**OL 333 Assignment One Field Guide**

**Online Learning: OL 333 Climate Smart Agriculture.**

**Field Guide: Participatory Mapping of Soil and Water Resources**

Participatory mapping is an excellent way of learning in greater detail about the community, their resources, the hazards they face, and how the village, farm fields, roads, hills and water sources interrelate. It's also a method for the community members to see things they take for granted every day through a new lens. Participatory mapping is a tremendous tool because all workshop participants can engage in the activity—it's very visual—non-readers will be included.

Organize a five-hour workshop with 12 to 15 farmers from your community. The purpose of this workshop is for the farmers to understand the impact that wind, soil health, location of water sources, variable rains, runoff, floods, and drought have on agricultural productivity.

**Geography of the community.** Consider returning to the village the day before the workshop to tour the farm fields, forests, and water sources with one of the farmers. Take a few minutes to talk to farmers you meet in order to gain a greater understanding of the challenges they are facing. Work in advance with an agriculturist on background information on soil restoration, water conservation and management, and crop selection so that you are better prepared. Arrange for him to participate in a second, follow-up workshop for site visits, to discuss the results of the mapping exercise and to suggest solutions to the farmer’s challenges.

**Drawing the basic map.** Tape several sheets of newsprint together and place them on the floor. A suggestion is to begin with a black marker to draw the basic outline of the village, roads, pathways, and major farming areas. You can then use different colors for houses, rivers, and farm fields. Another suggestion is to take 15 minutes and have community members draw a small preliminary map of the village, surrounding farm fields, roads, pathways, and watersheds on a single sheet of newsprint. This will accomplish two things: you can quickly solve spatial problems by moving things around on the preliminary drawing—and you might discover that there is a good illustrator in the group. Let your group artist transfer this basic outline of the community onto the larger piece of taped together sheets of newsprint.

**Indicating the location of community features.** Take colored sheets of paper and cut them out to represent additional features. These could be individual farm fields, houses, and school. Stick them to the map with removable tape so they can be moved or adjusted; by removing these bits of paper completely the map can be used again for a different assessment.

**Features important for soil, water and agriculture.**

* sources of both domestic and agricultural water and their relationship to the village/farmlands
* rivers and streams
* seasonal availability of both domestic and agricultural water
* the location of steep hillsides or canyons
* community land, forest boundaries, grazing/pasture lands

When everybody at the workshop is satisfied, begin applying farm specific information. Examples could be:

* farmlands vulnerable to drought (or insufficient access to water)
* farmlands vulnerable to flooding, too much wind exposure and other weather related hazards
* areas that suffer from excessive runoff
* areas of high erosion and gullies
* the location of what crops are grown where
* farmer perception of the fertility of their soil: good, medium, or poor
* types of soil
* areas of high and low agricultural productivity

**Indicating community hazards on the map**. Next is to begin the process of overlaying hazards impacting the community onto the map. These hazards might be floods, portions of the community that are most affected by drought, by heavy rain, or by extreme weather events. Which parts of the community, which people, which personal assets, which environmental resources, and which livelihoods are the most vulnerable to the hazards as identified on the hazard map?

**Conclusion:** To discuss and reinforce what has been learned and to discuss.

1. Discuss and review what has been learned.
2. Reinforce the challenges for farmers that were identified during the mapping exercise.
3. Discuss whether hazards such as, floods, variable rainfall and drought impact soil and water resources.
4. Discuss whether the intensity of the hazards is increased by farming practices and deforestation.

What are the community members’ current coping strategies for dealing with these difficult periods?

Capacity building: Which of the difficult events are they having trouble coping with due to a lack of strategies?

Summarize a list of the challenges and hazards farmers face in preparation for the visit by the extension agent.