

Village :

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Participatory Mapping								
Author		Interviewer			Entered by			
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Village								

Participants

No.	Name	Job	Gender
1			
2			
3			
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9			
10			

Participatory mapping: correlation between land use (LU) and land cover (LC)

Material

9 maps: 5 base map in transparent paper (featuring road, river, settlement, any other relevant key features), 2 land cover maps (LC), 2 Google Earth Pro Images

GUIDELINE FOR MAPPING ACTIVITY

Acknowledgement: Methods between villages might be different, for instance in Java, we focus the mapping inside the village boundaries from BPS, whereas in Papua, we won't take in consideration any official boundaries, just the territory that villagers identified as theirs during COLUP project. However, in Java, we will ask if they have activities outside the boundary.

A- Familiarize people with the maps

- 1- Use only the printed high resolution Google Earth Pro image. It can be displayed in the village for the villagers to get familiarized with the map before the participatory mapping activity.
- 2- Start the discussion from the BPS (Indonesian Bureau of Statistics) village boundary and identify if it is accurate or not and if there are mismatches (not necessary for Papua).
- 3- Identify the important locations, name of the different hamlets or settlements, main road, river, lake.

B- Map Building

1- Villager's features and activities on a transparent base map

Drawing/updating the transparent base map (based on people's comments on the map familiarization): new village boundary (if necessary), key features (hamlet, river, huts, roads, paths, cemetery etc)

(If possible, draw as accurate as possible according to topography or natural elements. This will not be recognized officially because it is only based on one village's perception. The interest of drawing the boundary is to have the limit of the area of influence of villagers' activity upon the forest.)

Tasks:

- a. Place a transparent base map over the high resolution map from Google Earth Pro.
- b. Draw any new features mentioned by local people on this base map (hamlet, river, huts, roads, paths, harbor etc). It will be used as new base map.
- c. Identify the activities of villagers on the new base map. We'll draw those information on the base map in the next step. The high resolution image can be used as reference to help the villagers to identify their activities.

2- Land cover (LC) map based on villagers' perception and its correlation with our colored land cover map

We already have the high resolution and colored (classification) land cover map. However, the colored land cover map is derived from satellite imagery and the classification is based on our visual interpretation of this image. In this activity, we need the villager's perception about their current land cover. We will use the high resolution image to help the villagers to see the features so they can define their own land cover.

Important: Do not use our colored land cover map before the villagers finished drawing their own, since it might influence their interpretation and the way they will draw their land cover. We will use this colored land cover map once the villagers finished to draw their own land cover.

Tasks:

- a. Place a transparent new base map over the high resolution map.
- b. Draw the land cover map based on the local people's perception (only with the help of the features on the new base map and the high resolution map).
- c. Overlay the villagers' land cover map with our colored land cover map. Look where the overlaps and differences are between the two maps?
- d. Do ground check where there are differences between villagers' land cover and our colored land cover. Please refer to the ground check section and GPS datasheet.

3- Current land use (LU) map and its correlation with villagers' land cover (LC) map

Explain that we are interested to draw the actual land use as accurate as possible and discuss on how to regroup the different land uses.

Tasks:

- a. Place a transparent new base map over the high resolution map.

- b. Ask the villagers' activities based on each land cover identified in the previous step by filling the column 2 & 3 in the table 1 in appendix 1 (LC description and villagers' activities by LC).
- c. Regroup those activities by groups (we will call it **land use (LU)**) and create symbol for each group and fill column 4 & 5 in the table 1 in appendix 1.
- d. Draw those land uses (LU) on a transparent new base map. The high resolution map can be used as reference to help the villagers to place those land uses.
- e. Overlay the land use map with the villager's land cover map and see the correlation.
- f. Overlay the land use map with our colored land cover map to fill the column 1 in table 1 in appendix 1. Look at the correlation.

4- Past land cover (LC) and land use (LU) map (10 years time frame and more)

There are 2 possibilities:

- The first one is that local people will not be able to draw the past land cover, in this case we ask for drawing where any change occurred.
- The second one is that local people are able to draw the past land cover.

In both cases, the idea is to refer to the current land cover so that we are able to identify what was the past LC or where any change occurred in the last 10 years and more. For that, we try to locate on the high resolution map where these change occurred and just mark or add symbol in that location.

Tasks:

- a. Ask the historical event
- b. Fill the table 2 in appendix 2.

At the same time:

- c. Place a transparent base map over the high resolution map.
- d. Draw the past land cover/use change based on the villager's perception. The high resolution image can be used here as a reference and to help them draw the land cover or land use.
- e. Explain the changes (where, when, what for, how, by whom the changes occur?) (please refer to the table 2 appendix 2)

C- Ground check

1- Material

- i. 2 GPS: to record the location/coordinate
- ii. Data sheet (see table 4 in appendix 4): to write down the information about the location/coordinate
- iii. Camera (personal/CIFOR): to take photo of north, south, east, west, and up to the location/coordinate
- iv. Compass: to inform where is north, south, east, and west when taking the photos

2- Ground check activities

One day/one social scientist with the help of a local people (someone who knows better about the area). Walk around the village and take as many GPS point as possible for every LU in the LC.

3- Tasks

- a. Go to the specific location where you want to take the coordinate
- b. Make sure the GPS gets enough signal to triangulate your position
- c. Wait until you get an error accuracy less than 5 meters (if impossible to have less than 5 meters due to weather condition or any other circumstances, you can always record the point but try to have it as small as possible, say maximum 15 meters)
- d. Record the location on your GPS
- e. Record the information on the data sheet (see table 4 in appendix 4)
- f. Use you compass to find out where is north
- g. Take photos of north, south, east, west, and up
- h. Go to the next point and repeat the same processes

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APPENDIX 1

Table 1. LC description and LU identification				
LC Type (refer to LC map in color)	Villagers' LC description	Villagers' activities	LU Regrouping (Regroup all villagers' activities into similar group)¹	Symbol (to link this table with the map)

¹ For example: bird hunting, crocodile hunting, pig hunting can be grouped as "hunting"

APPENDIX 2

Table 2. Past land cover and land use (LC)					
Historical events	Current land cover/land use	Past land cover/land use	Symbol to link with the LC map	When the change occurred?	What for, why, by whom are the changes?
<i>Example:</i> <i>Expansion of the village</i>	<i>Settlement</i> <i>Paddy field</i>	<i>Forest</i> <i>Forest</i>	<i>xxx</i> <i>ooo</i>	<i>1970</i> <i>1970-1975</i>	<i>Build new house and expand the paddy field, to have more space to live in, by villagers themselves</i>

APPENDIX 3

Table 3. GPS data sheet	
CODE:	PHOTO
UTM X:	North:
UTM Y:	South:
ELEVATION:	East:
ERROR:	West:
	Up:
DESCRIPTION:	
CODE:	PHOTO
LATITUDE:	North:
LONGITUDE:	South:
ELEVATION:	East:
ERROR:	West:
	Up:
DESCRIPTION:	