

# Report on LADA-L Training Workshop in Limpopo Province, South Africa

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- Mr. Eric Mashiane for supplying the list of participants for the Limpopo Department of Agriculture.
- Mr. Piet Molahlegi for his help to arrange accommodation and catering for participants.
- All trainers involved in the training workshop for their inputs and presentations.

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## EXECUTIVE SUMMARY

*The South African local level land degradation assessment training workshop was held from 8 to 11 June 2009 at the Tompi Seleka Agricultural College in the Limpopo Province. The aim of the workshop was to train various stakeholders in the local assessment of land degradation in drylands (LADA-L) methodology to enable them to execute such local assessments as part of a coordinated team.*

*Participants included individuals from both the Agricultural Research Council and the Limpopo Department of Agriculture. Training was given for four days, incorporating both theoretical and practical aspects of the LADA local manual. Theoretical aspects were presented in the morning sessions with subsequent practical exercises or field work in the afternoons. This combination ensured a regular change in activities and enabled participants to view practical aspects soon after the theory was presented.*

*General feedback indicated that the training was satisfactory and the training format can be used for the regional training to be held in 2010.*

## **1 INTRODUCTION**

The Land Degradation Assessment in Drylands (LADA) project is implemented by the Agricultural Research Council – Institute for Soil, Climate and Water (ARC-ISCW) as part of the FAO funded project aiming to implement and test LADA methodology in South Africa. The local land degradation assessments are implemented according to the local assessment manual (McDonagh and Bunning, 2009 a, b) and assessment teams needed training in the various assessment methods before the actual fieldwork commenced.

In South Africa, the LADA local assessments will be combined with new Eco-technology projects in the Limpopo Province, which aim to implement various sustainable land management practices or eco-technologies in participation with local farming communities. These projects will be located in the Blouberg, Fetakgomo and Makhudutamaga local municipalities and the assessment data will constitute the diagnostic phase of these Eco-technology projects, which again aims to analyse and understand the local farming systems before actual implementation. The LADA analyses will also provide a set of baseline data which can serve as a basis for project monitoring and evaluation frameworks. Furthermore, this information will help to improve process monitoring in the Eco-technology projects during the project life cycle, as well as impact assessments during and after project completion. Monitoring should be done during the same time of the year as the original assessment in order to enable comparison between the results and identify possible changes.

In order to bring various partners on board and increase capacity in the execution of LADA local assessments, a four-day training workshop was held from 8 to 11 June 2009 at the Tompi Seleka Agricultural College in Limpopo. Participants were invited from various institutes of the ARC, as well as from the Limpopo Department of Agriculture (LDA).

### **1.1 AIM OF THE TRAINING WORKSHOP**

The aim of the workshop was to train various stakeholders in the local assessment of land degradation in drylands (LADA-L) methodology to enable them to execute or

assist with the local assessments executed in the Limpopo Province as part of the LADA project, or future assessments as part of a coordinated team.

## **2 PARTICIPANTS**

In South Africa, it is envisaged that the Department of Agriculture, Forestry and Fisheries (DAFF), together with the ARC, will be the main users of LADA local assessments. For this reason, participants included individuals from both the ARC and the LDA. Employees from the ARC included researchers and technicians from four different institutes with expertise in soils, vegetation, water resources and community interviews.

In order to get good representation from the LDA, Mr. Eric Mashiane (Assistant Manager: Natural Resource Management) was approached to identify and invite appropriate persons to attend. The requested levels of representation were structured according to planned Eco-technology projects and the potential people that would be involved in them. From the three projects, the representation was requested to include extension officers, resource technicians, control technicians, a LandCare control officer, a control resource technician, land use planners and officers from the Tompi Seleka College. Participants were also chosen to represent provincial, district and project levels.

Of the three projects, only two were represented at project level, due to communication limitations during the invitation process. The Blouberg project was not represented. A list of all participants is given in **Appendix A**.

## **3 TRAINING PROGRAMME**

Training was given for four days, incorporating both theoretical (Figures 1 to 4) and practical aspects of the LADA local manual. The objective was to present theory in the morning sessions with subsequent practical exercises or field work in the afternoons. This combination ensured a regular change in activities and enabled participants to view practical aspects soon after the theory was presented. The full workshop programme is presented in **Appendix B**.



Figure 1. Participants at the LADA-L training workshop.

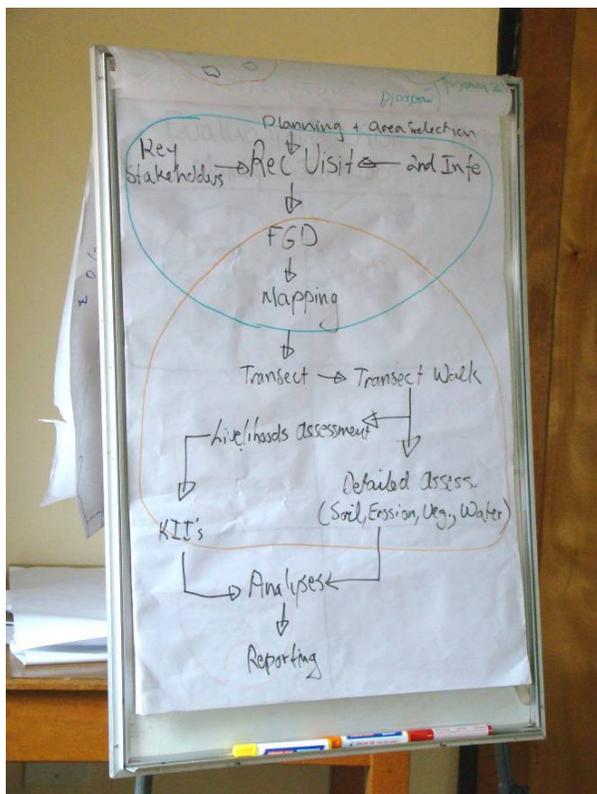


Figure 2. Basic format of the local assessment used to structure and explain the assessment process.



Figure 3. Dr. Hendrik Smith explaining the focus group discussion and livelihood interview processes.



Figure 4. Ms. Thembi Ngcobo explains the Sustainable Livelihoods Framework analysis.

Practical sessions (Figures 5 to 9) consisted of demonstration sessions with all the relevant tools being explained by the trainers, with the assistance of the participants. Data analysis was then explained and demonstrated in a subsequent classroom session.



Figure 5. Participants give feedback on a community mapping exercise.



Figure 6. Dr. Jorrie Jordaan explains the use of the disk meter to measure dry matter production.



Figure 7. Following the field session for vegetation assessment, the calculation of the veld condition score is explained.



Figure 8. Explanation of the water assessment at dams near the training venue.



Figure 9. Demonstration of the Visual Soil – Field Assessment Tool (VS-Fast) methodology to assess soil properties.

#### **4 DISCUSSION**

The LADA local assessment methodology is extensive and a diverse team of experts is needed to execute a full assessment. There were two aspects to the training that needed to be conveyed to participants. The first aspect involved the complete assessment methodology and the facets that it includes, from the identification of the assessment sites through to the eventual data analysis and conclusions. The second involved the specific assessment methods for the various biophysical measurements, as well as the livelihood assessments. The amount of detail presented in the latter was adapted according to the audience, since too much detail would be inappropriate for individuals who did not have the scientific background in that specific field.

Practical sessions consisted of demonstration sessions by the trainers, with participants assisting. Participants therefore did not do complete practical sessions on their own, partly due to the difference in background levels of the trainees, as well as time constraints during the training week. The demonstrations were still found to be effective, though.

A simple evaluation procedure was done at the end of each day to assess the participants' general feeling about that day's training. The evaluation results indicated that the training was generally satisfactory and the last day's evaluation is shown in Figure 10.



Figure 10. Evaluation results for Thursday 11 June.

## 5 COMMENTS AND RECOMMENDATIONS

The four-day training session was sufficient for South Africa's need in terms of the planned local assessments to be completed and equipped participants with the needed background to participate in these assessments.

If more time was available to do the training, it would be ideal to give participants the opportunity to do a small-scale assessment during the training week. The LADA local manual contains an extensive amount of information and many of the principles of the assessment will only be fully understood once an assessment is underway.

It is recommended that the basic format of the training workshop be used for the regional training session to be held in 2010.

## 6 REFERENCES

**McDonagh, J & Bunning, S.** 2009 a. *Field Manual for Local Level Land Degradation Assessment in Drylands, LADA-L Part 1: Methodological Approach, Planning and Analysis*, FAO: Rome. pp. 76.

**McDonagh, J & Bunning, S.** 2009 b. *Field Manual for Local Level Land Degradation Assessment in Drylands, LADA-L Part 2: Local Assessment: Tools and Methods for Fieldwork*, FAO: Rome. pp. 133.

**APPENDIX A.** List of training participants

<b>Surname</b>	<b>Name</b>	<b>Institution / Location</b>	<b>Tel</b>	<b>E-mail</b>
Breytenbach	Flip	ARC-Irene	082 732 8729	FBreytenbach@arc.agric.za
Diale	LF	Makhudutamaga		NgcoboT@arc.agric.za
Ngcobo	Thembi	ARC-CO	072 607 8372	
Jordaan	Jorrie	DoA	082 886 6792	Jordaanj@agric.limpopo.gov.za
Kidson	Michael	ARC-ISCW	084 870 3938	Michael@arc.agric.za
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Lötter	Lianda	ARC-PPRI	082 336 8337	LotterL@arc.agric.za
Maake	PE	Fetagomo	073 164 6984	
Makaleng	MP	Makhudutamaga	072 417 8930	
Malope	LO	Makhudutamaga		
Mametja	HJ	Tompi Seleka		
Mapholo	RR	Fetagomo		
Maribeng	Lebea	ARC-ISCW	076 370 3915	MaribengL@arc.agric.za
Machaba	J	Sekhukhune	083 576 8065	
Mashabane	William	ARC-ISCW	012 310 2558	MashabaneK@arc.agric.za
Matlou	Mmakgabo	ARC-ISCW	082 726 0232	MmakgaboM@arc.agric.za
Monakedi	MS	Landuse	082 463 7943	
Montjane	MA	Tompi Seleka		
Mphahlele	RZ	Sekhukhune	079 047 0001	
Ntsoane	SF	Makhudutamaga		
Riba	BS	Fetagomo		
Sekhole	RN	Fetagomo		
Smith	Hendrik	ARC-ISCW	082 331 0456	Hjsmith@arc.agric.za
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Stronkhorst	Liesl	ARC-ISCW	084 556 9861	StronkhorstL@arc.agric.za
Tjelele	Julius	ARC-Irene	012 672 9314	<a href="mailto:JTjelele@arc.agric.za">JTjelele@arc.agric.za</a>
Trytsman	Gerrie	ARC-RFI	083 326 5362	<a href="mailto:GTrytsman@arc.agric.za">GTrytsman@arc.agric.za</a>
Makgoatha	MA	Tompi Seleka	076 355 7169	
Tjatjie	MM	Tompi Seleka	083 589 3377	
Lebogo	Julius	Tompi Seleka	073 882 6818	
Mogowe	EW	Lepelle Nkumpi	073 813 6740	
Manaka	TRP	Lepelle Nkumpi	072 719 4180	
Mahada	NT	Tompi Seleka		

## APPENDIX B. Workshop Programme



### Land Degradation Assessment in Drylands Local Assessment (LADA-L) Training

Tompi Seleka Agricultural College, Limpopo

8-12 June 2009

#### *Draft Agenda*

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**1. Objective:** To train various stakeholders in the local assessment of land degradation in drylands (LADA-L) methodology to enable them to execute such local assessments in future as part of a coordinated team.

**2. Venue :** Tompi Seleka Agricultural College, Limpopo

**3. Host institution:** Agricultural Research Council – Institute for Soil, Climate and Water (ARC-ISCW)

**4. Participants (40 persons)**

**5. Organiser/Resource person:**

- Ms. Liesl Stronkhorst, LADA project leader - ARC-ISCW (Tel: 012 310 2686)

Day	Date	Topic	Trainers
1	Monday 8 <sup>th</sup>	<b>Introduction and identification of assessment areas</b>	
	09:00-09:30	Arrival of participants at Tompi Seleka College	
	09:30-10:00	Registration	
	10:00-10:45	i) Welcome and introductions ii) Review and adoption of the programme	Hendrik Smith Liesl Stronkhorst

Day	Date	Topic	Trainers
	10:45-11:15	Overview of LADA and the LADA-L approach	Liesl Stronkhorst
	11:15-12:30	LADA-L Process flow (including data analysis) Assessment planning Assessment team Identifying assessment areas	Liesl Stronkhorst
	12:30-13:00	Introduction to the Conceptual Framework <ul style="list-style-type: none"> <li>• DPSIR</li> <li>• Ecosystem Services</li> <li>• Sustainable livelihoods</li> </ul>	Liesl Stronkhorst
	13.00-13.45	<i>Lunch</i>	
	13:45-15:15	Characterizing the study area: <ul style="list-style-type: none"> <li>• Review secondary information</li> <li>• Identify key stakeholders</li> <li>• Reconnaissance visit</li> <li>• Focus group discussion</li> <li>• Participatory mapping</li> <li>• Transect</li> <li>• Rapid assessments (vegetation, erosion, water resources)</li> </ul>	Liesl Stronkhorst Hendrik Smith Thembi Ngcobo
	15:15-16:00	Practical exercise <ul style="list-style-type: none"> <li>• Divide into 3 groups according to the 3 assessment sites</li> <li>• Identify main land uses in the area</li> <li>• Draw community maps (rich pictures) of the assessment areas</li> <li>• Identify different land use types and areas of LD, SLM, normal land and undisturbed land</li> <li>• Identify transect cutting through major Land Use Types (LUT)</li> <li>• Draw transects on maps</li> </ul>	Liesl Stronkhorst Hendrik Smith
2	<b>Tuesday 9<sup>th</sup></b>	<b>Assessment of vegetation and soil properties</b>	
	08:30-09:45	Livelihoods assessment	Hendrik Smith
	09:45-11:00	Assessment of vegetation	Jorrie Jordaan
	11:00-11:15	<i>Tea break</i>	
	11:15-12:15	Assessment of soil erosion	Liesl Stronkhorst Hendrik Smith

Day	Date	Topic	Trainers
	12.15-13.00	<i>Lunch</i>	
	13:00-14:30	Practical – vegetation assessment <ul style="list-style-type: none"> <li>• 1 Group</li> <li>• Identify areas for vegetation assessment and assess according to the methodology</li> <li>• Complete score sheets and take pictures</li> </ul>	Jorrie Jordaan Liesl Stronkhorst Hendrik Smith
	14:30-16:00	Practical – soil erosion assessment <ul style="list-style-type: none"> <li>• 1 Group</li> <li>• Identify areas of erosion and assess according to the methodology</li> <li>• Complete score sheets and take pictures</li> </ul>	Liesl Stronkhorst Hendrik Smith
<b>3</b>	<b>Wednesday 10<sup>th</sup></b>	<b>Assessment of soil erosion and water resources</b>	
	08:30-09:45	Assessment of soil properties	Liesl Stronkhorst
	09:45-11:00	Assessment of water resources	Lianda Lotter
	11:00-11.15	<i>Tea break</i>	
	11:15-13:00	Practical – soil assessment <ul style="list-style-type: none"> <li>• 1 Group</li> <li>• Identify areas for soil sampling to assess possible differences (TOMPI Seleka)</li> <li>• Do physical measurements to familiarize with equipment</li> <li>• Take pictures</li> </ul>	Liesl Stronkhorst
	13.00-14.00	<i>Lunch</i>	
	14:00-16:00	Practical – water resources assessment <ul style="list-style-type: none"> <li>• 1 Group</li> <li>• Identify areas for water assessment</li> <li>• Do assessment to familiarize with procedures</li> <li>• Complete score sheets and take pictures</li> </ul>	Lianda Lotter
<b>4</b>	<b>Thursday 11<sup>th</sup></b>	<b>Livelihood assessment, impacts of LD and analysis using DPSIR framework</b>	
	08:30-09:30	Assessment of LD impacts on crop production	Liesl Stronkhorst
	09:30-11:00	DPSIR Framework	Liesl Stronkhorst
	11:00-11.15	<i>Tea break</i>	

<b>Day</b>	<b>Date</b>	<b>Topic</b>	<b>Trainers</b>
	11:15-11:45	Assessing impact on ecosystem services	Liesl Stronkhorst
	11:45-12:15	Sustainable Livelihoods Approach	Thembi Ngcobo
	<i>12:15-13:00</i>	<i>Lunch</i>	
	13:00-14:00	Reporting	Liesl Stronkhorst Hendrik Smith
	14:00-15:00	Way Forward / Assessment planning	Hendrik Smith Liesl Stronkhorst
	15:00-15:30	Closure	Hendrik Smith Liesl Stronkhorst
	15:30	Departure of participants	