

Part V Reports of the working group sessions A to F

Presentation of results of investigations and surveys (dissemination of information)

A. Blair Rains and W. Siderius

Introduction

There is a growing awareness that a large proportion of the reports describing work undertaken for the governments of third world countries remain unread and consequently unused.

This must be a cause for concern.

Quite clearly it is necessary to produce technically satisfactory reports in conventional format and in a major language – this is necessary as a discipline for the professional workers to provide information in an appropriate format for the international community and to provide a document which will meet the requirements of a funding agency ('Bankable' Reports).

However decisions and initiatives based on the recommendations embodied in our reports can only be taken by the leaders on the advice of their national officials and clearly it is necessary that they should read easily and understand both the salient facts and the discussion of the professional workers.

It is necessary to recognize that few officials will have the technical background to appreciate the detailed information provided by the geomorphologist, pedologist, ecologist and others; nor do they need to have an indepth understanding of these different disciplines in order to make reasoned decisions. In addition the language of the report is unlikely to be the mother tongue of the official and who may find that reading a learnt language requires considerable effort. (Many studies result in a daunting quantity of information even for interested professional colleagues.) An integral component of most studies is a series of thematic maps of varying complexity. (It may sometimes seem that a map is principally a medium for the worker to demonstrate his ingenuity in combining colours both hue and density, symbols letters and numbers.) Not every person has had sufficient cartographic education or experience to acquire routinely information from a map and a complicated map with an elaborate key may be entirely meaningless to most people.

Since 1975 the Land Resources Development Centre (ODA/U.K.) has provided with its Land Resource Studies a synopsis of the results and recommendations with expanded resumee in appropriate language or languages.

While this may seem a step in the right direction it may not be adequate or entirely appropriate. An even briefer synopsis in the vernacular language lavishly illustrated with informative photographs may be a recommendable alternative.

Quite clearly it is necessary to provide the information on which the recommendations are based in a form which is both sufficiently complete and understood by the national official; he may on the basis of this information either question the validity of some of the recommendations or arrive at different conclusions.

Great skill is necessary both in the abridgement and in the translation; there must be no suggestion of oversimplification. It is tempting to recommend the imaginative use of diagrams, histograms and 'cakes'; some readers however will always find it difficult to derive information from diagrams. The use of suitable photographs can be helpful; but photographs must not be a diversion.

It is difficult to identify alternatives to conventional maps; as far as possible maps should be kept simple – only one theme should normally be displayed on a map; a series of overlays allows the display and combination of themes. (Printed coloured maps involve cartographic staff and are invariably costly to produce; a run of several thousand costing little more than a few hundred – rapidly changing features may not justify the cost of producing colour masks and printing.)

Some of the information provided by a map may be satisfactorily displayed in tabular form, e.g. land use categories can be listed in terms of administrative units e.g. districts either as a percentage of the total areas or as actual size in hectares or km.

e.g. – category/ District	Arable	Fallow	Uncultivated but suitable	Unsuitable for cultivation
Kiang West	15%	48%	20%	17%
Kiang East	50%	20%	18%	12%

Regardless of the method adopted for the presentation of information it is most desirable that one of the authors or a worker completely familiar with the background and contents of the report is available to explain or clarify any aspects of the report. Ideally such a person or persons should not only be available for a limited period when the report is presented but should be present during the initial stages of implementing the reports recommendations.

Provision of information for extension workers, livestock owners and herdmen.

Ideally the views of the pastoralists will have been sought during the course of the field; usually it is not difficult to identify the problems experienced by individuals and to determine which of these problems are common to the group.

(In our experience it is more difficult to reach agreement on how problems should be resolved. It is easy to get apparent agreement on a course of action during a friendly informal meeting but far more difficult to get decisions implemented.)

If the views of the pastoralists have been sought; as far as possible the recommendations of the report will incorporate these views, although in some circumstances the recommendations may conflict with the wishes of

individual owners of livestock.

The dissemination of instructions and information must always be the responsibility of the appropriate government department; it may, however, be desirable to provide some materials for extension workers' own use and if there is even a modest level of literacy, among the pastoralists, the provision of cards describing improved methods of animal husbandry in simple language.

Many technical workers who have demonstrated a high level of ability are poorly supplied with either essential reference books or maps.

If during the course of field work there is an awareness of such deficiencies, efforts should be made to make-good these deficiencies as well as providing the worker with those sections and recommendations of any report which involve him.

Only a small number of senior officials can be drawn into a consultative process, but as far as possible intermediate and junior staff should be provided with information and made to feel that their work provides the all important link in the chain. (Promotion to an administrative post or a short overseas visit are not appropriate rewards for dedicated work.)

Conclusions and recommendations

The main reasons for the failure of proper use of inventories in the past are 1) lack of action-orientated maps, 2) lack of understandable information with regard to the various users, 3) lack of correlation between action at primary and secondary production levels (veterinary versus range management actions) and 4) lack of incorporation of socio-economic data in LEEG.

The target group(s) of the land evaluation report(s) are summarized as follows:

- a) politicians, planners, decision makers
- b) scientists
- c) extension workers
- d) farmers and other users of the land.

Because of the variety of people involved it is essential that the report should be adapted to the various 'users' as mentioned under a, b, c and d.

The information of the report is given by means of text, tables, figures, photographs and maps.

The main criterion for the presentation of this information is that it remains readable (= understandable). This implies that the contents of the reports should be tied as much as possible to the reference level of the target group. Consequently the main theme of the report may have to be adapted to suit the user by means of different reports.

It is very relevant that the results of the land evaluation for extensive grazing should be made available to the users within the shortest time possible.

This may imply the help of outside editing and/or typing, while the report quality (in the sense of paper and map, photo quality) is made subjective to the speed with which the information may reach the users.

An example in this respect may be the publication in Mali of the monthly state of the rangeland in a critical area, to which purpose satellite images,

aircountings as well as ground checks are used.

The quantity as well as the quality of information which may be the result of the land evaluation exersize is cost bound, however the dissemination of the information should never be hampered by a too stringent budget. It is reasonable though to weigh the costs of colour printing versus black and white, offset printing versus hand setting, etc. etc.

In addition it may be considered in howfar the information could be stored on tape to make it also available at an international level, once clearance from the appropriate institutions has been obtained.

The infrastructural and practical means of extension should be a key attribute in the description of LUTs of EG.

In addition diversification of the information with regard to the different levels (inventory-evaluation-planning-extenxion) should be aimed at.

Multistage production character of extensive grazing

H. van Swinderen and W. van Wijngaarden.

1. Introduction.

The question raised in land evaluation for extensive grazing is whether it is possible to determine directly the secondary (animal) production from field observations and measurements or whether it is necessary to understand and quantify first the primary production system.

The general conscious was clearly that it is absolutely necessary to consider the primary production first in order to be able to determine the secondary production levels.

Special attention has to be given to:

- incorporate seasonal (or) year-by-year changes in the environment: rainfall patterns, climatic cycles, trends in primary production.
- incorporate possible interventions on the primary production level, such as reseeding, fertilization, bush control.
- the necessity to leave all options open to improvement.
- spacial and time variability in primary resources should be treated as a land quality.

2. Usefulness of the concept of LUT

Agreement was reached that the concept of LUT is useful with the understanding that:

- the 12 listed key attributes are only considered as a checklist of items to be studied and not as to be collected as a whole.
- it covers not only the present land use but may include guidelines for improvements and indicate alternative land utilisation types.
- within the major extensive grazing system there may be intensive improvements on a small scale; when they occur on a large scale it becomes a system of intensive grazing.
- more attention should be paid to data collecting as one of the key attributes, especially in the socio-economic area.

3. Land status

A major constraint in the implication of improvements in extensive grazing is commonly used land (common land).

4. Usefulness of the FAO framework

An evaluation should contain:

- current status of land use.
- assessment of obtainable production.
- identification of major constraints.
- possible improvements.
- determination of new sustainable production levels.

These five steps are to be used as a base in the FAO framework for land evaluation it is being used in 'Farming Systems Research' (ILCA Bulletin 16).

Excessive use of jargon would be a danger for proper utilization of the FAO framework.

There is a definite difference between internal L.E. (for individual holdings) and external L.E. (for planning purpose); it is especially for external land evaluation that the FAO framework will be used.

LUTs may lead to an abstraction of reality and guidelines for farmers (holdings) need to be given on an individual basis.

5. Incorporating management specification in LE for EG

Normally the sequence of action is: inventory, evaluation, planning and implementation. Management specifications are only needed for the last sequence.

But when improvements are considered in the description of LUTs, one has to describe those improvements which often are straight forward management specifications.

Management specifications have to be specified to make an economic analyses possible and thus should be incorporated.

Definition of land utilization types for extensive grazing

M. Purnell and P.N. de Leeuw.

Definition of LEEG

Extensive grazing refers to animal production systems that rely mainly on (a feed resource base of) natural and naturalised vegetation without major improvements to the vegetation.

The inputs for improvements to the primary production resource base are minor, both as a proportion of total inputs (investments) or land affected. Inputs to meet the requirements of animals or management may be included (for example water supplies, limited strategic supplementary feeding, rural roads, etc.).

Purpose of the LUT concept

- LUTs are defined to aid land evaluation procedures in order to weigh and assess land (unit) qualities for specific land utilization.
- LUT groupings should be defined according to:
 - specific climatic zones and regions.
 - key attributes become more specific in relation to increasing degree of detail and decreasing area size.
 - key attributes of LUTs should be listed but their relative importance depends on site/region and production systems.
 - key attributes can be used for both description and classification of LUTs.

Main key attributes for selection and classification of relevant LUTs

- a) production method (hunting, pastoralism, ranching, etc.)
- b) produce (wool, meat, skins, young animals, milk, etc.)
- c) animal species (means of produce)
- d) production aims or objectives (e.g. subsistence, commercial, settlers, etc.)
- e) territoriality.

Hierarchies for class groupings depend on site-specific characteristics.

Check list of key attributes

- a) produce medium (animal species, species mixture, herd/flock structure, etc.)
- b) functions and products of produce media (transport, traction, status, milk, meat, wool, etc.)
- c) mobility (spatial and temporal arrangements of grazing orbits, permanency of domicile)
- d) land use rights and land tenure
- e) rights to animals and their produce
- f) size of holding (stock, land water, etc.)
- g) labour

- source (family, hired, age, sex etc.)
- tasks (kind, permanent or seasonal, etc.)
- intensity (hrs/holding, hrs/output, etc.)
- h) market orientation (trade, subsistence, sales, exchange; etc.)
- i) income (cash, subsistence)
- j) management:
 - attitudes (production objectives, etc.)
 - knowledge (skills, education, etc.)
 - technology (kinds, levels, source, etc.)
- k) capital investments (internal and external investments)
- l) infrastructural and institutional facilities (credit, markets, input delivery systems).

Conclusions

- The LUT concept is applicable to extensive grazing with minor modifications,
- Solutions should be found for problems that arise from the key attributes of pastoral production systems. These are:
 - animal requirements continue throughout the year but differ between species and between groups within species.
 - inputs and outputs should be expressed in terms of animal units rather than land, the more so in systems with a high degree of mobility.
 - evaluation of LUTs that are separated in space and time should be linked to the type of animals that use them (seasonal LUTs may be a useful concept).
 - at detailed levels for land evaluation the management unit may be equated with the concept of the LUT.
 - a management unit may be defined as: a unit that incorporates single, or groups of, producers, their stock, their ownership rights to crop land and private water points as well as their use rights to grazing and natural water supplies.

The concepts of single, multiple, compound and overall LUT need further considerations.

Concepts and methods determinating carrying capacity

M. Butterworth and N. de Ridder.

1. The following objectives for land evaluation for extensive grazing are described:
 - a) selection of project areas for extensive grazing or alternative use.
 - b) to describe existing systems and their limitations.
 - c) to ascertain user needs.
 - d) to suggest interventions to supply these needs and improve productivity.

2. It was agreed that the definition should be synonymous with that of grazing capacity of the American Society of Range Management (ASRM, 1964) i.e., 'the maximum stocking rate possible, without inducing damage to vegetation or a related resource', rather than that of Mott (1960) which does not include any reference to resource maintenance. It was also agreed that the maximum stocking rate mentioned in this definition has to take the production system into account; in a transhumance/nomadic system the goal will be the maximum number of animals and a milk production to sustain milk consumption, whereas in a meat production system the maximum production per surface unit will be the goal.

3. The working group was pessimistic about the possibility of fixing carrying capacity. Once a safe (conservative) stocking rate is set, continuous monitoring of vegetational and range condition related to secondary production is necessary. This was discussed at length. Various methods were mentioned in this respect: ground level, aerial survey and remote sensing.

Photographs of fixed sites had been used. Additionally, for grasslands, changes in condition vs. seasonal changes, total base cover and spp. frequency are monitored. In shrublands spp. density and size class (height and maximum intercept) are recorded. It was stated and generally agreed that problems existed with respect to soil condition evaluation and analysis of data.

The importance of using the same methods at all times was emphasized. It was also noted that lignified and herbaceous cover should be separated and that utilisation of both should be determined. Various techniques useful in this type of work were mentioned e.g., oesophageal fistulae, total fecal collection, grid photography for utilisation measurement of browse spp, radio collars for livestock distribution estimation, etc.

It was generally agreed that the use of the traditional concept of climax spp. was of limited value outside the N. American context.

However, a number of useful additional criteria were mentioned. One such was a measurement of the change in perennial species with time: a use factor

of < 50% could be associated with an increase in such species and > 50% with a decrease.

The importance of continuous measurement of secondary production was also emphasized as was the importance of appropriate monitoring methods for specific areas. An example of a critical level of utilisation of rangeland was as follows:

- 50% utilization of desirable species
- 30% utilization of intermediate species
- 0% utilization of undesirable species.

This applies to bunch species: the values would be higher for stoloniferous species.

Desirable species were defined as productive, palatable and perennial in perennial grasslands, and as the persistence of species in annual grass-lands. Finally it was agreed that not only forage attributes determined carrying capacity, but that this was also influenced by other factors such as accessibility, availability of water, climatic factors, topography, etc.

4. Check list of qualities and LUTs

- a. Range condition and trends.
- b. Pre-dominantly annual vs. perennial vegetation
- c. Utilisable primary productions.
- d. Limiting nutrients for plant and animals growth.
- e. Seasonal variations in quantity and quality.
- f. Long term inter-seasonal variations in quantity and quality.
- g. Management system.
- h. Animal species involved.

5. Recommendations

- a. Monitoring of range condition and secondary production is recommended because carrying capacity estimates are always approximate and because carrying capacity changes in time.
- b. The developing of appropriate methods to determine range conditions and to establish critical limits of range condition is recommended.

Land qualities for extensive grazing and their rating

A. Young and H. van Gils.

1. Land qualities for extensive grazing

The land qualities for extensive grazing are grouped according to production levels (following the proposal of Van Wijngaarden) and, in the case of the primary production, according to qualities affecting growth, management and conservation.

The land qualities for the primary production level mainly follow the listing for rainfed crop production; however, some qualities have been removed from the list and others added.

The qualities are:

1.1 Primary production level

A. Growth

1. Moisture regime
2. Temperature regime
3. Radiation regime
4. Nutrient conditions
5. Oxygen availability to roots
6. Rooting conditions
7. Surface sealing (as affecting natural re-seeding)
8. Flood hazard
9. Soil toxicities
10. Excess of salts
11. Genetic potential of vegetation
12. Fire susceptibility

B. Management

13. Ease of control of undesirable species (bush clearance)
14. Conditions for hay and silage
15. Soil workability
16. Potential for mechanization

C. Conservation

17. Erosion hazard under grazing conditions
18. Susceptibility to trampling (poaching)

1.2 Secondary production level

The list of land qualities for the secondary production level is taken from Zonneveld, slightly revised.

1.2.1. Forage availability

Availability of forage of specified quality, both herbage and browse, per season, for an average rainfall year and for one, or two consecutive drought

years (a drought year may be defined according to local climatic data). Quality of forage should be specified in terms of crude protein, digestible protein, and macro- and micro-nutrients (see note).

NOTE: This quality will frequently be the major land quality affecting secondary production. Where appropriate, description of forage conditions may be given in considerable detail.

1.2.2. Water availability

Quantity of specified quality per season for each watering point.

Quality has not only to be defined in terms of conductivity, but also mineral composition.

1.2.3. Biological hazards

Poisonous plants.

Endemic and epidemic pests and diseases (tsetse, liver-fluke etc.).

Predators.

1.2.4. Climatic hardships

The need for shelter and protection induced by temperature, wind, rain, snow, etc.

1.2.5. Accessibility to animals

Slope, stones and boulders, hindrance by vegetation, other land use, flooding.

1.2.6. Ease of fencing or hedging

Availability of natural materials, ease of establishment and maintenance.

1.2.7. Location

Mainly in relation to markets.

2. Weighting (relative importance) of land qualities

No clear rules can be laid down. Relative importance should be decided in the light of local circumstances.

3. Rating of land qualities

A distinction is made between the rating of individual qualities (factor rating) and land suitability based on consideration of all qualities together.

Comparison of land qualities with land-use requirements is better carried out in terms of actual dimensions, quantities or other figures, and not as an ordinary scale (1 to 5).

The overall land suitability, based on combination of factor ratings, cannot be specified for all possible situations.

As is the case for other major kinds of land use, combination can be subjective or by various prescribed means. However a single factor rating of N2 must always result in an overall suitability of N2.

Socio-economic aspects of LEEG

N. Cossins and D. van Mourik.

1. Introduction

This report describes the conclusions and recommendations of the work group on socio-economic aspects of Land Evaluation for Extensive Grazing (L.E.E.G.).

It describes the place of Sociological Evaluation (S.E.) and Economic Evaluation (E.E.) with Land Evaluation (L.E.) in a flow chart and it gives an answer to the following posed questions:

1. Should L.E. be executed
 - quantitatively or qualitatively and
 - parallel or in two stages?
2. When should an input/output analysis take place in L.E.?
3. How can L.E. prevent the short term exploitation of ecological 'capital' on an unsustained basis (mining of land resources and variability in time)?
4. Does L.E. give management specifications for LUTs?
5. Can sociological factors be included in the L.E.?
6. To which extent are Extensive Grazing – LUTs market oriented?
7. Can L.E. evaluate present use of different improved land uses?

The first 4 questions are answered by the description of the links between L.E., S.E. and Economic Evaluation (in Figure 1) with their outputs in paragraph 2 to 5.

The answers for the last three questions are given in the recommendations only.

2. Links between land-sociological- and economic evaluation (Figure 1.)

Quantitative L.E. gives data of costs and production for the E.E. This data can only be delivered at the end of the study period, but will however only be given for those LUTs which are ecologically sound, i.e., produce on a sustained basis. The S.E. unsustaining LUTs are a second output of quantitative L.E.

The qualitative L.E. gives the preselection of the most promising areas or the areas most in need of an alternative land use.

Fulfilment of the sociological needs and acceptability constraints as expressed by the corresponding key attributes are evaluated by the sociologist (S.E.) at the first selection of relevant LUTs in the quantitative land evaluation and again for the suitable LUTs. Sociologists may base their findings on inventories made with the I.C.R.A.F. or Farming Systems Analysis Approach.

The output of E.E. depends on the quantitative data delivered by the quantitative L.E.

3. Outputs of L.E. (qualitative and quantitative)

The outputs of the quantitative L.E. as described above, are delivered in a parallel approach with the E.E., i.e., the economist comes at the end of the study period, with however the whole team still present.

The quantitative L.E. is executed at a more detailed scale only in those areas which appear to be most promising for (or in need of) improvements as indicated in the qualitative L.E.

The qualitative L.E. can be based on a reconnaissance study, executed several years earlier with broad recommendations only useful for choice of project. 'Qualitative' refers to the nature of output of this evaluation, not to the nature of the data evaluated.

4. Output of E.E.

The economic output, e.g. financial and economic internal rate of return, repayment capacity, credit needs of the farmer, is being given for all the sustaining LU and LUTs.

5. Output of S.E.

The sociological output gives acceptability constraints for key attributes of LUTs and recommends new key attributes to fulfill expressed needs.

Example of homogeneity of the group with landrights, needs for schools and the sale of milk to pay school fees have been stated.

Recommendations

It is recommended that Land Evaluation will follow the procedures described in Figure 1 and paragraph 2-4.

Sociological factors may be described as key attributes in the LUTs description and not as a land quality. They should be evaluated independently by a sociologist and be entered into the L.E. process as described in Figure 1.

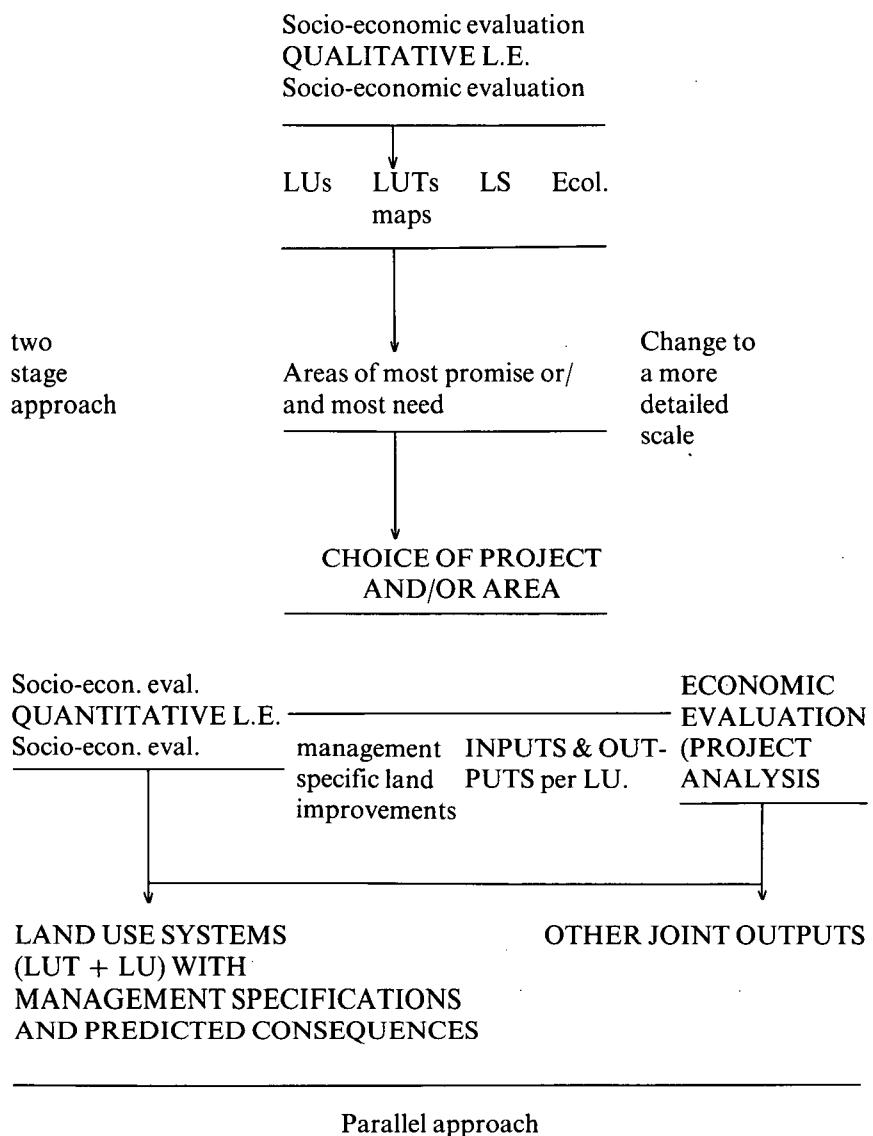
The list of key attributes as presented by Working Group C of the Workshop on LEEG (1983) may be used as a first checklist for sociological factors.

The key attributes animal- and landtenure and user attitude (towards changes) should be given special interest and when necessary additional key attributes should be added.

Market orientation may be a separate key attribute. Special attention should be given to ratio of the participation in the 'barter' economy and cash-economy.

Land evaluation should evaluate the present situation of land use (abstracted into the present LUT) and land use alternatives with different levels and kinds of inputs use (abstracted in different LUTs).

Figure 1.
Links between land-, sociological- and economic evaluation.



Appendix I

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- | | |
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Appendix 2

Programme of the International Workshop on Land Evaluation for extensive grazing (LEEG) **31 October – 4 November 1983** **Addis Ababa, Ethiopia**

Saturday – 29 October Arrival and Registration of the participants

Sunday – 30 October Arrival and Registration of the participants

Monday – 31 October

1.	Introduction 08:30 – 09:30	Chairman: Registration of participants at ILCA training block, assembly in Auditorium 1.	W. Siderius
	09:45 – 10:00	Welcome by ILCA director	S. Sandford
	10:00 – 10:15	Welcome by the chairman at the Workshop	I.S. Zonneveld
	10:15 – 10:30	Organization of the Workshop	W. Siderius
	10:30 – 11:00	Coffee break	
2.	Review of rangeland inventory and evaluation techniques. 11:00 – 11:30	Chairman: Review of major rangeland areas and their utilization on a global scale.	P. de Leeuw H. van Gils
	11:30 – 12:00	Sub-Saharan Anglophone Africa	A. Blair Rains
	12:00 – 12:30	Mediterranean	H. van Swinderen
	12:30 – 13:00	Francophone Africa	P. de Leeuw
	13:00 – 14:00	Lunch	
	14:00 – 14:45	Chairman: Asian highlands	M. Butterworth J. Ren
	14:45 – 15:30	Australia	R. Hacker
	15:30 – 16:00	Coffee break	
	16:00 – 16:30	South-America	O. Braun
	16:30 – 17:00	N & M-America	A. Cornet
	18:30 – 20:30	Cocktail hosted by ILCA at the Zebu Club	

Tuesday – 1 November

3.	The FAO framework for land evaluation 08:30 – 09:15	Chairman: Principles, basic concepts and procedures	A. Young I.S. Zonneveld
	09:15 – 10:00	The FAO methods of land	M. Purnell

	evaluation for agriculture as compared to extensive grazing	
10:00 – 10:30	Discussion	
10:30 – 11:00	Coffee break	
11:00 – 11:45	Pastoral system and land utilisation types	P. de Leeuw
11:45 – 12:15	Socio-economic study methodologies and land evaluation	D. van Mourik
12:15 – 12:45	Discussion	
13:00 – 14:00	Lunch	
	Chairman:	I.S. Zonneveld
14:00 – 14:30	Rangeland qualities	W. Siderius
14:30 – 15:15	Special problems of rangeland evaluation as compared to agriculture and forestry	W. van Wijngaarden
15:15 – 15:45	Discussion	
15:45 – 16:15	Coffee break	
16:15 – 16:45	Inventory and monitoring of Sahelian pastoral systems	Ch. Vanpraet
16:45 – 17:00	Discussion	
17:00 – 17:30	Organisation of the working group sessions	
20:00 – 22:00	Slide show in auditorium 1.	

Wednesday – 2 November

4. Working group session

The participants will be asked to select two topics from the lists and form 4 groups for discussions. Each group consists of about 10 persons. There are 6 sessions, 3 in the morning, (A, B, C) and 3 in the afternoon, (D, E, F).

Background papers may be quoted.

AM. 08:30 – 13:00	Coffee	10:30 – 11:00
PM 14:00 – 17:00	Tea	15:30 – 16:00

Separate rooms will be available in the 'Training Block' (lecture rooms 1 and 2).

Working group session A.

Dissimilation of information (reports, maps, extension)

Working group session B.

Consequences for land evaluation of multistage production character of rangeland utilization.

Working group session C.

Concept of LUT in relation to pastoral systems.

Working group session D.

Concepts and methods of determination of the carrying capacity.

Working group session E.

Rating of land qualities for extensive grazing.

Working group session F.

Socio-economic aspects of LEEG.

Thursday – 3 November

5. Excursion to MoA range experiment station in the Central Ethiopian Rift Valley, where ILCA conducts experiments.

08:30 Departure – from the main building
Visit to – Aberanosa Cattle Ranch
 – lunch at the ranch 13:00 hrs.
 – visit to Rift Valley Lake.
Return to ILCA – at 20:00 hrs.

Friday – 4 November

6. Reporting of the rapporteurs to the Workshop.

	Chairman:	I.S. Zonneveld
08:30 – 09:00	Reading of the working group comments	
09:00 – 10:30	First three sessions on the working groups	
10:30 – 11:00	Coffee	
11:00 – 13:00	Last three sessions on the working groups and filling out of the questionnaire.	
13:00 – 14:00	Lunch	
14:00 – 15:00	Writing up of the recommendations	
15:00 – 15:15	Closing address	M. Purnell
15:15 – 15:30	Closing address	I.S. Zonneveld
15:30 – 16:00	Coffee	
16:00 – 17:00	Demonstration of the FAO computer programme of matching land qualities and land requirements as done for the 1:1 M map of Ethiopia and followed by a short tour along some of the ILCA experiments on forage.	
18:30 – 20:00	Reception hosted by ITC for the delegates.	

Appendix 3

Workshop evaluation **

Please answer the questions with 'Yes' or 'No' and give remarks.

-
1. Do you think the subjects of the Workshop were dealt with sufficiently.
yes (64%) no (9%) no opinion (27%)
-

2. Which other topics could have been included.
68% offers further suggestions.
-

3. Was the structure/organization of the Workshop such that most if not all views/opinions could be heard.
yes (77%) no (9%) no opinion (14%)
-

4. Do you have any suggestions for a possible follow up of this Workshop.
77% offers suggestions.
-

5. Do you still think there is a need for LEEG after this Workshop.
yes (92%) no (4%) no opinion (4%)
-

6. Other suggestions/remarks.
For comments on questions 1, 2, 4 and 6 see below.
-

** About 65% of the participants were able to complete the questionnaire.

Reactions to questions 1, 2, 4 and 6 of the workshop evaluation questionnaire.

Q1.

- The concept of the framework should have been explained in even greater detail.
- More detail would have been appreciated on some individual subjects.
- The number of subjects were quite adequate.

Q2.

- The various aspects of animal nutrition should have been dealt with more extensively.
- More examples of LEEG case studies would have been appropriate.
- Various remote sensing techniques with regard to LEEG could have been included.
- The grazing habits of the various animals would have been another topic.
- Condition and trend analysis could have been dealt with more explicitly.
- Secondary productions may have been related with regard to the needs of the people.

- The influence of LEEG on the concept of LUT.
- The relation between intensive grazing and extensive grazing could have been elaborated on.

Q4.

- A working committee be formed to work on a LEEG manual through the FAO.
- The special role of range management in Africa.
- Draft of the guidelines (or manual) to be circulated and discussed at next Workshop.
- Scientists of other disciplines should be included also in this Workshop, in particular wildlife experts.
- The set up of a subcommittee for Int. Rangeland Ass. concerning conferences in Australia.

Q6.

- More socio-economic inputs in the manual and next workshop.
- The time was too limited to deal with the various subjects in detail.
- The discussions may have been held according to regions.
- The transport to and from town was sometimes somewhat cumbersome.

