

Session Plan Four

Modus Operandi for Participatory Land Suitability Activities - PALSA: A New Approach.

1. Objectives

- To achieve greater, sustainable agricultural or horticultural productivity
- To choose the best use for a particular area of land
- To protect and conserve those areas where long-term production is not possible

2. Session Outline

- Background to Land Suitability and Land Capability
- What is PALSA?
- Survey - Village Resource Mapping
- The Transect Walk Method
- Evaluation of Collected Information

3. Session Time

4. Assumptions

- Classifying land in terms of its suitability has been largely the work of government agencies
- In this exercise, land users themselves are neither encouraged to participate nor are their views included, consequently, such an exercise has little practical use.

5. Session Outline Topics

6. Background to Land Suitability and Land Capability

The existing methods of classifying land in terms of its suitability (land use or crops) have been used largely by planners from a formal government structure. The purpose of these systems is to identify areas that are suited to either a land use type (LUT) or to a particular crop. Finally, a map is drawn showing distinct areas suited to different LUTs. The Land Suitability Classification developed by FAO in the 1970s is the system used most for classifying land in terms of its suitability.

Land Suitability and Land Capability

- **Land Suitability** - largely focussed on the specific crop that has potential in any given area of land

- **Land Capability** - refers to the type of land use a particular area is suited for, i.e., irrigated or rainfed agriculture, forestry, pasture or recreation, etc

7. What is PALSA?

Participatory Land Suitability Activity (PALSA) is a meeting of minds from the inside and from the outside. The insiders are those who live, work, and make their living in a particular area; these are the people who know the history of the land, the productive capabilities of each area where the fuelwood and fodder is collected, which source of water is good for the livestock, and so on. The outsiders are a group of trained specialists, generally experienced in surveying areas or types of environment.

In watersheds or farming communities, it is the land suitability but not the land capability practice that is generally followed, based on the felt needs of individuals and communities, and from the point view of the environment. The needs may include the following.

- Food, fodder, fuelwood from the forest and areas of scrub and shrub
- Staple food and cash crops from the fields
- Water from the hills or valley streams
- Grazing areas
- Urban centres and recreation areas

Steps for Land Suitability Assessment

- **PALSA- The Modus Operandi** - Outsiders do not go blind into an area.
- **Meeting the People** - Formal and informal meetings between insiders and outsiders are important to set the tone and collaborative spirit for the survey work to come.
- **Presenting the Case** - The outsiders must explain what they can provide in terms of advice and options - photos, slides, videos, etc., - that are useful.
- **Raising Awareness** - In the process of raising awareness, a number of meetings will be required to produce a land-use plan for the watershed as a whole, keeping in mind that needs and interests will differ among different groups of people.

Example of Constraints-Solutions Diagram for Pungzhi, Thimpu, Dzongkhag

Resources	Constraints/ Problems	Solutions tried/tested	Solutions suggested by villagers
Wetland	Weed problem, lack of irrigation water	Hand weeding two times; wait for rain, leave land fallow	Herbicide use, Improve water distribution according to land-holding RGOB assistance
Irrigation water	Irrigation channel broken by landslides	Hollow trunks used to pass the washed out area; trunks need to be changed every three years	
Wetland + Dryland	Crop damage by wild animals (boar, deer)	Dead brush fencing, 5 strand barbed wire fences reinforced with branches: ineffective; nightwatching, fires	Chemicals, RGOB to take action
Orchard	Insects and diseases	Use of chemicals but insufficient knowledge, manually removing insects, ashes on infected twigs and branches: ineffective Use water from drinking water supply	Village-level training on pest/disease control for farmers at appropriate time of year Chemicals
Livestock	Low milk yield from local cattle; no knowledge of jersey-cross or other improved cows		Receive a jersey- cross cow on trial/ provision of jersey bull for cross- breeding
Forest	Forest policy/act too strict/ cumbersome. Insufficient firewood		Improve forest act: easier access to forest products
Drinking water	Broken water pipes	Tried to join the pipes by heating the iron and with rubber strips: unsuccessful	Repair with RGOB assistance: train people, provide tools
Houses	No electricity, no latrines	Reported 6 times but no result Temporary structure built	Send copy of our report to concerned dept.
Infra- structure	Not enough good cattle tracks	Tracks improved by villagers, but many big rocks	Tools + materials required to blast the big rocks/stones (PWD assistance)
Tseri	Fallow due to lack of manpower		

- S : Suitable - The land can support the land use indefinitely and benefits justify inputs.
- S1: Most Suitable - Land without limitations; it is useful to include the best 20-30% of suitable land as S1.
- S2 : Moderately - Land suitable but with limitations; it needs increased inputs to sustain productivity compared to S1 land.
- S3 : Marginally - Inputs needed to sustain production are increased and this cost is marginally justified.
- N : Not Suitable - The benefits do not justify the use of necessary inputs.
- N1 : Currently not suitable – Sustained use that cannot be overcome at current acceptable cost.
- N2 : Permanently not suitable - Sustained use that cannot be overcome.

8. Survey - Village Resources' Mapping Method

This method consists of two steps. First, villagers are requested to draw a map showing the important resources which the villagers use. Second, a problem-solution chart is made. After completion of the map, villagers are asked

to explain how the resources are managed. Local materials may be used to draw the map. Villagers may use their imagination in choosing the materials.

Time required: Preparing the map takes one to two hours, with another one to two hours to prepare a diagram of constraints-solutions.

Different Steps to be taken while preparing the village resource map are given below.

- Briefly explain the purpose of the exercise;
- Ask the villagers to select 6-10 representatives of different user groups to participate in the exercise;
- Select a suitable place to prepare the map;
- Ask the villagers to use their imagination while drawing a map showing all the village resources.
- Ask the group which materials they would like to use to draw the map.
- After preparation of the map by individual groups, people may come together for additional information or modification.

- When the map is finished, go through the checklist and ensure that farmers are reminded of missing points for consideration and inclusion.

9. The Transect Walk Method

This method serves to explore the village territory in detail together with villagers. It should take the group through most of the different land use types distinguished by the villagers in their village territory. Observed or indicated land uses, soil, slopes, vegetation, crops, cultural practices, infrastructure, water availability, erosion, special sites, etc, are noted down. The constraints/problems related to the different land-use systems and related solutions are to be discussed.

Considerations

- Transects can be chosen based on the village resource map.
- The team should be multidisciplinary with farmers representing various socio-economic categories of user groups.
- Transect walks should take place at a time when representatives of all resource user groups can participate.

- Depending on the variation of the terrain, several walks may be undertaken.
- The group could produce a diagram indicating different resources, characteristics, management, constraints, and solutions.
- Sheets of paper could be divided into columns and rows. The topics to be addressed could be indicated in the first column, with space left for other topics to be added by the group.
- The team walks the predetermined transects. The team writes down observed or indicated land uses, soils, slopes, vegetation, crops, water availability, erosion, etc.

10. Evaluation of Collected Information

The study of findings must be reviewed with all the participants, including both the outsiders and insiders, to reveal gaps, misunderstandings and misconceptions. Villagers are the experts and understanding their views will improve the researchers' perceptions greatly. People who live in the area should be consulted to check whether the outsiders have understood the situation. Ultimately, a joint consensus could be arrived at for preparing participatory land suitability development programmes.