

# Analysis of Training Needs for Improving the Performance of Forest Management Unit Employees

*(Study in Riau Province, Riau Islands, Jambi, Bengkulu, South Sumatra)*

Ali Hamdani

Post Graduate Program of  
Universitas Negeri Medan  
Medan, Indonesia  
[alihamdani3878@gmail.com](mailto:alihamdani3878@gmail.com)

Paningkat Siburian

Post Graduate Program of  
Universitas Negeri Medan  
Medan, Indonesia  
[siburianpaningkat@gmail.com](mailto:siburianpaningkat@gmail.com)

Zainuddin

Post Graduate Program of  
Universitas Negeri Medan  
Medan, Indonesia

**Abstract**— The purpose of this study was to analyze the training needs to improve the performance of Forest Management Unit (FMU) employees in Riau, Riau Islands, Jambi, Bengkulu and South Sumatra Provinces. This research is a combination of quantitative and qualitative research by gathering information from all FMU employees. The research data collection was obtained through filling out questionnaires, interviews and documentation studies. The results of this study indicate that there are still many FMU employees whose forestry technical competence is not in accordance with the standards set by the Minister of Forestry of the Republic of Indonesia. The conclusion is that based on the results of the analysis of field data processing, the competency category that is needed by the FMU employees as respondents in order to carry out their tasks and improve the performance of employees in the FMU institution can be facilitated through training activities, for the category needed to be facilitated through on the job activities training, technical guidance and training refresher, for less needed categories it can be facilitated through seminar activities and remote modules. The results of research on Training Needs Analysis (TNA) need to be followed up in the form of the design of the Training and Education program, training materials such as; modules and the development of the abilities of teachers and other educators.

**Keywords:** *Training Needs Analysis, Competence, Employee Performance, Forest Management Unit*

## I. INTRODUCTION

In the framework of implementing Law No. 41 of 1999 concerning Forestry, a Forest Management Unit (FMU) was formed in Indonesia. In accordance with the function of the forest, the FMU Institution is divided into 3 (three) units, namely: Production Forest Management Unit (FMUP), Protection Forest Management Unit (FMUL), and Conservation Forest Management Unit (FMUK).

In order to make the FMU Institution more effective and efficient, a number of things need to be prepared, one of which is to prepare human resources for FMU managers who have competencies in positions in accordance with Competency Standards for Forestry Technical Fields that refer to Forestry Minister Regulation No.42 / Menhut-II / 2011, which consists of the Competency of the structural positions of the Head of

FMU, Head of Sub-Administration (KSBTU), Head of Section of Planning and Head of Utilization and Protection Section, Head Resort and functional positions / technical personnel.

The establishment of the FMU Institution has logical consequences for adjusting the institutional form, qualification of human resources and the quality of mindset of its managers in the local government. Quality and adequate human resources (HR) are very much needed in the management of FMUs and to improve the performance of current FMU staff. Human resources with forestry technical competence in the required FMU must be achieved in accordance with applicable regulations, so that they are more professional and have high sensitivity in managing FMUs and empowering various elements of the community around their area, both technically substantial and socially.

Therefore, in order to meet competency standards and support performance improvement and human resource capacity development in the forestry technical staff of the FMUL and FMUP work units, it is necessary to conduct education and training (training) for FMU employees. To be able to carry out the design and design of training programs in accordance with the needs of the field, it is necessary to carry out this TNA research activity. TNA is implemented as an effort to meet the needs of users (users) in the field so as to improve the competence of its employees, so as to improve its performance. The results of this TNA research are very much needed in developing education and training programs that will be held by education and training institutions both at the central and regional levels which include the determination of types of training, curriculum development, methods, tools and materials, facilities, teaching staff and the development of training staff.

## II. LITERATURE REVIEW

### A. Definition and Scope of TNA

According to Budi Djatmiko and Heri Jumaedi [1], to overcome the problems of labor that do not meet the required competency standards, development is carried out through the following training process: (1) analysis of training needs to increase the effectiveness of improving skills so that training is not considered a formality so that it meets quality

management system standards; (2) the establishment of training programs in accordance with the results of the analysis of the training needs of each field / section; (3) the training is carried out both internally (trainers of competent employees) and externally (bringing in consultants / trainers from outside the organization) provided that the training is supported by adequate time, place and adequate facilities; (4) evaluation of training to see the effectiveness of the training that has been carried out both to the trainer (mastery of the material, how to convey, understanding of practice and language) as well as to the participants by assessing whether knowledge or skills increase after participating in training assessed by their respective superiors.

According to Marpaung and Saptoaji [2] Analysis of training needs is defined as the process of gathering information both explicit and implicit information from an organization, then see and sort out any information that can be met through the implementation of certain training so that organizational goals are achieved.

Based on the TNA Guidelines issued by the Forestry Education and Training Center [3], Training Needs Analysis is defined as a process to uncover and determine training needs at both the organizational, occupational and individual levels.

Based on the Minister of Forestry Regulation No. 20 of 2004 [4] concerning the Implementation of Forestry Education and Training, the TNA activities consist of 3 (three) levels, namely:

- Organizational level TNA is analyzing the training and training needed to underlie and support organizational performance so that the vision, mission and tasks of the organization's functions can be carried out effectively and efficiently.
- TNA position level is to analyze the training and training needed to underlie and support the performance of officials so that their duties and functions can be carried out effectively and efficiently.
- Individual TNA is analyzing the training and training needed to underlie and support the performance of a person carrying out the work so that the tasks and functions can be carried out effectively and efficiently.

#### *B. Purpose, Benefits and Function of TNA*

Marpaung and Saptoaji [5] explained that in general the Training Needs Analysis was carried out with the aim of obtaining an accurate picture of the activities related to training and non-training which were really needed by the organization as a whole.

Furthermore, in more detail the objectives of the TNA are as follows:

- As a basis for developing training programs;
- As a guideline for organizations to design and build training programs;
- Provide input for the organization to continue or stop further activities;
- Maintain and increase work productivity;
- Facing new policies.

While the benefit of TNA is to obtain a list of training program plans that reflect the real needs of the organization in creating career development patterns. Another benefit (if needed), is a list of non-training activities that may be utilized by decision makers in developing human resources through non-training channels, such as coaching and consultancy.

TNA is a systematic process to determine whether there is a need for training and education. Thus the function of the TNA is :

- Identify needs that are relevant to a particular task or job;
- Identify critical needs that can overcome performance problems;
- Get priorities for choosing the right course of action;
- Obtain information about knowledge, skills, attitudes that are not possessed by employees who are unable to demonstrate work.

### III. METHODOLOGY

#### *A. Research Approach*

The approach taken in this research activity is a quantitative approach that is supported by qualitative analysis. The quantitative approach will provide a measurable picture and relationship between the variables studied, a qualitative approach as a tool to reveal and complete any shortcomings of quantitative research. Thus by using these two approaches, it is expected that data and information regarding the training needs have a higher level of accuracy.

#### *B. Time and Place of Research*

This research was conducted in May-June 2015 and this research activity was carried out in 18 (eighteen) FMU work units in 5 (five) Provinces, namely: Riau (1 FMUL and 4 FMUP), Riau Islands (1 FMUL), Jambi (1 FMUL and 3 FMUP), Bengkulu (1 FMUL and 2 FMUP) and South Sumatra (1 FMUL and 5 FMUP).

#### *C. TNA Research Methods*

- Types of data
  - The data collected is primary data and secondary data at the FMUL Unit and FMUP agencies in the 5 (five) Provinces:
    - Primary data
      - Primary TNA data were obtained from respondents namely KFMU, KSBTU, Section Chief, Resort Head and Functional / Technical Personnel at FMU through semi-structured interviews and questionnaires, from them it is expected to obtain a portrait of HR potential in each work unit and various matters related to technical competence in the forestry sector, in accordance with the main tasks and functions, priorities in the implementation of work, the frequency of implementation of activities as well as the desired standard work skills and current work capabilities.
        - Secondary data
          - TNA secondary data was obtained from documentation of the implementation of existing staffing activities.
    - Data collection technique
      - The TNA data collection method is carried out through :

- Semi-structured interviews with information sources, both respondents and related parties.
- Filling out the questionnaire (instrument) by: Head of FMU, Head of Sub-Division of Administration (Ka.SBTU), Head of Section (Head of Section), Head of Resort and Functional Personnel at FMU
- Study documentation of respondent's staffing data.

**D. Processing and data analysis**

Data collected by researchers is compiled, processed, sorted and analyzed. The results of data processing are discussed internally to determine the completeness of information according to the purpose of the TNA. Data processing and information on TNA results can be classified:

- Qualitative data, qualitative descriptive processing is carried out by recapitulating, sorting and processing, and analyzing.
- Quantitative data, carried out with a scoring calculation approach (weighting) on the instrument used. Each choice in the questionnaire data is given a logical weight, i.e. :
  - component of importance with a weight of 20%, with an interval of assessment: less important 10%, important enough 30% and important 60%.
  - frequency components with a weight of 30%, with an interval of assessment: rarely 10%, enough 30% and often 60%.
  - component of capability level with a weight of 50%, with an interval of assessment: less able 60%, 40% capable enough and 0% capable.

After the data is collected and processed the average score (  $\bar{x}$  ) and standard deviation (Sd), which are then grouped into 4 parts namely: very necessary, necessary, less necessary and not needed.

**IV. RESULT**

Respondents who filled out the TNA questionnaire were all FMUP / FMUL employees in the position of FMU Head, KSBTU, Head of Planning Section, Head of Utilization and Protection Section, Head of Resort and employees in Functional Position (Technical Staff) only, while employees in the Administration Staff position are not used as TNA respondents this is in accordance with P.42 / Menhut-II / 2011 concerning Competency Standards for Forestry Technical Fields in FMUL / FMUP. The results of this TNA are expected to provide an overview / portrait of the various activities and potential of Human Resources (HR) in FMUL / FMUP in accordance with their position.

The number of respondents obtained from the results of this TNA study are: 12 (twelve) FMU Heads, 11 (eleven) KSBTU people, 3 (three) Kasi people. Planning, 3 (three) Kasi people. controlling and monitoring, 10 (ten) Resort Heads and 129 (one hundred and twenty-nine) employees in the Functional Position (Personnel in charge of Technical Affairs). The following is complete data on the results of the respondents' answers as follows:

**A. Position of Head of FMU**

The results of data processing in the field, 12 respondents were obtained from the FMUP / FMUL position of 18 FMUP / FMUL and based on the results of the analysis of data weighting and scoring as well as from 14 questions in the TNA Instrument for FMUL / FMUP Heads containing competencies required by respondents, obtained data listed in table 1 below:

TABLE 1. COMPETENCIES FOR FMU HEADS

Needs	Competence
Is indispensable	<ul style="list-style-type: none"> <li>• Implementation of Use of Forest Areas</li> <li>• Management of information and control of Forest management</li> <li>• Task management</li> <li>• Implementation of forest governance and preparation of forest management plans</li> <li>• Thinking ability</li> <li>• Human Resource Management</li> <li>• Program and activity management</li> <li>• Management of Personal Character</li> </ul>
Required	<ul style="list-style-type: none"> <li>• Implementation of protection and nature conservation</li> <li>• Carrying out forest utilization: utilization of forest area, environmental services, Collection of Timber and Non-Timber Forest Products</li> <li>• Business Management / Business</li> <li>• Implementation of Forest Rehabilitation and Reclamation</li> <li>• Management of the Parties (Negotiations, Conflict Management, communication etc)</li> </ul>
Not Required	Management of infrastructure and financial facilities

**B. Position of Head of Sub-Administration (KSBTU)**

The results of data processing in the field, 11 respondents were obtained from the position of Head of Sub-Administration from 18 FMU and based on the results of the analysis of the weighting and scoring of data as well as from 5 questions in the TNA Instrument for KSBTU containing the competencies needed by respondents, obtained data listed in table 2 below:

TABLE 2. COMPETENCIES FOR KSBTU

Needs	Competence
Is indispensable	Human Resource Management
Required	Thinking ability
Not Required	<ul style="list-style-type: none"> <li>• Management of infrastructure and financial facilities</li> <li>• Task Management</li> </ul>
Not required	Personal Character Management

**C. Position of Head of Planning Section**

The results of data processing in the field, obtained data of 4 respondents in the position of Head of the Planning Section of 18 FMUP / FMUL and based on the results of the analysis of the weighting and scoring of data as well as from 9 questions in the TNA Instrument for Planning Section which contains the competencies needed by respondents , obtained the data listed in table 3 below:

TABLE 3. COMPETENCIES FOR THE HEAD OF PLANNING SECTION

Needs	Competence
Is indispensable	<ul style="list-style-type: none"> <li>• Information management &amp; forest management control</li> <li>• Program and activity management</li> </ul>
Required	<ul style="list-style-type: none"> <li>• Thinking ability</li> <li>• Development of a forest management plan</li> <li>• Personal Character Management</li> </ul>
Not Required	<ul style="list-style-type: none"> <li>• Management of the Parties (negotiations etc.)</li> <li>• Management Management Tasks</li> </ul>
Not required	<ul style="list-style-type: none"> <li>• HR Management</li> <li>• Management of Infrastructure and Financial Facilities</li> </ul>

**D. Position of Head of Section for Utilization and Protection**

The results of data processing in the field, obtained 4 respondents in the position of Head of Utilization and Protection Section of 18 FMUP / FMUL and based on the results of the analysis of the weighting and scoring of data as well as of 13 questions in the TNA Instrument for the Control Section which contains the competencies needed by respondents, obtained data listed in table 4 below:

TABLE 4. COMPETENCE FOR HEAD OF UTILIZATION AND PROTECTION SECTION

Needs	Competence
Is indispensable	<ul style="list-style-type: none"> <li>• Program and activity management</li> <li>• Information Management and Forest Management Control</li> </ul>
Required	<ul style="list-style-type: none"> <li>• Organization of Conservation Protection</li> <li>• Management of infrastructure and financial facilities</li> <li>• Management of the parties</li> <li>• Business Management</li> <li>• Human Resource Management</li> </ul>
Not Required	<ul style="list-style-type: none"> <li>• Implementation of Use of Forest Areas</li> <li>• Personal Character Management</li> <li>• Task Management</li> </ul>
Not required	<ul style="list-style-type: none"> <li>• Implementation of Rehabilitation and Reclamation</li> <li>• Implementation of Forest Utilization</li> <li>• Thinking Ability</li> </ul>

**D. Resort Head Position**

The results of data processing in the field, obtained data of 10 respondents in the position of Head of Resort from 18 FMUP / FMUL and based on the results of the analysis of the weighting and scoring of data as well as from 12 items in the TNA Instrument for Resort Heads containing the competencies needed by respondents, the data obtained in the following table 5:

TABLE 5. RESORT HEAD COMPETENCIES

Needs	Competence
Is indispensable	<ul style="list-style-type: none"> <li>• Personal Character Management</li> <li>• Implementation of Rehabilitation and Reclamation</li> <li>• Information management &amp; forest management control</li> </ul>
Required	<ul style="list-style-type: none"> <li>• Management of Infrastructure and Financial Facilities</li> <li>• Implementation of Use of Forest Areas</li> <li>• Thinking Ability</li> </ul>
Not Required	<ul style="list-style-type: none"> <li>• Management of the Parties</li> <li>• Organization of Conservation Protection</li> <li>• Implementation of Forest Utilization</li> </ul>
Not required	<ul style="list-style-type: none"> <li>• Program and activity management</li> <li>• Business Management</li> <li>• Human Resource Management</li> </ul>

**E. Functional Position / Technical Staff**

The results of data processing in the field, obtained 129 respondents in the Position of Technical Personnel from 18 FMUP / FMUL and based on the results of the analysis of the weighting and scoring of data as well as from 25 questions in the TNA Instrument containing the competencies needed by respondents in carrying out management tasks forest at FMU, the Technical Staff Position at FMU is divided into 2 groups of positions, namely: planning (12 questions) and utilization and protection of forests (13 questions). As for the description as follows:

- *Position of Technical Staff in Planning*

Based on 12 questions in the TNA instrument, the results are as shown in table 6 below:

TABLE 6. COMPETENCIES OF PLANNING TECHNICAL PERSONNEL

Needs	Competence
Is indispensable	<ul style="list-style-type: none"> <li>• Operate GIS</li> <li>• Interpretation of Satellite Imagery</li> <li>• Block Border Arrangement</li> </ul>
Required	<ul style="list-style-type: none"> <li>• Block and Plot Distribution</li> <li>• Operate GPS</li> <li>• Boundary Inspection / Boundary Maintenance</li> </ul>

Not Required	<ul style="list-style-type: none"> <li>• Inventory of Environmental Services</li> <li>• Inventory of Non Timber Services</li> <li>• Develop a Forest Management Plan <ul style="list-style-type: none"> <li>• Animal Inventory</li> </ul> </li> </ul>
Not required	<ul style="list-style-type: none"> <li>• Forest Stand Inventory</li> <li>• Socio-Economic Inventory</li> </ul>

• *Position of Technical Staff in Utilization and Protection*

Based on 13 questions in the TNA instrument, the results are as shown in table 7 below:

TABLE 7. COMPETENCIES OF TECHNICAL STAFFS IN UTILIZATION AND PROTECTION

Needs	Competence
Is indispensable	<ul style="list-style-type: none"> <li>• Conduct Monitoring-Evaluation-Reporting on Utilization of Environmental Services</li> <li>• Implement Nature Protection and Conservation (which is not permitted)</li> </ul>
Required	<ul style="list-style-type: none"> <li>• Monitoring-Evaluation-Reporting on the Utilization of the Area</li> <li>• Monitoring-Evaluation-Reporting Collection of Timber / Non-Timber Forest Products</li> <li>• Monitoring-Evaluation-Reporting on Protection and Conservation of Nature (which is not permitted)</li> </ul>
Not Required	<ul style="list-style-type: none"> <li>• Monitoring-Evaluation-Reporting of Timber / Non-Timber Forest Product Utilization</li> <li>• Collection of wood / non timber forest products</li> <li>• Utilization of Environmental Services</li> <li>• Utilization of Timber / Non-Timber Forest Products</li> <li>• Use of the Area</li> <li>• Monitoring-Evaluation-Reporting on the Use of Forest Areas</li> </ul>

V. CONCLUSION AND RECOMMENDATIONS

A. *Conclusion*

Based on the results of TNA research through the stages of material collection, instrument preparation, data collection, processing of results and reporting, the following conclusions can be summarized:

- For competencies that are categorized as indispensable by FMUP / FMUL employees as TNA respondents to carry out tasks in the agency, it can be facilitated through the implementation of Education and Training activities.
- For competencies that are categorized as required by FMUP / FMUL employees as TNA respondents to carry out tasks in the agency, they can be facilitated through On The Job Training, Technical Guidance and Training Refresher training.

- For competencies that are categorized as less required by FMUP / FMUL employees as TNA respondents to carry out tasks in the agency, it can be facilitated through Seminar and Distance Module activities.

B. *Recommendations*

Based on the TNA results, several training proposals were obtained in accordance with the positions in 18 (eighteen) FMUP / FMUL, namely:

• *To Employees with FMU Head Position*

It is recommended to follow:

- Leadership Training for FMU Phase I
- Leadership Training for FMU Phase II
- Office Administration Training
- Conflict Management Training
- Conflict Resolution Training

• *To Employees with the Position of Head of Sub-Administration*

It is recommended to take the Human Resources Management Training

• *To the Officer Position in the Head of Planning Section*

It is recommended to follow:

- Management Training Level IV in Planology
- Training on forest area planning based on forest spatial
- Training on Formulating FMU Management plans

• *To Employees Position, Head of Utilization and Protection Section*

It is recommended to follow:

- Level IV Management Training for Forest Protection and Nature Conservation
- Management Training for Forest Management Control Information Systems

• *Resort Officers Head of Resort*

It is recommended to follow:

- Level IV Management Training and Field for Social Rehabilitation and Forestry
- Management Training for Forest Management Control Information Systems
- Training on Management of State Property

• *To Functional Position Employees / Technical Personnel in Planning*

It is recommended to follow:

- Basic and advanced GIS training
- Training on Interpretation of Satellite Imagery
- Training on Formulating FMU Management Plans

- *To Functional Staff / Technical Personnel in the Field of Utilization and Protection*

It is recommended to follow:

- Training for Management of Utilization of Environmental Services
- Training on Protection and Nature Conservation
- In addition to being based on TNA results using a questionnaire, researchers also conducted TNA using interviews with several FMU Heads. The types of education and training proposed by the Head of FMU are as follows:
  - Training of Technical Staff for management of non-timber forest products such as: honeybees, rattan, clear, rubber latex, pallets.
  - Training on Business Plan Preparation
  - Training on Preparation of Activity Proposals for Donors / FMU Partners
  - Training for Marketing Techniques for Timber and Non-Timber Forest Products
  - Training for Improvement of Community Economy Around FMU, Through: Mushroom Cultivation, Agarwood, MPTS Nursery

- Mental Revolution Training
- Occupational Health Safety Training
- Training on Carbon Calculation

- The results of the Training Needs Analysis need to be followed up by training institutions both at the central and regional levels in the form of designing training programs, training materials such as; modules and the development of the skills of lecturers.

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