

## CHAPTER 6: CONCLUSION AND RECOMMENDATION

Land suitability evaluation, unlike land capability classification, takes both the descriptions of land utilization types and soil and other resource surveys into consideration. It starts by stating the clear objective of the evaluation. This leads to the selection of major kinds of land use and later the establishment of land utilization types in a more detailed way. This part of the process helps the evaluator to identify what to look for during surveying. The requirements and limitations (climatic, soil, landform, etc.) of each land utilization type will be determined. At the same time the mapping of land will resume where land qualities and land characteristics are used to measure or estimate the fitness of the land. At this stage land improvement could be introduced to improve the quality so that it can easily be matched.

Comparison of the requirements of the land utilization types and qualities of the land will follow. This part of the evaluation has three parts i.e. first it can be compared physically but this is not enough to decide on the final suitability of the land. In order to be able to decide on the final suitability it is important to also consider the other two factors, i.e. socio-economic acceptability and feasibility and environmental sustainability of the proposed land use. Different iteration or modifying decisions could be considered before one decides on the final suitability. For example, if the objective was to find an area of land for small scale coffee farming and the available resources might not be able to support the proposed land use. It is advisable to suggest to the government or other body to reconsider the objectives and consider changes to the original objective of the evaluation. On other occasions the iteration process could be done to introduce land improvement or modifying the land use type so as to match the proposed land use and the land qualities in harmony.

The rating of suitability of each land mapping unit will be decided including the possible reasons for putting a certain land in a specific category. The suitability of any piece of land is decided in relation to a specific land use only. This indicates that certain area could be marginally suitable (S3) for a specific land use but the same land could be highly suitable (S1) or moderately suitable (S2) for another kind of land use.

The final stage of suitability evaluation is the presentation of results. This includes printing of maps showing the rating of suitability of each mapping unit and a well-written report stating all the procedures and reasons for allocating a certain area of land under specific level of suitability.

Generally two strategies can be used to approach suitability evaluation. These are (a) allocating alternative crops for specific areas and (b) allocation of alternative areas for specific crop. These strategies can be applied in different circumstances but in the case of the Eritrean situation the latter is more applicable. This is because if there are priority crops that should be planted to secure food self-sufficiency for the masses of the people, there is no choice but to find/allocate areas of land for the production of such crops. Sorghum and wheat are among the priority crops in Eritrea, so by using the second strategy areas suitable for the successful production of these crops should be identified.

Such activity of land suitability guides planners and decision-makers towards sustainable land use. Any improper land use could cause destruction to the available land resources and reduce the yield and the production. As a result land users could abandon the use of the land and migrate to towns and industrial areas. The general plan should be drafted in such a way that the use of any piece of land (agricultural or otherwise) should comply with the overall objective of the country and should ensure the sustainable use of the land resources. The following points should be considered during the allocation of land for particular use in Eritrea:

- (a) The use in question must be very important to the general objective of the country.
- (b) The use must ensure income to the land user or to the community.
- (c) The use should comply with the real situation of the local community.
- (d) The use must be sustainable, i.e. it must not result in degradation and erosion of the natural resources of the country.

To accomplish these and other related objectives, there should be a land use committee at a national level that evaluate the existing condition and decide

accordingly. The committee could be at ministerial level and feedback from land use experts can follow to enable the committee decide on proper land use.

#### REFERENCES

In Eritrea the availability of moisture is a limiting factor and any planning for rainfed agriculture should consider this quality seriously. So soil and water conservation and water harvesting techniques should be given high priority, at the same time selecting crops that survive on the available climatic conditions should be encouraged. Another water conserving and nutrient replenishing technique is through fallowing. This practice, sometimes, could clash with the low land availability but it must be seen in relation to the average yield that can be obtained, not the total production.

In any land use program the involvement of local communities should be given attention. Local knowledge is unique to certain communities (Warren, 1991). The use of RRA or PRA could be helpful in identifying the needs of the people. The latter gives the necessary information about any community and increases the confidence of the people but it needs more time compared to RRA. If time and capital allows, the use of PRA is recommended for the Eritrean situation.

Continuous training of both agricultural experts and land users on proper use and conservation of land resources should be the main agenda of the ministries concerned. Since land evaluation is a multidisciplinary activity, exchange of experts (e.g. from the ministries of Agriculture and Land, Water and Environment) should be encouraged for fruitful planning.

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