mailing lists for the forestry sector.
- Information exchange system between national and community levels through of Forestry Management Committees composed of local people and meetings with extension workers.
- A comprehensive Resource Centre/library accessible to provincial and national level staff.
- Concern shares the language/content problem that most resource materials are in English with sophisticated content while Khmer language simplified content materials for extension workers and rural people remain very limited.
- Production systems for Khmer language extension materials in response to field staff demands.
- Production of the newsletter Community Forestry in Cambodia.
- Long-established networks in the field of community forestry in Cambodia and including other NGO’s active in forestry issues.
- Strong community level relations with rural people and knowledge base on forestry project implementation in the community context.

**Concern Interests in FEU and the Development of Forestry Extension**

- Concern is very supportive of the development of the FEU and forestry in Cambodia.
- There is a general need for more information for extension workers and rural people engaged in community forestry projects.
- Especially there is a need for simple Khmer language technical forestry extension materials.
- The provision of appropriate Khmer language technical forestry extension materials by FEU is therefore an important task.
- The design of extension materials by FEU would benefit from inputs and feedback from experienced community forestry field staff.
- Concern is prepared to play a role assisting FEU Objective 4 team to gain more information on the demand for forestry information from rural people on their community forestry projects and feedback from them related to the usefulness of produced FEU extension materials.
- They would like a list of extension materials produced by FEU and samples of these materials. They would also like to be informed as to current FEU extension materials production plans.
- They are prepared to offer their stakeholder information to assist FEU compile its new stakeholder listing. They would like a copy of this FEU stakeholder listing to augment their own listings.

**Next Steps in Collaboration for FEU:**

- FEU Objective 4 team to meet Concern regarding cooperation to increase feedback on forestry information demands from rural people and feedback on FEU extension materials. Also to provide Concern with a list and samples of FEU extension materials.
- FEU Objective 5 team to meet Concern to seek their assistance in compiling the FEU stakeholder listing.
- With Concern FEU to consider establishing regular collaboration and information exchange meetings.
- Explore future collaboration with Concern based on their substantial community level forestry project implementation experience. This would be of benefit to FEU in two ways. Firstly, to provide an additional source of information on issues of importance to field extension workers and rural people engaged in community level forestry project (i.e. additional to the experience gained on the Kampong Speu GTZ-CGFPI pilot forestry extension project). Secondly as a source of insight to assist FEU forestry project implementation planning and systems development for the future. For Concern this would provide an opportunity to extend the lessons they have learned to a broader range of projects.
SMRP

A meeting was held with SMRP to discuss collaboration with FEU on one particular project. This was the compilation of a national directory of Natural Resource Management Projects for Cambodia. This project is being undertaken under the leadership of the World Wildlife Fund and has just commenced. It is proposed that forestry projects be included in this directory. This dovetails neatly with FEU’s need to build a directory of forestry projects in Cambodia.

Collaboration between FEU and SMRP on this project has already commenced. The form and procedures designed for FEU for the Forestry Project Listing in Cambodia will be shared with SMRP as an initial model of how the broader task of collating information on all natural resource management projects in Cambodia might be achieved.

Agreement was also reached that FEU would share its listing of Forestry projects with SMRP as it accumulates. Similarly SMRP would share any information on forestry projects that they compile independently. SMRP can also provide support in the form of entering the listing on a computerised database and will provide access to FEU to this database.

Next steps in collaboration will involve the sharing of the Forestry Project Information form with SMRP and follow-up meetings to share the listings being compiled. This work will be of mutual benefit to both agencies.

Cooperation Committee of Cambodia (CCC)

The CCC is the umbrella organisation for international and Cambodian non-government organisations operating in Cambodia. CCC was paid a familiarisation visit by the FUE FEIS Working group during the assignment.

Useful modes of collaboration in future between FEU and CCC would relate to the following issues:

- CCC is a key communication link with the NGO community in Cambodia. They can play an important role in dissemination of forestry extension information in the NGO community.
- CCC NGO mail boxes as an easy means for FEU to disseminate information to a wide range of smaller NGO’s including local NGO’s.
- CCC library is a technical resource agency for aspects of library development including cataloguing systems, training of librarians and Khmer language materials on small library development.
- The NGO Forum a unit within the CCC is an active policy lobbying agency for NGO’s and may advocate on forestry issues on behalf of NGO’s.

Proposed next steps in collaboration with the CCC include:

- Follow-up visits to CCC library concerning development of the FEU library.
- Enlisting CCC support in soliciting information from NGO’s identifying which ones have forestry related projects in Cambodia and information on the nature of those projects.
- Use of CCC mailboxes during future FEU extension material disseminations.

There was insufficient time to broaden these horizontal networks with stakeholders further during the assignment. Recommendations are made for future collaboration with the above agencies and should be followed up in the short term. In the medium term networking should be extended to other priority stakeholders, such as those listed below.

Collaboration with Other Agencies

There is a range of other agencies that were unable to meet during the assignment but which are important for FEU to build relationships in future. A selected list is presented below for future follow-up.

- Prek Leap College (agricultural extension training college).
- Chamcar Duang (technical agricultural university).
- U.N. Development Programme (information on forestry activities by all U.N. agencies)
- U.N. Food and Agricultural Organisation (technical forestry and extension information resources).
- U.N. World Food Programme (Research and analysis related to forestry and food security, pilot forestry projects).
- Oxfam Land Study Project (research and advocacy on the new forest land law).
- Other NGO’s in Cambodia with Forestry projects (yet to be identified).
- Thai, Vietnamese and Malaysian government forestry agencies.
- NGO’s and development programmes with forestry projects in Thailand, Laos, Vietnam or Malaysia (yet to be identified).
- Cambodian National Archives (historical Cambodian forestry reports from the early colonial era onwards).

9. Conclusion

The Forestry Extension Information System is at an initial stage of development in the Forestry Extension Unit. This assignment is the first technical support for development of the FEIS. Essentially a pilot FEIS is now being developed as a counterpart to early stage FEU institutional support and the pilot PFO Kampong Speu forestry extension project.

The short-term strategy to develop the FEIS during the assignment has focused on the range of factors which are inhibiting the free flow of information needed to develop the FEU to fulfil its role in forestry extension. Reviewing the needs, actions and recommendations to establish each component of the FEIS it can be seen that these inhibiting factors are mostly to do with basic issues such as lack of systems, procedures, simple tools and staff capacities. Once these basic obstacles have been overcome more attention can be focused on developing more sophisticated, computer based information systems for the FEIS.

The FEIS is absolutely central to the successful functioning of the FEU. FEIS development tasks involve all FEU teams. If the actions and recommendations from this assignment are followed up, a good beginning in FEIS development will have been made. In particular, information flows within the FEU should be improved.

The next stage is now to allow some time for implementation of these suggestions for FEIS development by FEU. This period of perhaps two or three months should be followed by a first review of progress achieved and obstacles encountered. Over the longer term this process of initiating further FEIS developments, and reviewing progress, is how the FEIS will be further improved and expanded toward the aim of making forestry extension information freely and readily available to support effective forestry extension work in Cambodian rural communities.

List of Annexes


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<tr>
<th>FEU Work Plan</th>
<th>Achievements To Date Mar./ Apr. 2001</th>
<th>Identified Problems in Information Processing</th>
<th>Action Implemented March April 2001</th>
<th>Recommended Follow-up/ Future Actions</th>
<th>Who</th>
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</thead>
<tbody>
<tr>
<td>1. Redefine roles and responsibilities of FEU staff</td>
<td>- Draft plan complete, update in progress.</td>
<td>- Concerning training needs for information processing refer to this section for each Objective/ Activity.</td>
<td>- Check of computer skills proficiency through working with the teams including trial data entry and typing.</td>
<td>- Concerning training needs for information processing refer to this section for each Objective/ Activity.</td>
<td>Sothea/Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td>1.1. Update job descriptions for staff members</td>
<td>- First draft job descriptions completed.</td>
<td>- Key competencies for Information processing that are lacking are as follows.</td>
<td>- Check of paper based information system skills through participation in design of new systems with the teams and trial data coding and entry.</td>
<td>- Check of paper based information system skills through participation in design of new systems with the teams and trial data coding and entry.</td>
<td>Sothea/Chharda</td>
<td>Jun?</td>
</tr>
<tr>
<td>1.2. Review and update existing Work Plan / prepare new Work Plan</td>
<td>- An initial training needs analysis has been commenced.</td>
<td>- English reading comprehension &amp; Khmer translation skills.</td>
<td>- Check of English comprehension/ translation skills through team discussions and specific tasks.</td>
<td>- Check of English comprehension/ translation skills through team discussions and specific tasks.</td>
<td>Sothea/Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td>1.3. Provide Training</td>
<td>- Key competencies for Information processing that are lacking are as follows.</td>
<td>- Skills and experience in operating paper-based information processing and storage systems.</td>
<td>- Check of computer skills proficiency through working with the teams including trial data entry and typing.</td>
<td>- Check of computer skills proficiency through working with the teams including trial data entry and typing.</td>
<td>Sothea/Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td>1.3.1. Prepare selection criteria for participation at trainings</td>
<td>- English reading comprehension &amp; Khmer translation skills.</td>
<td>- Typing speed proficiency.</td>
<td>- MS Excel additional training for Objective 2 team.</td>
<td>- MS Excel additional training for Objective 2 team.</td>
<td>Sothea/Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td>1.3.2. Extension techniques</td>
<td>- Skills and experience in operating paper-based information processing and storage systems.</td>
<td>- Medium level skills in MS Word including Table design.</td>
<td>- MS Access introduction for Objective 2 team.</td>
<td>- MS Access introduction for Objective 2 team.</td>
<td>Sothea/Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td>1.3.3. English courses</td>
<td>- Typing speed proficiency.</td>
<td>- Development of new systems with the teams and trial data coding and entry.</td>
<td>- In the near future, information processing roles and responsibilities should be incorporated into each job description as specific tasks. This can be done simply by incorporating approved recommendations from this report into job descriptions for respective Objective team members.</td>
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<td>Sothea/Chharda</td>
<td>Jun?</td>
</tr>
<tr>
<td>1.3.4. Computer Training</td>
<td>- Medium level skills in MS Word including Table design.</td>
<td>- Definition of information processing job tasks by Objective team &amp; Activity.</td>
<td>- In the near future, information processing roles and responsibilities should be incorporated into each job description as specific tasks. This can be done simply by incorporating approved recommendations from this report into job descriptions for respective Objective team members.</td>
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<td>Jun?</td>
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<tr>
<td>1.3.5. Management techniques</td>
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<td>Jun?</td>
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<tr>
<td>1.3.6. Information management</td>
<td>- In the near future, information processing roles and responsibilities should be incorporated into each job description as specific tasks. This can be done simply by incorporating approved recommendations from this report into job descriptions for respective Objective team members.</td>
<td>- More English &amp; Khmer typing training.</td>
<td>- In the near future, information processing roles and responsibilities should be incorporated into each job description as specific tasks. This can be done simply by incorporating approved recommendations from this report into job descriptions for respective Objective team members.</td>
<td>- In the near future, information processing roles and responsibilities should be incorporated into each job description as specific tasks. This can be done simply by incorporating approved recommendations from this report into job descriptions for respective Objective team members.</td>
<td>Sothea/Chharda</td>
<td>Jun?</td>
</tr>
<tr>
<td>1.3.7. Study Tours</td>
<td>- More training in MS Word table design.</td>
<td>- Suggested best computer training modality is to hire an instructor with computers available for training outside the office. Training should be based around current Work Plan tasks.</td>
<td>- More training in MS Word table design.</td>
<td>- More training in MS Word table design.</td>
<td>Sothea/Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td></td>
<td>- At a later stage of the project if more provincial extension workers are to be included in training, a training capacity building database would be recommended listing trainees, service providers and courses attended.</td>
<td>- ACE English training will slowly reduce current English comprehension limitations. Medium term external translation support should be arranged.</td>
<td>- Suggested best computer training modality is to hire an instructor with computers available for training outside the office. Training should be based around current Work Plan tasks.</td>
<td>- Suggested best computer training modality is to hire an instructor with computers available for training outside the office. Training should be based around current Work Plan tasks.</td>
<td>Sothea/Chharda</td>
<td>May onward</td>
</tr>
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### Objective 1: Institutional Development and Training (continued.)

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<tbody>
<tr>
<td>1.4. Equipment / stationary</td>
<td>- Many additional resources have been provided by GTZ support and new requirements are also being met. Resources for paper based information systems are adequate. - 3 x desktop computers are now available in FEU</td>
<td>- Desktop computer time availability is limited for individual staff. More desktops will be required when computer based information processing increases in future. - There is also a lack of computer time for computer training. - Team members are not all certain of procedures to get cash advances or reimburse expenses for purchasing stationary, books, or photocopying etc. If in doubt they will not collect or copy the information, a block to information processing at a most basic level.</td>
<td>- Observation and report. - Concerning cash advance/ expenses claims processes, walked the team through the process of getting a cash advance and submitting an expenses claim to GTZ (CCC visit).</td>
<td>- Monitor computer access adequacy among FEU team members. - Prepare to increase computer capacity as information processing shifts to computer based systems. - Hire external computers for training sessions. - Get staff to understand the rules and to feel at ease with the petty cash advance and expenditure claims system so they are not deterred from spending money to collect information.</td>
<td>Sothea/ Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td>1.5. Translation services</td>
<td>- Most translation work, of limited quantity, is done by the FEU team themselves. - External translators have not been systematically used.</td>
<td>- In-house FEU translation capacity is inadequate to meet the demands for translation inherent in their information processing work.</td>
<td>- Raised the language translation issue with teams concerning their activities.</td>
<td>- External translation service providers need to be identified and translation tasks need to be determined, prioritised and delegated to them.</td>
<td>Sothea/ Chharda</td>
<td>May onward</td>
</tr>
<tr>
<td>1.6. Travel costs (DA/NA)+ etc....</td>
<td>- Resources are available through GTZ.</td>
<td>- Some team members are not familiar or are still uncertain about how to claim expenses for local travel within Phnom Penh (own moto fuel/ parking fees or meter dup fare). If they are uncertain they will not make the journey to visit other locations in Phnom Penh to attend meetings or to collect information. This is another block to information processing at a most basic level.</td>
<td></td>
<td>- Go over the rules for transport expenditure claims again, with particular reference to local travel expenditure within Phnom Penh. Get staff to feel at ease with the travel expenses claims system so they are not deterred from spending money for travel to collect information.</td>
<td>Sothea/ Chharda</td>
<td>May onward</td>
</tr>
</tbody>
</table>

### Objective 2: Development of a Forestry Information System (FEIS Working Group: Sorun, Monu, Kent)

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<tr>
<td>2.2. Determine type of information to be collected</td>
<td>- Some progress in establishing information needs. - Some information is still stored elsewhere in the library cupboard. - Lack of plans and systems for other types of information collection e.g. meetings, liaison with external stakeholders, questioning of key informants.</td>
<td>- Lack of central filing systems. - Lack of categorisation of information held. - The library is rarely utilised. It lacks shelf space, is normally locked, staff don't know how to use it, most materials are in English, coding systems on category boxes are explained only in English codes. - PPD forestry reports are not part of the library collection and are not stored within the Department in Phnom Penh. Ly Chhoe Bovong suggests there are many such reports in PPD offices.</td>
<td>- Conceptual training on elements of information system design. - Practical development of standard procedures, tools and systems for information collection to meet Work Plan Objective team information needs.</td>
<td>- Key role of Objective 2 team to provide monitoring of implementation of new information systems and to provide backup to other teams. - Sorun &amp; Monu to follow up with each team their progress in implementing new information systems at least once/month. - Support implementation of new systems where problems are encountered by each team.</td>
<td>Sorun/ Monu</td>
<td>May onwards</td>
</tr>
<tr>
<td>2.3. Standardize the format of collected information</td>
<td>- A few first attempts at various listings of information of importance in MS Word tables. - Achieved Entry of approx 280 library materials on MS Excel file provided by SMP (Monu).</td>
<td>- Standardised forms lacking almost universally for information collection. - Lack of central filing systems.</td>
<td>A range of new forms and paper filing systems have been designed and trained to build improved information systems for all teams. - Most input will simply be in the form of hand writing on forms either in Khmer or English.</td>
<td>- Key role of Objective 2 team to check information categorisation and inputs are proceeding and are correct for each new objective information system. - Sorun &amp; Monu to follow up with each team their progress in categorising and entering information into their systems at least once/month. - Library Recommendations: - White Category box codes and code descriptions in Khmer language on box labels. Place a Khmer copy of the code list on the front of the library cupboard. - Post instructions on using the Library on the front of the library cupboard. - Post borrowing forms on the front of the library cupboard. - Unlock the library at the beginning of each working day. - Hold a training on using the library with the new system.</td>
<td>Sorun/ Monu</td>
<td>May onwards</td>
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#### Objective 2: Development of a Forestry Information System (continued).

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<tbody>
<tr>
<td>2.4. Create Forestry Extension Website on Mekong Info</td>
<td>Not yet undertaken.</td>
<td>- Lack of plan for site content.</td>
<td>None.</td>
<td>- Invest minimum inputs at this stage. - Jurgen and Saran to provide content to be incorporated into the existing Mekong Info. Website.</td>
<td>Jurgen/ Saran</td>
<td>Aug.</td>
</tr>
<tr>
<td>2.4.1. Liaise with SMPP staff in Hanoi on website development.</td>
<td></td>
<td>- Complete lack of internet site design skills.</td>
<td></td>
<td>- Start by having the new GTZ DFW Forestry Extension Project brochure included on the Mekong Info. site.</td>
<td>Jurgen/ Saran</td>
<td></td>
</tr>
<tr>
<td>Develop electronic and non-electronic data storage and retrieval system together with consultant</td>
<td></td>
<td>- Relatively unimportant due to lack of access to internet of most important stakeholders (extension workers &amp; rural people)</td>
<td></td>
<td>- The involvement of IMU in FEIS development will be at the executive level. Agreement between managers to use IMU for this task is needed on a due share basis with CPU.</td>
<td>Sonun/ Monu</td>
<td>July onwards</td>
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<tr>
<td>3.1. Collect relevant extension material</td>
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<tr>
<td>3.1.1. Collect material during Project visits</td>
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<tr>
<td>3.1.2. Collect relevant extension material from CAEPE in MAFP and other Projects.</td>
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<td>Note Re Objective 3 Activities:</td>
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<td>A new Extension Materials Production Plan was agreed at the &amp; GTZ DFW Forestry Meeting in February. The plan aims to increase the number of materials produced by various organisations to a total of 500. The following are the highlights of the plan:</td>
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<td>- Project field visits have begun and some useful materials have begun to be collected on these visits and from other organisations.</td>
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<td>- Extension materials collection has been limited and ad hoc.</td>
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<td>- Team unsure which organisations to visit &amp; which materials to collect.</td>
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<td>- Current visits to organisations do not always include obtaining their extension materials.</td>
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<td>- Extension materials have not been systematically collected from CAEPE: DAE &amp; Community Forestry NGOs.</td>
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<td>- A new procedure: Samples of all extension materials to be collected during visits to CAEPE/DAE and Concern. Both organisations have been advised of this future visit at an initial meeting with the FEIS working group.</td>
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<td>- A cataloguing system for collected extension materials has only just started and needs development to move easily catalogue and access materials.</td>
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<td>- The Objective 4 team and the Objective 4 team are both currently collecting extension materials for different purposes and neither team necessarily knows what materials have been collected by the other team.</td>
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<td>- The current materials collection is limited and ad hoc.</td>
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<td>- Lack of plan for site content.</td>
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<tr>
<td>- Complete lack of internet site design skills.</td>
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<tr>
<td>- Relatively unimportant due to lack of access to internet of most important stakeholders (extension workers &amp; rural people)</td>
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<tr>
<td>- The involvement of IMU in FEIS development will be at the executive level. Agreement between managers to use IMU for this task is needed on a due share basis with CPU.</td>
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<td>- A phased approach to information storage has been adopted.</td>
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<tr>
<td>- Initially paper filing systems have been developed. At a later date, the team has received a computer file system. Later, data entry support will be provided to enter the information from these paper systems into the computer file system.</td>
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<td>- The involvement of IMU in FEIS development will be at the executive level. Agreement between managers to use IMU for this task is needed on a due share basis with CPU.</td>
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<td>- The involvement of IMU in FEIS development will be at the executive level. Agreement between managers to use IMU for this task is needed on a due share basis with CPU.</td>
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<tr>
<td>- New procedure: To improve extension materials collection when meeting with other organisations make visits to head offices where materials are produced and attempt to get samples of all materials produced in one visit.</td>
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<tr>
<td>- New Extension Materials Catalogue. A new simple paper file cataloguing system has been developed. This consists of a master list of Extension Materials categories and a standard form to record the availability of each material under such category. A practice session entering materials was undertaken.</td>
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<tr>
<td>- Visit CAEPE/DAE and Concern to collect samples of all their produced extension materials.</td>
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<tr>
<td>- Make a plan to prioritise visits to other key organisations to collect extension materials utilising existing knowledge of the team and the new Stakeholder Listings (Objective 5.3). Visit head offices and collect samples of all materials in one visit if possible.</td>
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<tr>
<td>- Enter all extension materials collected in the new Extension Materials Catalogue file. Complete forms using hand writing in Khmer or English.</td>
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<tr>
<td>- Make sure extension materials held by the Objective 4 team is also included in the Extension Materials Catalogue and that they have easy access to the file to use it.</td>
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<tr>
<td>- If the Catalogue becomes large in future consider hiring a data entry person to transfer the Catalogue to MS Word and enter all the materials utilising existing knowledge of the team and the new Stakeholder Listings (Objective 5.3). Visit head offices and collect samples of all materials in one visit if possible.</td>
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<tr>
<td>- Consider further typing training for team members to facilitate future data entry on MS Word.</td>
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<tr>
<td>- Consider MS Excel training to enable the Catalogue to be transferred from MS Excel into MS Excel for future use.</td>
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Objective: 3: Development of a Forestry Extension Strategy (continued)


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<tr>
<td>3.2. Review and analyze collected extension material</td>
<td>This Activity has not yet started.</td>
<td>- The team is unsure of the idea of the activity and what to do.</td>
<td>- New Information Abstracting Form and File system.</td>
<td>- Discuss recommendation that review and analysis should initially be limited to tasks related to production of specified extension materials which have not yet commenced (under the new production plan).</td>
<td>Sothea &amp; Puthyra</td>
<td>May</td>
<td>onward</td>
</tr>
<tr>
<td>3.2.1. Prepare criteria for analysis</td>
<td></td>
<td>- A particular problem (previously) was a lack of focus for this activity as there is no plan for which materials should be produced in which priority.</td>
<td>- Form designed to record Abstracts. One copy to be placed with material and a second copy filed.</td>
<td>- Begin Abstracts of important already collected materials using new Abstract Information Form.</td>
<td></td>
<td></td>
<td>June</td>
</tr>
<tr>
<td>3.2.2 Feed back analysis into Information system</td>
<td></td>
<td>- Time available to read and review materials is limited.</td>
<td></td>
<td>- Form a Key Extension Materials Khmer Translation Committee with an Objective 3 &amp; 4 team members &amp; Ly Chhou Beang of CUF. Together choose one high priority material in English to be translated into Khmer and carry out this translation using external translators &amp; publishers. If successful continue the selection of other key materials using the same system.</td>
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<tr>
<td>3.3. Prepare recommendations based on analysis</td>
<td>This Activity has not yet started.</td>
<td>- The predominance of English Language resources for designing new extension materials is a major problem with difficulties in reading and comprehension of English materials.</td>
<td>- Identify potential users of FEU Work Plan time frames</td>
<td>- Consider hire of external translators to create Abstracts or full translations into Khmer of high priority English Language documents.</td>
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</tr>
<tr>
<td>3.3.1. Recommend necessary activities or preparation of extension material based on analysis of material</td>
<td></td>
<td>- Team lacks confidence, experience and a defined procedure for Abstracting key information from source materials.</td>
<td></td>
<td>- Consider hiring a skilled Khmer librarian or researcher to build team skills and methodology for Abstracting information from documents.</td>
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<td></td>
<td>- FEU members generally may lack some skills in interpreting statistical and other quantitative data from source materials.</td>
<td></td>
<td>- Undertake a competency check for interpretation skills for Descriptive Statistics found in reports among FEU team.</td>
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<td></td>
<td>- New procedure: Related to 3.1 and 3.2 above restricts recommendations based on analysis to materials planned under the new production plan Extension Materials Production Plan.</td>
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Objective 4: Development and dissemination of extension material (FEIS Working Group Chharda, Tech, Sivoun, Sorun, Monu, Kent)

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<tr>
<td>4.1. Identify potential users of extension material</td>
<td>This team is experienced in extension material production with two members having been engaged in this work (with limited resources) since 1990. Information systems relevant to these activities are therefore substantially already in place. The lack is in further build on these strengths.</td>
<td>- The team is aware of the new priority to develop new extension materials that are primarily in demand from field extension workers and rural people. However, while they have some information, they remain uncertain as to what extension materials extension workers and rural people need. A system to identify the needs and priorities of these stakeholders now needs to be developed.</td>
<td>- Discussed future periodic field visits to extension workers and rural people as a means to better gauge the demand and priorities for new extension materials from these stakeholders.</td>
<td>- Discuss with Concern a role for them in assisting FEU in determining extension materials needs of extension workers and rural people on their projects and to gain involvement of Objective 3 team in this planning.</td>
<td>Chharda, Sivoun, Tech.</td>
<td>May</td>
<td>onwards</td>
</tr>
<tr>
<td>4.1. Produce a matrix showing clients, type of needed extension material, ranking of importance, time frames</td>
<td>- A matrix of stakeholder group by</td>
<td>- Team feels they lack feedback on extension materials already disseminated to extension workers</td>
<td>- Discussed future periodic field visits to extension workers and rural people as a means to gain feedback on extension materials produced from these stakeholders.</td>
<td>- Monthly check records of incoming information Requests from PFO Kampot Spoi to FEU (refer Objective 2 tasks). Sorun/ Monu will maintain the new file of such requests.</td>
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<td>- A matrix of stakeholders group by</td>
<td>- Discussed future periodic field visits to extension workers and rural people as a means to gain feedback on extension materials produced from these stakeholders.</td>
<td>- Monthly check with Sarah/ Britta and PFO extension workers on arising extension material demands during routine meetings.</td>
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<td>- Formalise a plan for regular field visits / meetings to gain a clearer understanding of extension materials demand from extension workers and rural people. Involve Objective 3 team in this planning.</td>
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</tbody>
</table>
4.2. Contract publishing agency (ies) as professional back-up for material production

- From prior experience a network of material production service providers is known to team members already and is utilized for production.

- Previous contracting was done on the basis of experience with publishing agencies. The team recognizes a more formal publishing contracting system will be needed in future.

- New procedure

- The team proposes that in the near future they will do a refresher round of print houses and services and will record findings in a written report.


Objective 4: Development and dissemination of extension material (continued)

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<tr>
<td>4.3.1. Prepare material for Arbor Day</td>
<td>- The team has been producing extension materials since 1993 including the Forestry Magazine, brochures, posters, technical handbooks, a cartoon book and a video. These have all been based on the work of Tech and Chharda, at times with very little feedback from villagers and field extension workers in Kampong Speu listing all such previous production.</td>
<td>- The majority of resources for producing extension materials are in English language and are sophisticated. They require translation and considerable adaptation to be of use to Cambodian extension workers and rural people.</td>
<td>- Extension Materials Catalogue (refer to Objective 3)</td>
<td>- The roles of the Objective 3 and Objective 4 teams in collecting and disseminating extension materials needs clarifying. Perhaps both teams should continue this activity to meet their different needs but coordinate more closely so that each team knows what material is held by the other.</td>
<td>Chharda, Sivourn, Tech.</td>
<td>May</td>
<td>Aug.</td>
</tr>
<tr>
<td>4.3.2. Improve ‘Forest Magazine’</td>
<td>- A plan defining and prioritizing extension materials production has just been completed.</td>
<td>-以往的文献数据库只包含很少的信息，现在需要系统化。</td>
<td>- The Objective 4 team will catalogue materials acquired in the new Extension Materials Catalogue, using the new master-category list for grouping materials and the new forms to list material details (see Sivourn/ Phnom Penh/ Monu concerning how to do this). This catalogue is also for use by the Objective 4 team.</td>
<td>- Participate in Key Extension Materials Khmer Translation Committee (see Activity 3.2)</td>
<td>Chharda, Sivourn, Tech.</td>
<td>Jun.</td>
<td>Aug.</td>
</tr>
<tr>
<td>4.3.3. Prepare other material based on list under activity</td>
<td>- Production of new materials for Arbor day is underway and the Magazine is being improved.</td>
<td>- Chharda reports that she has some difficulties conducting internet searches.</td>
<td>- New procedure</td>
<td>- Consider providing internal training to Tech and Sivourn.</td>
<td>Chharda, Sivourn, Tech.</td>
<td>May</td>
<td>Jun.</td>
</tr>
<tr>
<td></td>
<td>- Team has accumulated various extension materials from some other agencies. This collection is running parallel to and independent from the collection of extension materials by the Objective 3 team. This collection has been ad hoc rather than systematic. Collected materials are not catalogued.</td>
<td>- Monu to spend a morning or afternoon with Chharda helping her learn more internet skills including designing and saving searches and bookmarking key internet sites.</td>
<td>- New procedure</td>
<td>- Evaluate new resource cataloguing methods as indicated by Sivourn concerning how to do this.</td>
<td>Monu, Chharda, Sivourn, Tech.</td>
<td>Jun.</td>
<td>Aug.</td>
</tr>
<tr>
<td></td>
<td>- One team member has some Internet skills to access new materials on-line.</td>
<td>- Ideas for future Forestry Magazine content (kent):</td>
<td>- The team proposes that in the near future they will do a refresher round of print houses and services and will record findings in a written report.</td>
<td>- Include a conceptual section containing articles on some fundamental concepts of forestry extension such as “extension” and “sustainable forestry”.</td>
<td>Chharda, Sivourn, Tech.</td>
<td>May</td>
<td>Aug.</td>
</tr>
<tr>
<td></td>
<td>- New procedures are now in place for the Objective 5 to handle distributions in future. There are also new forms and procedures to organise dissemination to different stakeholder groups.</td>
<td>- Include a section in the FEU- GTZ Project for meeting our technical methods, training available etc.</td>
<td>- New dissemination is to be undertaken by Meng under work plan Objective 5. New stakeholder forms will allow the recording of individual distributions on copies of the stakeholder list. Distribution decisions will need to be made as the range of stakeholders is more adequately covered. The Objective 5 and Objective 4 teams will need to work together on this new dissemination process using new methods.</td>
<td>- Include a section on current common questions from villagers and field extension workers on Forestry Extension projects.</td>
<td>Chharda, Sivourn, Tech., with Meng</td>
<td>Aug.</td>
<td>Aug.</td>
</tr>
</tbody>
</table>


Objective: 5 Coordination Among Stakeholders (FEIS Working Group: Meng, Sorun, Monu, Kent).

<table>
<thead>
<tr>
<th>FEU Work Plan Objective/ Activity</th>
<th>Achievements To Date Mar./ Apr. 2001</th>
<th>Identified Problems in Information Processing</th>
<th>Action Implemented March April 2001- During Consultancy</th>
<th>Recommended Follow-up/ Future Actions</th>
<th>Who</th>
<th>By</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1. Conduct regular field mission trips to Kampong Speu Province</td>
<td>- No meeting with Sophy (in the field). - Frequent field support visits by FEU/GTZ team from Phnom Penh.</td>
<td>- Routine linkages for information sharing between FEU and PFO Kampong Speu need to be systematised and reinforced.</td>
<td>- Visit to PFO Kampong Speu to discuss field extension work and rural peoples information needs and methods for improved FUS support in meeting those information needs (refer to report).</td>
<td>- Sonuen/ Monu to arrange information meetings schedule with PFO Kampong Speu (one meeting/month as an add- on to routine meetings in Phnom Penh. One meeting/month PFO Kg, Speu Oudong)</td>
<td>Sonuen/ Monu</td>
<td>May</td>
<td></td>
</tr>
<tr>
<td>5.1.1. Support PFO field team in Kampong Speu</td>
<td>- Frequent field support visits by FEU/GTZ team from Phnom Penh.</td>
<td>- Agreed to set up specific twice monthly meetings between the Kampong Speu team and the FEU team (Sonuen/ Monu) to facilitate information exchange and the meeting of current field needs for information on an ad hoc basis. One meeting to be held in Phnom Penh as an add-on to existing meetings. A second monthly meeting to be held in Kampong Speu, alternating between town and Oudong each month.</td>
<td>- Design of a new simple information Request system and...</td>
<td>- Sonuen/ Monu to complete Khmer version of the new Information Request Form and make 40 copies for PFO Kg, Speu.</td>
<td>Sonuen/ Monu</td>
<td>May</td>
<td></td>
</tr>
</tbody>
</table>

| | - At first meeting Sonuen/ Monu... | - | - | - | |

| | | | | | | | |
This section provides a guide for using six new FEIS data forms developed during this assignment. These forms have now been numbered according to the FEU Work Plan Objective and Activity for which they are designed. To this Activity number a letter (A, B etc.) is added (A, B etc.) to identify the individual form. A guide for use of each form is presented in the sections below. The data forms themselves and related categorisation tables for use with them, follow this guide in numeric order.

Guide to Using the New Forestry Extension Information System Forms

This section provides a guide for using six new FEIS data forms developed during this assignment. These forms have now been numbered according to the FEU Work Plan Objective and Activity for which they are designed. To this Activity number a letter is added (A, B etc.) to identify the individual form. A guide for use of each form is presented in the sections below. The data forms themselves and related categorisation tables for use with them, follow this guide in numeric order.

All these forms will require translation into Khmer language for easy use by staff. English should also be retained on the Khmer language forms as small font subscript.

### Form Number

<table>
<thead>
<tr>
<th>Form Number</th>
<th>Form Name</th>
<th>Form Users</th>
<th>Form Purpose</th>
<th>Procedures</th>
</tr>
</thead>
</table>
| 3.1.1A | Extension/ Training Materials Catalogue Form | FEU Objective 3 & 4 teams. | To enable the cataloguing of extension and training resource materials in the possession of FEU Objective teams 3 & 4 in a central file. | To compile the FEU Extension/ Training Materials Catalogue Form:  
  - For each individual material first categorise which category if information it falls under by referral to the Extension/ Training Materials Category Master List.  
  - Use one copy (and later additional copies) of the form for each different category of materials. Label the category in the space provided on the form.  
  - Compile the catalogue by completing details for each material on the form.  
  - Both Objective teams 3 and 4 will need to complete these forms.  
  - The Extension/ Training Materials Catalogue file will be maintained by the FEU Objective 3 team. The Objective 4 team should have easy access to this catalogue at all times. |
<p>| 3.2.1A | FEU Extension/Training Resource Abstract Form | FEU Objective Teams 3 and 4. | A form to facilitate completing standardised abstracts of key information from extension or training resource documents reviewed by team members. | |
| 3.2.2A | Extension/ Training Material Information Processing Form | FEU Objective Teams 3 and 4. | This form is for the purpose of processing important extension information resources into useable FEU information outputs. It contains standardised instructions to plan the processing of such information from raw inputs to useable FEU material outputs. | |</p>
<table>
<thead>
<tr>
<th>Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete this form for individual documents evaluated as important information resources for FEU in the evaluation section of FEU Extension/Training Resource Abstract Form (Form 3.2.1A).</td>
</tr>
<tr>
<td>According to the type of information processing required the processing of the resource will need to be delegated to either FEU Objective Team 4, individual FEU staff members or external information processing service agencies (e.g., translation services, data processing services, editorial services). This form will act as a set of instructions for the work group delegated with this information processing task.</td>
</tr>
</tbody>
</table>

Form Number: 5.1.1A  
Form Name: PFO Extension Staff Information Request Form  
Form Users: PFO field Extension Staff and FEU Objective 2 & 5 teams.  
Form Purpose: This simple form is to facilitate the servicing of extension workers ad hoc demands for information through the support of FEU Phnom Penh.  
Procedures:  
- PFO Kampong Speu extension workers will need to be trained by the Objective 2 team on the use of this form.  
- A stock of these forms will need to be provided to the extension workers.  
- Extension workers simply fill in the upper section of the form and forward it to FEU Phnom Penh whenever they would like FEU support to locate information.  
- Alternatively, the form can be completed by FEU in response to any verbal requests for information from extension workers.  
- The FEU Objective 2 team then seeks out the information required.  
- FEU completes the lower section of the form and returns the results of the enquiry to the extension worker. A copy of the Information Request Form is returned together with the results, enabling extension workers to learn the process of information collection.  
- A copy of the completed Information Request Form is stored in the PFO Information Request Log file in the FEU office.  

Form Number: 5.3.2A  
Form Name: Stakeholder List and Distribution Form  
Form Users: FEU Objective 4 & 5 teams.  
Form Purpose: To enable the compilation of the FEU Stakeholder Listing by the Objective team 5. In addition when these forms are copied they serve as listings for the planning of FEU extension materials disseminations by Objective team 4.  
Procedures:  
- To compile the FEU Stakeholder Listing:  
  - For each stakeholder first categorise which stakeholder group they belong to by referral to the Stakeholder Category Master List.  
  - Use one copy (and later additional copies) of the form for each Stakeholder Category. Label the category in the space provided on the form.  
  - Compile the FEU stakeholder listing by completing all contact details for each stakeholder on the forms.  
- For organising future dissemination of FEU extension materials:  
  - Photocopy the stakeholder lists and pass them to Objective team 4. Objective team 4 then fills in the fields on the form related to the distribution being undertaken (Distribution tasks name, number of copies by stakeholder).  
  - The Objective 4 team then returns the list to Objective team 5 to carry out the distribution of materials. A column on the form allows confirmation of receipt of materials by each stakeholder.  
  - On completion of the distribution the distribution list is filed in a new Completed Distributions file maintained by the Objective 5 team.  

Form Number: 5.3.2B  
Form Name: Forestry Project Information Form  
Form Users: FEU Objective 5 team, other FEU staff visiting forestry project sites in the field or other stakeholder organisations with forestry projects.  
Form Purpose: This form is to standardise information collection concerning forestry projects being implemented by all agencies in Cambodia. This information will be used to compile a listing of these forestry projects for reference by DFW staff.  
Procedures:  
- Training will need to be given to all FEU staff in the use of this form by the Objective 5 team.  
- FEU staff are to gather the forestry project information shown on the form during field forestry project and organisation office visits.  
- One form should be completed for each separate forestry project. If one organisation has more than one forestry project then a separate form should be completed for each such project.  
- The completed forms should be returned to the FEU Objective 5 team member responsible for collating these forms in a new Cambodian Forestry Project Information File.  

DFW Forestry Extension Unit: Extension/Training Materials Catalogue Form (Form 3.1.1A)  
Extension/Training Material Category:  
(Copy from Extension Material Category Master List)  
| Media | Language | Title | Publisher | Brief Notes on MainContent |
Forestry Extension Information System

Extension/ Training Materials Category Master List (For use with Form 3.1.1A)

The list below shows the categories of different existing extension materials of interest to DFW FEU as a resource for the purposes of production of FEU's own extension materials.

Lists of individual extension materials within each of these categories will be compiled under Activity 3.1 of the FEU Workplan by Puthyra and Sothea.

Extension Materials Category Master List

<table>
<thead>
<tr>
<th>Extension Materials Category Master List</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Community Forestry.</td>
</tr>
<tr>
<td>2. Forestry Extension</td>
</tr>
<tr>
<td>3. Non- Forestry Extension (eg agriculture, fish, livestock, community development)</td>
</tr>
<tr>
<td>4. Forestry Science (eg ecology, biology)</td>
</tr>
<tr>
<td>5. Forestry Technical</td>
</tr>
<tr>
<td>6. Firewood Technical..</td>
</tr>
<tr>
<td>7. Non- Forestry Technical (eg agriculture, fish, livestock, community development)</td>
</tr>
<tr>
<td>8. PFO Kampong Speu Project</td>
</tr>
<tr>
<td>9. Mapping/ GIS</td>
</tr>
<tr>
<td>10. Extension Equipment</td>
</tr>
</tbody>
</table>

FEU Extension/ Training Resource Abstract Form (Form 3.2.1A)

Resource Identification Details

<table>
<thead>
<tr>
<th>Resource Identification Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title:</td>
</tr>
<tr>
<td>Author:</td>
</tr>
<tr>
<td>Year:</td>
</tr>
<tr>
<td>Type of Media: (eg book, brochure, map, video)</td>
</tr>
</tbody>
</table>

Extension Materials Catalogue Category.

Document Internal Abstract Details

<table>
<thead>
<tr>
<th>Document Internal Abstract Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does this document itself contain a Table of Contents?</td>
</tr>
<tr>
<td>Does the document itself contain an Executive or similar summary?</td>
</tr>
</tbody>
</table>

Manual Recording of Resource Contents and Summary

If the document itself does not have a Table of Contents, write down your summary of the main topic sections of this resource here:
If the document itself does not have an Executive or similar summary, write down your summary of this resource here:

Evaluation of the Resource:
Overall how would you rate the usefulness for FEU to develop Extension/ Training Materials in future?

List here which topics or components that you found particularly interesting or useful for FEU to develop Extension/ Training Materials in future:

Give your recommendation on how this resource should be utilised by FEU in future to develop Extension/ Training Materials.

Has a Resource Information Processing Form (Form 3.2.2A) been completed?  

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

Reviewer Details:
Name:  
Unit:  
Date:  

DFW FORESTRY EXTENSION UNIT
RESOURCE MATERIAL INFORMATION PROCESSING FORM- (Form 3.2.2A) Pg. 1 of 2

<table>
<thead>
<tr>
<th>INPUT INFORMATION CHARACTERISTICS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder/ Source</td>
</tr>
<tr>
<td>Language</td>
</tr>
<tr>
<td>Media Type</td>
</tr>
<tr>
<td>Title/ description of input information (write here):</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INFORMATION TYPE TICK ONE CATEGORY ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Forestry Extension Concepts and Methods.</td>
</tr>
<tr>
<td>02. Forest Extension Practice</td>
</tr>
<tr>
<td>03. Forest Resources Inventory</td>
</tr>
<tr>
<td>04. Forestry Technical and Scientific information</td>
</tr>
<tr>
<td>05. Government Law and Policy</td>
</tr>
<tr>
<td>06. Geographical Information</td>
</tr>
<tr>
<td>07. Socio-economic Information</td>
</tr>
<tr>
<td>08. Training Materials</td>
</tr>
<tr>
<td>09. Extension Materials</td>
</tr>
<tr>
<td>10 GTZ Project Information</td>
</tr>
<tr>
<td>11. Other/ To Be Classified</td>
</tr>
<tr>
<td>12. New Component</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REQUIRED INFORMATION PROCESSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Language Translation</td>
</tr>
<tr>
<td>Edit/ Adapt Information Content</td>
</tr>
<tr>
<td>Change Media (non- electronic)</td>
</tr>
<tr>
<td>Computer Word Processing</td>
</tr>
<tr>
<td>Computer Spreadsheet Processing</td>
</tr>
<tr>
<td>Computer Database Processing</td>
</tr>
<tr>
<td>GIS/ Remote sensing Processing</td>
</tr>
<tr>
<td>Statistical Analysis</td>
</tr>
</tbody>
</table>
**Instructions:**
Use this form to write down requests you have for information from DFW FEU. Use one form for each separate request for information. You can write your request in English or Khmer. Send the form to the FEU in Department of Forestry in Phnom Penh. FEU. They will act on this request and advise you of results.

### Details of Person and Office/Unit making Information Request

- **Name:**
- **Office/Unit Name and Address:**
- **Date:**
- **Any Phone or email contact details:**

### Details of Information Requested:

Write down the information you would like to find from FEU Phnom Penh. Be as specific as you can about what you need.

### Required Information Outputs

Specify the Output/end-product required. If insufficient space here attach an Output Specification.

### Dissemination to Stakeholders

Specify the Stakeholder Groups to which Outputs should be disseminated and the number of copies to be distributed to each Stakeholder. (If insufficient space here attach a Stakeholder Dissemination List).

### Estimated total cost of Output preparation and dissemination.

<table>
<thead>
<tr>
<th>Start Date</th>
<th>End Date</th>
<th>Total Working Days</th>
<th>Estimated Total Person Days</th>
<th>Estimated Total Cost</th>
</tr>
</thead>
</table>

### INFORMATION PROCESSING APPROVED BY:

**THIS TASK WILL BE UNDERTAKEN BY:**

- **Tasking Priority for this Task:**
  - High
  - Medium
  - Low

### DFW Forestry Extension Information System

**PFO Extension Staff Information Request Form (Form 5.1.1A)**

**Instructions:** Use this form to write down requests you have for information from DFW FEU. Use one form for each separate request for information. You can write your request in English or Khmer. Send the form to the FEU in Department of Forestry in Phnom Penh. FEU. They will act on this request and advise you of results.

Details of Person and Office/Unit making Information Request.

- **Name:**
- **Office/Unit Name and Address:**
- **Date:**
- **Any Phone or email contact details:**

Details of Information Requested:

Write down the information you would like to find from FEU Phnom Penh. Be as specific as you can about what you need.

### Section Below to be Completed by FEU Phnom Penh

**FEU Unit Phnom Penh- Details of Information Request Processing and Actions**

- **Date Request Received in FEU Phnom Penh:**
- **Name of Person Handling this Information Request:**

---

*Other Computer based applications from input*

- **Qualitative Analysis**

Specify processing tasks in more detail here: If insufficient space attach a separate processing task list.

- **Estimated Number of Person/ Days to complete the above processing tasks.**

### DFW Forestry Extension Information System

**PFO Extension Staff Information Request Form (Form 5.1.1A)**

**Instructions:** Use this form to write down requests you have for information from DFW FEU. Use one form for each separate request for information. You can write your request in English or Khmer. Send the form to the FEU in Department of Forestry in Phnom Penh. FEU. They will act on this request and advise you of results.

Details of Person and Office/Unit making Information Request.

- **Name:**
- **Office/Unit Name and Address:**
- **Date:**
- **Any Phone or email contact details:**

Details of Information Requested:

Write down the information you would like to find from FEU Phnom Penh. Be as specific as you can about what you need.

### Section Below to be Completed by FEU Phnom Penh

**FEU Unit Phnom Penh- Details of Information Request Processing and Actions**

- **Date Request Received in FEU Phnom Penh:**
- **Name of Person Handling this Information Request:**

---

*Other Computer based applications from input*

- **Qualitative Analysis**

Specify processing tasks in more detail here: If insufficient space attach a separate processing task list.

- **Estimated Number of Person/ Days to complete the above processing tasks.**
**FEU Information Request Actions & Results**

Actions taken to meet information request:

Achieved Result of Information search:

**FEU Information Feedback Record**

| Date of Sending Information from FEU Phnom Penh back to the Requesting Person/Office | |
| Method of sending return information (mail, by hand, etc.) | |

**DFW Forestry Extension Unit: Forestry Extension Information System Stakeholder Contact List and Distribution Form (Form 5.3.2A)**

**Stakeholder Category Master List**

(Copy from Stakeholder Category Master List)

**Distribution Task Name/ Details:**
(Leave blank on original list, fill in on copies of this list made for each distribution task)

<table>
<thead>
<tr>
<th>Stakeholder Contact Information</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation Name</td>
<td>Contact Person</td>
</tr>
<tr>
<td>1. All Units of the DFW Office of Reforestation.</td>
<td></td>
</tr>
<tr>
<td>2. All Offices of the DFW Phnom Penh</td>
<td></td>
</tr>
<tr>
<td>3. All Provincial Forestry Department Offices (specifying which have Forestry Extension Units).</td>
<td></td>
</tr>
<tr>
<td>4. All Government Ministries, and any UN Agency, Bilateral or Multilateral government partners of those ministries, with Forestry Extension Projects.</td>
<td></td>
</tr>
</tbody>
</table>

**Forestry Extension Information System**

**Stakeholder Category Master List (for use with Form 5.3.2A)**

The list below shows the categories of different stakeholders of interest to DFW FEU Unit for the purposes of dissemination of DFW FEU information and as a resource for DFW FEU to seek information relevant to their work.

Lists of contact details for individual organisations within each of these categories will be compiled under Activity 5.3 of the FEU Work Plan by Meng.

**Stakeholder Category Master List**

1. All Units of the DFW Office of Reforestation.
2. All Offices of the DFW Phnom Penh
3. All Provincial Forestry Department Offices (specifying which have Forestry Extension Units).
4. All Government Ministries, and any UN Agency, Bilateral or Multilateral government partners of those ministries, with Forestry Extension Projects.
Procedures Related to the Stakeholder Category Masterlist

- Information will be collected on each individual stakeholder within each of the above categories using the Stakeholder Contact List and Distribution Form. This form will be the list within each category.
- The Stakeholder Contact List and Distribution Form will contain the following information:
  - Organisation Name
  - Organisation Post/ Distribution Address.
  - Contact Person Name and Title.
  - Telephone & Email numbers.
- These forms will be stored in the FEU Stakeholder List paper file.
- There will be separate lists for each of the above categories.
- There will be separate lists in Khmer and English within each category as appropriate.
- Lists for distribution of each particular FEU material will be compiled using photocopies of these Stakeholder Contact List and Distribution Forms. After copying, particular distribution task details, stakeholders selected for distribution, and the number of copies per stakeholder are added in the spaces provided on the form for that particular task.

DFW Forestry Extension Information System

Forestry Project Information Form (Form 5.3.2B)

<table>
<thead>
<tr>
<th>Organisisation Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation Name:</td>
</tr>
<tr>
<td>Organisation/ Address:</td>
</tr>
<tr>
<td>Contact Person</td>
</tr>
<tr>
<td>Name/Title</td>
</tr>
<tr>
<td>Phone &amp; e-mail</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Name</td>
</tr>
<tr>
<td>Partner Organisation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Aim: (ADD KHMER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Objectives: (ADD KHMER)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Main Project Activities (ADD KHMER)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Project Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start/End</td>
</tr>
<tr>
<td>Project Budget</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Location, Size and Number of Beneficiary Households Information</th>
</tr>
</thead>
</table>
## Miscellaneous Other Forms Developed For Use during the Assignment

**NOTE:** The following forms are not for use in Forestry Extension Information System processing. They may however be useful for future FEIS development.

**FEU Stakeholder by Media Matrix (Revised)**

Note: This is a revised version of the initial Stakeholder by Media Matrix produced by Objective team 4 to make a more generalised matrix.

This draft is to give them some additional ideas in terms of Media types and Stakeholder groups for the matrix.

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Stakeholder Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Media Category</strong></td>
<td><strong>Type of Material</strong></td>
</tr>
<tr>
<td>Written Media</td>
<td>Poster</td>
</tr>
<tr>
<td></td>
<td>Brochure</td>
</tr>
<tr>
<td></td>
<td>Magazine</td>
</tr>
<tr>
<td></td>
<td>Comic</td>
</tr>
<tr>
<td>Other Visual Media</td>
<td>Photo</td>
</tr>
<tr>
<td></td>
<td>Video</td>
</tr>
<tr>
<td></td>
<td>T Shirt</td>
</tr>
<tr>
<td>Oral- Aural Media (3 Examples)</td>
<td>Radio</td>
</tr>
<tr>
<td></td>
<td>Group Discussions</td>
</tr>
<tr>
<td></td>
<td>Music</td>
</tr>
<tr>
<td>Doing Media (3 Examples)</td>
<td>Learn - by doing training</td>
</tr>
<tr>
<td></td>
<td>farmer field schools</td>
</tr>
<tr>
<td></td>
<td>forest transects</td>
</tr>
<tr>
<td>Computer Media (3 Examples)</td>
<td>Database Reports</td>
</tr>
<tr>
<td></td>
<td>GIS maps</td>
</tr>
<tr>
<td></td>
<td>Internet</td>
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<tr>
<td>Other Electronic Media (3 Egs)</td>
<td>Fax</td>
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<td>Telephone</td>
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<td></td>
<td>Photocopier</td>
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</tbody>
</table>

| FEIS: Questions Concerning Information Systems for External Organisation Visits |
|-----------------------------|---------------------|---------------------|
| Organisation | Date of Visit | Contact Person |
Questions for the Organisation Visited

1. What system is used to store and retrieve Stakeholder information?

2. What system is used to acquire, store and retrieve technical and extension information (eg libraries, catalogues)?

3. What system is used to gather material to design new extension materials?

4. What types of extension material have been produced (list?)

5. What system is used for dissemination of Extension Materials?

6. What system is used to communicate extension information between the Phnom Penh Office and Extension workers and rural people in the field?

7. What Extension Materials/information do they need from DFW Forestry Extension Unit, how can they communicate these needs to us, & how can we assist them?

8. How can DFW Forestry Extension Unit and (the organisation visited) work together to share more information?

9. On the basis of this meeting what follow-up actions would be useful to do together (what, who, when)?

CGFP FEIS: Work Plan Objective Information Needs Identification x Activity Form.

| CGFP Unit: | CGFP FEU Work Plan Objective: |
| Staff Members Responsible for these activities | FEIS Working Group on this Objective |
| Date: | |

<table>
<thead>
<tr>
<th>Activity</th>
<th>Staff</th>
<th>Main FEIS Related Problems</th>
<th>Recommended FEIS Actions</th>
</tr>
</thead>
</table>
CGFP FEIS: Work Plan Objective Recommended Procedures x Activity Form.

<table>
<thead>
<tr>
<th>CGFP Unit:</th>
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</thead>
<tbody>
<tr>
<td>CGFP FEU Work Plan Objective:</td>
<td></td>
</tr>
<tr>
<td>Staff Members Responsible for these activities</td>
<td></td>
</tr>
<tr>
<td>FEIS Working Group on this Objective</td>
<td></td>
</tr>
<tr>
<td>Date:</td>
<td></td>
</tr>
<tr>
<td><strong>Activity</strong></td>
<td><strong>Staff</strong></td>
</tr>
</tbody>
</table>

Page 27 of 33
CGFP FEIS: Work Plan Objective Information System x Activity Specification Form.

<table>
<thead>
<tr>
<th>CGFP Unit:</th>
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<tbody>
<tr>
<td>CGFP FEU Work Plan Objective:</td>
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<tr>
<td>Staff Members Responsible for these activities</td>
<td></td>
</tr>
<tr>
<td>FEIS Working Group on this Objective</td>
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<tr>
<td>Date:</td>
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<table>
<thead>
<tr>
<th>Activity</th>
<th>Staff</th>
<th>Recommended Information System Type</th>
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<th>CGFP Unit:</th>
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<tbody>
<tr>
<td>CGFP FEU Work Plan Objective:</td>
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</tr>
<tr>
<td>FEIS Working Group on this Objective</td>
<td></td>
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<tr>
<td>Date:</td>
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</tbody>
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Purpose Of Database:
Report of Results of FEIS WG Information System Concepts Exercises.

Eight exercise sessions were held with the FEIS Working Group during the first week of the assignment. The aims were to introduce basic Information System concepts and to develop ideas for the FEIS using participatory team methods.

The Session Topics and key findings for each are outlined below. They are included here as a record for FEU staff and to provide other readers with a sense of the issues related to FEIS development from the FEU team perspective.

**Note:** These earlier Conceptual Exercises examined different concepts for the FEIS which are different in many ways to the concept eventually adopted and presented in the main report.

- **Topic:** What is the idea of an information system for the FEU?

The team envisioned the FEIS would serve to both obtain needed information inputs from sources outside the FEU and to disseminate information

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**Database Table Structure:**

<table>
<thead>
<tr>
<th>Table</th>
<th>Field Name</th>
<th>Description</th>
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**Database Field Structure**

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**Application Software for This Database**

**Staff Capacity for Utilising Database:**

---
outputs from the FEU to stakeholders. It was also recognised that stakeholders, as sources of external information and as recipients for dissemination of FEU outputs needed to be better identified. Concern was raised that important stakeholders in remote areas including rural people and forest extension workers needed to benefit from the FEIS.

> **Topic: What is the concept of the Forestry Extension Information System?**

The Working Groups initial concept of an FEIS focused largely on a system which would provide nation-wide information on forestry extension issues as related to the national level functions of the FEU in Phnom Penh envisaged to include coordination and oversight of forestry extension activities at the national level.

Less prior thought had been given to a different concept of an FEIS, one which focused primarily on information exchange between the FEU and PFO field extension workers and rural people engaged in extension projects. Such an FEIS would begin on a pilot basis with the PFO Kampong Speu forestry extension project. Subsequently an FEIS of this type could then be applied to other PFO forestry extension projects.

It was then recognised that both concepts were important and that an FEIS in fact should eventually be composed of both national level and project level information subsystems.

> **Topic: What components should be included in the FEIS?**

The Working Group were able to define a number of components for a FEIS dealing with national level forestry extension. The components suggested are shown in the table below.

### FEIS Working Group Session: Suggested FEIS Components (National Level)

<table>
<thead>
<tr>
<th>Component</th>
</tr>
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<tbody>
<tr>
<td>Forest Resource Inventory for Cambodia- including extent of degradation.</td>
</tr>
<tr>
<td>National demographic and local government administration data.</td>
</tr>
<tr>
<td>Listing of forestry related projects in Cambodia.</td>
</tr>
<tr>
<td>Listing of forestry and extension related information sources in Cambodia</td>
</tr>
<tr>
<td>Technical and Scientific Information on forestry activities.</td>
</tr>
<tr>
<td>National/ case study socioeconomic research related to forestry/ extension</td>
</tr>
<tr>
<td>Information on all relevant laws (chhapp) concerned with Forestry.</td>
</tr>
<tr>
<td>Information on all relevant policies (nyobai) concerned with Forestry.</td>
</tr>
<tr>
<td>Information on Forestry extension concepts and methods for capacity building</td>
</tr>
<tr>
<td>Relevant training materials for extension staff and rural peoples capacity building</td>
</tr>
<tr>
<td>Case studies of Cambodian and overseas forestry extension projects.</td>
</tr>
<tr>
<td>Relevant Extension materials and tools used on other projects.</td>
</tr>
<tr>
<td>Materials to be included in a future Forestry Extension Handbook</td>
</tr>
<tr>
<td>Information for Public Relations and dissemination (including internet site, new letter etc.)</td>
</tr>
</tbody>
</table>

In contrast, the Working Group realised they had far fewer ideas concerning the likely components of a FEIS dealing with project level forestry extension information exchange, it was foreseen that the development of such a system would require the inputs of field forestry extension workers. As a starting point it was agreed that the FEIS would need to service project information exchange demands through the project cycle. Thus skeleton components of a project based FEIS would match standard project cycle components as shown in the table below. It was realised far more work was needed to flesh out this concept of the FEIS.

### FEIS Working Group Session: Suggested FEIS Skeleton Components (Project Level)

<table>
<thead>
<tr>
<th>Component</th>
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<tbody>
<tr>
<td>Project Planning</td>
</tr>
<tr>
<td>Project Implementation</td>
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<tr>
<td>Project Monitoring</td>
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<tr>
<td>Project Evaluation</td>
</tr>
</tbody>
</table>

In summary from this session it could be observed that the dominant conception of an FEIS to FEU team members at first was as a national level information resource. It also highlighted the lack of an FEIS concept that was more closely in line with the central shorter term priorities of the extension process itself as applied to the FEU. That is, the prime importance of improving exchange of information between rural people and extension workers in the field and FEU and DFW in Phnom Penh.

> **Topic: What are the stakeholder groups for the FEIS?**

The Working Group identified stakeholders for both national and project level FEIS. These are combined in the table below.

### FEIS Working Group Session: FEIS Stakeholder Groups

<table>
<thead>
<tr>
<th>Group</th>
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<tbody>
<tr>
<td>Cambodian Rural People</td>
</tr>
<tr>
<td>Local government officials at District, Commune and Village levels.</td>
</tr>
<tr>
<td>PFO Forestry Extension workers.</td>
</tr>
<tr>
<td>International and Khmer NGO’s especially those active in forestry extension, non- forestry extension or Community Development. Also CCC as the NGO umbrella organisation.</td>
</tr>
<tr>
<td>DFW Phnom Penh Office of Reafforestation units and other DFW Offices (Administration, Legal, Policy, Forestry &amp; Wildlife Research, Mapping/GIS, DFW Library, Wildlife office)</td>
</tr>
</tbody>
</table>
The Working Group made the following findings on language issues related to FEIS development.

- Differences in interests, information requirements, and methods of communication with these subgroups.
- FEIS Working Group Session: Stakeholder Sub Groups Among Rural Cambodians

The group was asked to further define different stakeholder subgroups among Cambodian rural people. The results of this exercise are shown in the table below.

**FEIS Working Group Session: Stakeholder Sub Groups Among Rural Cambodians**

- DFW Project participants/ non-participants.
- Rural Men/ Women (Principle: FEIS needs to be Gender sensitive).
- Monks.
- Different ethnic groups: Khmnes, (and for future projects) different Khmne Lieu upland minority ethnic groups, Khmer Lao, Khmer Thai, Khmer Cham, Khmer Vietnamese.
- Different social groups: Female headed households, elderly, handicapped, different occupational groups, school groups, households with/without forest land possession, households of different wealth categories (rich/poor), extension groups (lead forest innovators/followers/non-adopters).

With further thought the group was able to determine these sub-groupings of rural Cambodians. Implications were raised for FEIS development as to differences in interests, information requirements, and methods of communication with these subgroups.

**Topic: What language issues are there to consider in developing the FEIS?**

The Working Group made the following findings on language issues related to FEIS development.

- The major problem is the predominance of forestry extension related information in the English language and the difficulties of Cambodian FEU staff to access such information because of a lack of English language skills.
- There is a corresponding lack of information in Khmer language and a lack of capacity in FEU to translate material from English to Khmer (and vice versa).
- At the same time it is recognised that Khmer language should be the main language platform for the FEIS as far as possible.
- Over the longer term the following other languages are also recognised as relevant for the FEIS to facilitate information exchange with different ethnic groups in Cambodia that may be involved in Forestry projects in future.
  - Cambodian Upland Minority languages.
  - Lao, Thai, Cham, Vietnamese and Mandarin.
- For dissemination of information to some important stakeholders in forestry extension French and German are additional languages of importance.

**Topic: What types of media might form part of the FEIS?**

This exercise was used to develop ideas about different categories of media that may form a part of an FEIS in future.

The following categorisation system was developed.

**Categories of Media Types**

- Writing-Reading Media
  - Books, reports, newspapers, magazines, brochures, statistics, posters, journal articles.
- Oral-Aural Media
  - Radio, audio-cassette, meetings/discussions, music, story telling, oral history, verbal reports.
- Viewing Media
  - Television, video, slide shows, air photos, maps, field demonstrations, plays, shows.
- Doing Media
  - Participatory skills training, field schools, walking transects, forest visits, site visits, games.
- Electronic Media-Computers
  - Computer based applications of above types of media.
  - Word processor, spreadsheet, database, and other specific software applications.
  - Internet, email.
- Electronic Media-Other
  - Fax machine, telephone, photocopier, scanner.
As a wrap up session for the conceptual capacity building component of the assignment an integrated exercise was undertaken where examples of individual FEIS components were linked with stakeholder groups, language issues and media options. The Working group examined input information characteristics and the information processing required to deliver FEU extension information outputs in language/ media packages suitable for major stakeholders.

The exercise was useful to highlight information processing requirements and options for the FEIS. Typically information input from external stakeholders to FEU was in the form of sophisticated English language written material. Typically output required from FEU for field extension workers was simplified but good quality written Khmer language material. Output for rural people especially the rural poor and women in remote forest communities was typically Khmer language verbal or visual non-written material.

In terms of information inflow from field extension workers the FEIS could operate in Khmer language, with an additional information processing need for translation of this material from Khmer to English.

The processing of FEU input materials to appropriate output materials therefore typically involved language translation, content simplification and change of media.

A range of information processing options were explored from straight copying of externally sourced materials (with attribution) to various levels of adaption of materials to totally internally developed FEU materials.

To assist future information processing of this type an information processing form was designed to be completed for each such information processing task.

The major issues raised in this exercise have been incorporated into the preceding discussions on the current status of FEU information systems in Section 2 of this report.

Initial Development of a Forestry Information System

Background of the assignment:

GTZ-CGFP actively supports the Forestry Extension Unit of the Department of Forestry & Wildlife (DFW). Objectives for the unit's mandate and detailed workplans have been prepared so far.

One of the unit's major objectives is to establish and maintain a Forestry Information System (FIS) in order to ensure appropriate:

- Collection and storage of information
- Flow of information within the unit, but also within the DFW and among all relevant stakeholders at national and provincial levels (GO's and NGO's)
- Co-operation with the already existing Information Management Unit (IMU) of the neighbouring Community Forestry Unit.

A long term plan of future action has been prepared (Annex 2)

Following major obstacles have been identified so far:

- There is not yet a systematic structural approach to FIS development, rather a number of needs. These need to be systematically worked through and specific plans for the development of each component formulated.
- The department does not currently have a coherent FIS nor management and institutional structures based upon information management.
- Not enough attention has been given to questions of what information is needed for whom and for what purpose. There is also a need for task prioritisation.
- There are limitations in capacity for FIS development with regard to human resources.
- No linkages or co-operation with the IMU of the Community Forestry Unit.

Objective of the assignment:

The major objective of the assignment is twofold:

1. The consultant shall closely work together with the responsible staff of FEU and IMU in order to develop a simple and need based Information system, which includes the introduction of simple tools how to manage information (including the introduction of Microsoft Access for this purpose).
2. The consultant shall prepare a framework/strategy in the course of his assignment outlining necessary actions and requirements for the establishment of a functional and need based Forestry Information System.

Major tasks:

Basic principles:

1. Initial efforts should focus on beginning development of an FIS within the Office of Reforestation including the FEU, CFU and IMU units.
2. For best results a participatory approach with staff is preferable, to enable them to learn and feel ownership of the new FIS and so that it addresses their needs.

Based upon above 2 principles the consultant shall fulfil following tasks:

- In the first stage of FIS development primary focus will be on working through several basic components of the proposed FIS with the team as a basis for building the system, which include following elements:

1. **FIS Components:** Determine the types of information that need to be covered by FIS to meet the goals, objectives and tasks of the units involved.
2. **FIS Content:** Determine the subject matter of each FIS component.
3. **FIS Client/ User Groups:** Define and document clients and identify their needs.
4. **Language:** Think through the issue if language and access to knowledge and document findings. Particularly explore English/Khmer language issues.
5. **Media:** What media is appropriate to disseminate various types of information to different client groups. Determine appropriate media types by client group.
6. **Determine practical Component/ Content/ Client/ Media linkages for FIS.**
7. **Conduct a mini Training Needs Analysis for capacity building related to FIS.**
8. **Make findings on which staff/units should be responsible for which component of the FIS.**

- Introduce Microsoft Access as basic tool for PC based information storage and management
- Try to integrate and link existing structures of the IMU at the Community Forestry Unit with the FEU
- Check possible linkages with other organizations, especially CAAEP at MAFF and CONCERN Worldwide with regard to Forestry Information tools
- Make recommendations for further development of the FIS, which includes a Human Resource Development Plan