



PROJECT REPORT ACTIVITY ON GEOGRAPHIC INFORMATION SYSTEM

CoLUPSIA Capacity Building In Spatial Planning Training

Kapuas Hulu District, West Kalimantan Province

Danan Prasetyo Hadi

2012

Contents

| | |
|--|---|
| 1. Introduction..... | 2 |
| 2. Overview of training activities | 2 |
| Figure 1. Activities during the training session..... | 4 |
| Annex 1. List of Trainers | 5 |
| Annex 2. List of Trainees | 6 |
| Annex 3. The agenda of Geographic Information Systems for land allocation training ... | 7 |

1. Introduction

The Collaborative Land Use Planning and Sustainable Institutional Arrangements for strengthening land tenure, forest and community rights in Indonesia (CoLUPSIA) project is a research project funded by the European Union for four years (2010 – 2013) and conducted by CIRAD in collaboration with the Center for International Forestry Research (CIFOR), Toma Lestari (ToMA), University Pattimura (UNPATTI), University of Gadjah Mada (UGM), HuMA, and TELAPAK. The CoLUPSIA project sites are located in two sites: Kapuas Hulu District (West Kalimantan Province) and Central Moluccas District (Moluccas Province).

The overall objective of the project is to avoid deforestation and environmental degradation by supporting the development of sustainable institutional arrangements promoting land policies and instruments including the local community. While the specific objective to be achieved at the end of four years is to establish collaborative and equitable Land Use Planning (LUP) and Natural Resource Management (NRM), leading to the design and testing of new institutional arrangements, environmental policies and pro-poor financing instruments based on more secure land tenure and community rights.

This report describes one of the expected results related to capacity building which is relevant to the Land Use (LU) development process (training methodology for mapping and land allocation process). This training was part of the CoLUPSIA project activities in Kapuas Hulu District, West Kalimantan Province. The expected impact was that all participants of the training will have skills in using Global Positioning Systems (GPS) tool for data acquisition, conducting GIS data processing and also analysis for defining land allocation zoning.

2. Overview of training activities

The training was conducted in Putussibau, Kapuas Hulu District, West Kalimantan Province, and took place at the Betung Kerihun National Park office (*Balai Taman Nasional Betung Kerihun*) of the Ministry of Forestry's conservation agency on 9-19 October 2012. The training was attended by six participants including the Betung Kerihun National Park

office staffs, the local government development planning agency (*Badan Perencanaan dan Pembangunan Daerah-BAPPEDA*) staffs, the local government forestry and plantation agency (*Dinas Kehutanan dan Perkebunan*) staffs, and the local government agricultural and animal husbandry agency (*Dinas Pertanian Tanaman Pangan dan Peternakan*) staffs (see Annex 2).

The objectives of the training are to build capacity in spatial planning for land allocation and land use planning using Geographic Information Systems (GIS) and CoLUPSIA methodology for collaborative land use planning, more specifically to introduce GIS as a supportive tool to land use planning and land allocation process; and to train local agencies staff on the CoLUPSIA methodology using GIS.

The training material consists of theoretical and practical starting on how to acquire and develop accurate GIS data from various sources including how to use Global Positioning Systems (GPS) tool in the field for data acquisition, how to better manage geographic data (GIS data management) by applying geodatabase topology for ensuring data integrity, how to conduct GIS data processing and analysis, as well as on how to create map representation (map layouts) according to cartographic standards. During analysis session were also introduced on how to perform sequence analysis using model builder application of the ArcGIS Desktop software with forest score analysis for defining land allocation into functional zones as the case sample. The agenda of the training can be found in Annex 3.

At the end of the training program on 19 October 2012, there was agenda for handover three new computers supported by European Commission project - Collaborative Land Use Planning for Sustainable Institutional Arrangement (CoLUPSIA) to the Betung Kerihun National Park office, the BAPPEDA office of Kapuas Hulu regency, and the local government agricultural and animal husbandry office of Kapuas Hulu regency.

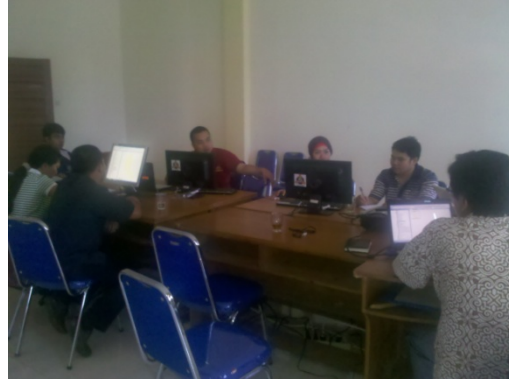


Figure 1. Activities during the training session

Annex 1. List of Trainers

| No | Name | Institution |
|-----------|---------------------|--------------------|
| 1 | Danan Prasetyo Hadi | CoLUPSIA - CIFOR |
| 2 | M. Agus Salim | CIFOR |

Annex 2. List of Trainees

| No | Name | Institution |
|-----------|-----------------------------|--|
| 1 | Iin Nisah | Badan Perencanaan dan Pembangunan Daerah (BAPPEDA) Kabupaten Kapuas Hulu |
| 2 | Novita Megasari | Dinas Pertanian Tanaman Pangan dan Peternakan Kabupaten Kapuas Hulu |
| 3 | Bujang Zainal | Dinas Pertanian Tanaman Pangan dan Peternakan Kabupaten Kapuas Hulu |
| 4 | Kurniawan | Dinas Perkebunan dan Kehutanan Kabupaten Kapuas Hulu |
| 5 | Syarif Muhammad Ridwan | Balai Besar Taman Nasional Betung Kerihun |
| 6 | Bundany Anugrah Putra Bundu | Balai Besar Taman Nasional Betung Kerihun |

Annex 3. The agenda of Geographic Information Systems for land allocation training

| Training on Geographic Information Systems (GIS) for Land Allocation Kapas Hulu Regency, West Kalimantan Province 9 - 19 October 2012 | | | |
|--|---------------------------------|---------------|--|
| No | Day/Date | Time | Activity |
| 1 | Tuesday, 9 October 2012 | 09.00 - 10.00 | Opening remarks |
| | | 10.00 - 10.30 | Tea Break |
| | | 10.30 - 12.00 | Introduction to GIS |
| | | 12.00 - 13.00 | Lunch Break |
| | | 13.00 - 14.00 | Introduction to GIS (continuation) |
| | | 14.00 - 15.00 | Introduction to ArcGIS Software |
| | | 15.00 - 15.30 | Coffee Break |
| | | 15.30 - 16.30 | Introduction to ArcGIS Software (continuation) |
| | | 16.30 - 17.00 | Review |
| | | 2 | Wednesday, 10 October 2012 |
| 10.30 - 11.00 | Tea Break | | |
| 11.00 - 12.00 | GIS Data Acquisition | | |
| 12.00 - 13.00 | Lunch Break | | |
| 13.00 - 14.30 | Map digitization | | |
| 14.30 - 15.00 | Coffee Break | | |
| 15.00 - 16.30 | Map digitization (continuation) | | |
| 16.30 - 17.00 | Review | | |
| 3 | Thursday, 11 October 2012 | 09.00 - 10.00 | Introduction to Global Positioning Systems (GPS) |
| | | 10.00 - 11.30 | Practical of using GPS |
| | | 11.30 - 12.30 | Lunch Break |
| | | 12.30 - 14.00 | Practical of using GPS (continuation) |
| | | 14.00 - 14.30 | Coffee Break |
| | | 14.30 - 16.00 | GPS data input into ArcGIS Software |
| | | 16.00 - 16.30 | Review |
| 4 | Friday, 12 October 2012 | 09.00 - 10.00 | Data preparation |
| | | 10.00 - 10.30 | Tea Break |
| | | 10.30 - 11.30 | Data preparation (continuation) |
| | | 11.30 - 13.30 | Lunch Break |
| | | 13.30 - 14.30 | Data preparation (continuation) |
| | | 14.30 - 15.00 | Coffee Break |
| | | 15.00 - 16.00 | Data preparation (continuation) |
| | | 16.00 - 16.30 | Review |

| | | | |
|---|----------------------------|---------------|---|
| 5 | Monday, 15 October 2012 | 09.00 – 10.00 | Table and Chart |
| | | 10.00 – 10.30 | Tea Break |
| | | 10.30 – 12.00 | Table and Chart (continuation) |
| | | 12.00 – 13.00 | Lunch Break |
| | | 13.00 – 14.30 | Map Layout |
| | | 14.30 – 15.00 | Coffee Break |
| | | 15.00 – 16.00 | Map Layout (continuation) |
| | | 16.00 – 16.30 | Review |
| 6 | Tuesday, 16 October 2012 | 09.00 – 10.00 | Spatial database |
| | | 10.00 – 10.30 | Tea Break |
| | | 10.30 – 12.00 | Query operation |
| | | 12.00 – 12.30 | Query operation (continuation) |
| | | 12.30 – 13.30 | Lunch Break |
| | | 13.30 – 14.30 | Query operation (continuation) |
| | | 14.30 - 15.00 | Tea Break |
| | | 15.00 - 16.00 | Data Management |
| | | 16.00 – 16.30 | Review |
| 7 | Wednesday, 17 October 2012 | 09.00 – 10.00 | Introduction to Spatial Analyst |
| | | 10.00 – 10.30 | Tea Break |
| | | 10.30 – 12.00 | Practical of Spatial Analyst |
| | | 12.00 – 12.30 | Review |
| | | 12.30 – 13.30 | Lunch Break |
| | | 13.30 – 14.30 | Introduction to 3D Analyst |
| | | 14.30 - 15.00 | Tea Break |
| | | 15.00 - 16.00 | Practical of 3D Analyst |
| | | 16.00 – 16.30 | Review |
| 8 | Thursday, 18 October 2012 | 09.00 – 10.00 | Automating geoprocessing using Model |
| | | 10.00 – 10.30 | Tea Break |
| | | 10.30 – 12.00 | Land allocation for zoning Kawasan |
| | | 12.00 – 12.30 | Practical of land allocation for zoning Kawasan using ModelBuilder |
| | | 12.30 – 13.30 | Lunch Break |
| | | 13.30 – 14.30 | Practical of land allocation for zoning Kawasan using ModelBuilder (continuation) |
| | | 14.30 - 15.00 | Tea Break |
| | | 15.00 - 16.00 | Practical of land allocation for zoning |

| | | | |
|---|-------------------------|---------------|--|
| | | | Kawasan using ModelBuilder (continuation) |
| | | 16.00 - 16.30 | Review |
| 9 | Friday, 10 October 2012 | 09.00 - 10.00 | Review the overall materials |
| | | 10.00 - 10.30 | Review the overall materials (continuation) |
| | | 10.30 - 11.30 | Closing remarks |