World Overview of Conservation Approaches and Technologies

International Workshop
and Steering Meeting

Ifrane and Rabat, Morocco
13 - 19 October 2009

PROCEEDINGS

Progress, Methods, Outputs,
Plan of Action,
Organisation

Co-sponsored by:

Faculty of Human Sciences

University Mohammed V Agdal

Ecole Nationale Forestière d'Ingénieurs

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WORLD OVERVIEW OF CONSERVATION APPROACHES AND TECHNOLOGIES (WOCAT)

WORKSHOP & STEERING MEETING PROCEEDINGS

WOCAT Global Management
Centre for Development and Environment (CDE, Switzerland)
ISRIC - World Soil Information (The Netherlands)
Food and Agriculture Organization of the United Nations (FAO, Italy)

LIST OF COLLABORATING AND FUNDING INSTITUTIONS

ACT	African Conservation Tillage Network, Harare, Zimbabwe
ADB	Asian Development Bank, Manila, Philippines
AJZ	AJZ: Association des Jeunes de Zammour, Médenine, Tunisia
ARC-ISCW	Institute for Soil, Climate and Water of the Agricultural Research Council, Pretoria, South Africa
ASC-UPLB	Agricultural Systems Cluster, University of the Philippines, Los Baños, Philippines
BSWM	Bureau of Soils and Water Management, Department of Agriculture, Quezon City, Philippines
CAMP Alatoo	Central Asia Mountain Programme, Bishkek, Kyrgyzstan
CAS and MWR	Institute of Soil and Water Conservation, Yangling, China
CDE	Centre for Development and Environment, University of Bern, Switzerland
CGIAR	Consultative Group on International Agricultural Research, Washington, USA
CHTDB	Chittagong Hill Tracts Development Board, Bangladesh
CIS	Centre for International Cooperation, Vrije Universiteit Amsterdam, The Netherlands
CRDA	Commissariat Régional au Développement Agricole, Médenine, Tunisia
DESIRE	EU-project for Mitigating desertification and remediating degraded land
DEC	Dept. for Erosion Control, Faculty of Forestry, Belgrade University, Serbia & Montenegro
DERAD	Diagnostic Environnemental et Recherches Appliquées pour le Développement, Antananarivo, Madagascar
DoA	Department of Agriculture, Pretoria, South Africa
FAO	Food and Agriculture Organisation of the United Nations, Rome, Italy
FAO-LADA	Land Degradation Assessment in Drylands, Rome, Italy
FSWCC	Fujian Soil and Water Conservation Centre, Fuzhou, China
GEF	Global Environmental Facility
GEF OP12	GEF Operational Program 12 Gansu Project Management Office, Lanzhou City, China
GI	Institute of Geoecology, Mongolian Academy of Sciences, Ulaanbaatar, Mongolia
GREAD	Group of Research, Studies and Actions for Development, Niamey, Niger
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit,
GTZ-Sustainet	Deutsche Gesellschaft für Technische Zusammenarbeit, Sustainet, Eschborn, Germany
IC-Pakistan	Intercooperation-Pakistan, Hayatabad – Peshawar, Pakistan
ICARDA	International Centre for Agricultural Research in the Dry Areas, Aleppo, Syria
ICIMOD	International Centre for Integrated Mountain Development, Kathmandu, Nepal
ICRAF	International Center for Research in Agroforestry, Nairobi, Kenya
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics, Niamey, Niger
InGeo	Institute of Geography, Ministry of Science, Almaty, Kazakhstan
INP	Institut National de Pédologie, Dakar, Senegal
IRA	Institut des Régions Arides, Médenine, Tunisia
IRRI	International Rice Research Institute, Manila, Philippines
ISRIC	ISRIC - World Soil Information, Wageningen, The Netherlands
IWMI	International Water Management Institute, Pretoria, South Africa
KAU	Kyrgyz Agrarian University, Bishkek, Kyrgyzstan
KU	Kathmandu University, Kathmandu, Nepal
MADRPM	Ministère de l'Agriculture du Développement Rural et des Pêches Maritime, Morocco
MoA-Ethiopia	Ministry of Agriculture, Addis Abeba, Ethiopia
MSEC-CACILM	Multicountry Secretariat, Central Asian Countries Initiative for Land Management, Bishkek, Kyrgyzstan
NCCR N-S	National Centre of Competence in Research North-South, Switzerland
SDC	Swiss Agency for Development and Cooperation, Bern, Switzerland
SSMP	Sustainable Soil Management Programme, Kathmandu, Nepal
SWCMC	Soil and Water Conservation Monitoring Center, MWR, Beijing, P.R. China

SWALIM	FAO Somalia Water and Land Information Management, Nairobi, Kenya
TerrAfrica	TerrAfrica – Regional Sustainable Land Management
TSSRI	Tajik Soil Science Research Institute, Dushanbe, Tajikistan
Tajik Academy of Agricultural Sciences, Dushanbe, Tajikistan	
UNCCD	United Nations Convention to Combat Desertification, Bonn, Germany
UNEP	United Nations Environment Programme, Nairobi, Kenya
UNGN	UNESCO-GN Chair, Faculty of Human Sciences, University of Mohammed V, Rabat, Morocco
UNU-INWEH	United Nations University, Institute for Water, Environment and Health, Hamilton, Canada
WASWC	World Association of Soil and Water Conservation, Beijing, P.R. China
WDCU	Watershed Development Coordination Unit, New Delhi, India
WORLP	Western Orissa Rural Livelihood Project

LIST OF ABBREVIATIONS

AGIS	Agricultural Geo-Referenced Information system
CA	Conservation Agriculture
CC	Climate Change
CCD	See UNCCD
CHT	Chittagong Hill Tracts
DB	Database
DBMS	Database Management System
DoA	Department of Agriculture
DPSIR	Drivers-Pressure-State-Impact-Response
DSS/ DST	Decision Support System/ Decision Support Tool
ESAPP	Eastern and Southern Africa Partnership Programme
GLASOD	Global Assessment of Human-Induced Soil Degradation (UNEP / ISRIC)
GO	Government Organisation
IM	Impact Monitoring
ISCO	International Soil Conservation Organization
LADA	Land Degradation Assessment in Dryland Areas (FAO-UNEP)
LD	Land degradation
LU(S)	Land Use (System)
MG	WOCAT Management Group
MoU	Memorandum of Understanding
NGO	Non-Governmental Organisation
NRM	Natural Resource Management
QA	Questionnaire on Approaches
QM	Questionnaire on the WOCAT Map
QT	Questionnaire on Technologies
SLM	Sustainable Land Management
SM	Steering Meeting
SWC	Soil and Water Conservation
TF	Task force
ToR	Terms of Reference
WOCATeer	WOCAT collaborator
WOCAT-L	WOCAT mailing list
WS	Workshop
WWSM	WOCAT (annual) Workshop and Steering Meeting

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FOREWORD & INTRODUCTION

Since 1996, WOCAT has organized International Annual Workshops and Steering Committee Meetings (WWSM) with the goal (a) to bring together the main collaborating and funding institutions and the core collaborators, (b) to assess the progress and to exchange experiences, (c) to further develop the programme, (d) to plan for the future and (e) enhance WOCAT in the host country/ region.

During the previous annual workshop in Switzerland in 2008, Morocco was selected to host the 14th annual workshop. The meeting was hosted by the UNESCO-GN Chair, Faculty of Human Sciences, University Mohammed V-Agdal, Rabat, Morocco and the 'Ecole Nationale Forestière d'Ingénieurs'.

The WWSM took place from Tuesday 13 to Monday 19 October at the 'campus de l'ENFI' in Ifrane and at the University Mohammed V in Rabat. The meeting was attended by almost 40 participants from 16 countries. A lot of participants from different institutions in Morocco joined the workshop and contributed to the discussions.

The workshop ended with a joint WOCAT - DESIRE symposium on 'Assessing benefits of SLM – Key for success'. The symposium aimed to enhance the collaboration between the two projects and to bring together various Moroccan and international organizations and institutions.

These proceedings have been prepared mainly for the core group of WOCAT collaborators and institutions in order to present the results of the 14th WWSM, held in Ifrane and Rabat, Morocco, 13 - 19 October 2009. This document is not addressed to a broad public and therefore has not been prepared for such a purpose. It is a working document for the further development of WOCAT. Thus some of the issues are presented as reported by the rapporteurs and questions arising need to be addressed until and during the next annual workshop and steering meeting. Please give us your comments in order to improve the programme and the results presented in this document.

The proceedings include:

1. Reports on the WOCAT taskforces
2. National/ regional and global progress reports and activity plans;
3. Summary of major discussion points;
4. Annex

A CD-ROM is attached to these proceedings with all major Powerpoint presentations and photographs. The reference to the presentation file is indicated in brackets behind the speaker's name.

WOCAT would like to thank all participants and collaborating institutions for their contributions and considerable commitment before, during and after the workshop (see attached list of participants).

EXTENDED SUMMARY

WOCAT taskforces

The first two days of the WWSM were spent on taskforce group work.

Impact Monitoring

The taskforce on 'impact monitoring' (IM) further discussed the list of indicators which had been developed during the WWSM and taskforce meeting in the year before. The list could not be finished yet and still needs further input and discussions. The indicators in the IM-tool should be consistent with the indicators already used in other WOCAT tools such as QT and QM, but needs also a clear distinction to the WOCAT questionnaires and to the LADA local manual. Unfortunately there is no clear taskforce leader at the moment, so it is not clear yet how this taskforce will be continued in the next year.

Decision Support

The decision support tools presented during the last WWSM in Switzerland were further developed and their application analysed. Unfortunately, no WOCAT partner managed to test the tools in their own country. The decision support tool at the regional level, which is based on the WOCAT / LADA / DESIRE mapping methodology, saw considerable progress by including the Dynamics Maps software to run queries and package results for specific target groups. The local level decision support tool developed within the DESIRE project was applied in 14 study sites and their overall success synthesized. The working group looked at how to improve these two levels and how to integrate them further. Senegal, Niger, South Africa and Central Asia are planning to apply the decision support tools in 2010.

Watershed Module

The newly involved people in the taskforce brought very valuable and also critical inputs to the module. The watershed module questionnaire (QW) should show spatial arrangement of different technologies/ measures (where in the system, topo-sequence) and help to evaluate impact and outcomes of these techniques holistically. Based on the input from the group work and from the taskforce members who could not participate, QW will be revised and a new version should be made available in the first half of 2010. Several countries have shown interest in testing the watershed module in 2010.

Mapping

Considerable progress was made in the last year. The on-line QM database is now functional, though some improvements are still needed. Data entry and editing is now possible, but not yet to display the data in map format through an (interactive) map viewer. The taskforce further discussed the database and map viewer development. A first idea of a map viewer system could already be presented. The taskforce participants made clear that also an off-line database system is urgently needed.

Digital products

The taskforce on 'digital products' did not have a special group work session, however some aspects like the new WOCAT website and the map viewer development were briefly introduced to all participants.

Progress Reports and activity plans 2010

The main achievements at the global level

- A publication on 'Benefits for Sustainable Land Management' has been prepared for UNCCD.
- A new WOCAT website has been developed based on a Content Management System (CMS).
- The new on-line database on SLM Approaches can be used since the beginning of 2009.
- WOCAT contributed to the preparation of the 'white papers' prepared by the Dryland Science for Development (DSD) consortium for the session of the CCD Committee on Science and Technology (CST) at COP9 in Buenos Aires, September 2009.
- A joint WOCAT-LADA-DESIRE side event was held at the COP9 in Argentina and WOCAT had a key note at the DSD conference embedded in the COP9 conference.
- Further collaboration/ involvement of WOCAT in the LADA and the DESIRE-projects.

Progress reports and activity plans of the national/ regional levels:

- ICIMOD jointly organised The International Shangri-La workshop 2009 on SLM in the highlands of Asia. One of the group work sessions was specifically on WOCAT tools. ICIMOD has planned to further strengthen the HIMCAT network and trainings are foreseen in Myanmar, Nepal and India.
- Kathmandu University (KU) and the Sustainable Soil Management Programme (SSMP) participated the first time in a WWSM. KU had some experience with WOCAT through the organisation of a NEPCAT workshop in collaboration with ICIMOD. SSMP aims to promote soil fertility management among farmers in Nepal and would be very interested in the development of a WOCAT module related to crop-livestock systems.
- 22 new SLM technologies and approaches were documented in Bangladesh. For the next year it is planned to publish the QT's and QA's in factsheets.
- The Institute of Soil and Water Conservation from Yangling, China, has used the WOCAT tools and methods through the DESIRE-project. For the next year mapping should be continued and new case studies documented.
- Mongolia published an overview book containing 19 technologies and approaches. Quality assurance and new data collection is foreseen for 2010.
- The Institute of Geography of the Ministry of Education and Science in Almaty, Kazakhstan, aims to restart WOCAT activities by documenting case studies and by using the new mapping methodology.
- Senegal has planned to conduct two WOCAT workshops in 2010. A national workshop is foreseen at the beginning of the year and a regional workshop is planned for March/ April 2010.
- WOCAT activities have been restarted in Niger through GREAD. The first need is to strengthen the capacity for training and technical support of target groups and to further promote WOCAT/ LADA tools within the partner structures in Niger.
- Within the DESIRE-approach several workshops were conducted in Morocco to select SLM options. A first selected technology could be implemented and introduction of more technologies is planned.
- The SWALIM project has been using the WOCAT/LADA mapping methodology in Somalia as one of the first countries. A continuation of the mapping procedure as well as training on QT and QA is foreseen for the next year.
- DERAD could document two technologies in Madagascar related to improved pasture management. In the coming year practices for sand dune fixation will be documented.

It was agreed that for the next WWSM the regional and national presentations should be better structured in order to clearly show the progress made in the last year.

Steering Meeting

Global activity plan for 2010

- Finalizing the production of guidelines on best SLM practices in SSA for the TerrAfrica project.
- Compilation of a chapter for the FAO State of the World Land and Water Resources (SOLAW) report.
- Further development of the digital products (QT on-line database, map viewer, etc.).
- Training workshops and backstopping.
- Global management meeting and development of a financial strategy for WOCAT.

Administrative and organisational issues

The host of the next WWSM has not been decided upon during the workshop, since it was not yet clear in which form the next workshop should be conducted. A discussion hold at the WWSM made clear that WOCAT is in a very crucial phase at the moment, therefore more major programmes and donors should be invited to the coming workshop. It has been agreed that the WOCAT management should decide about the host of the next WWSM, since the accessibility as well as the infrastructure will be especially important.

In the meantime the global management team agreed that the next WWSM will be conducted in Bishkek, Kyrgyzstan due to the following reasons: strategic regional interest, the opportunity to further promote and establish WOCAT in Central Asia, should help to create synergies and strengthen collaboration as well as harmonize activities between different players. The exact host in Bishkek is not yet determined.

For the coming WWSM it was foreseen to start with an open symposium to bring together various international donors, organisations and institutions and to actively involve participants in developing the way forward. During the WOCAT management meeting in Rome it was decided that there would be a better chance of involving such parties during a major on-going event like the UNCCD CRIC meeting, etc. Nevertheless, the next WWSM should start with an open symposium, but mainly to involve regional players in Central Asia. Furthermore, the WOCAT management team has decided to postpone the next WOCAT workshop and steering meeting to the first half of 2011. The reasons for this decision are limited WOCAT budget, time constraints, ambiguity about the host and more time to prepare for new funding proposals, etc.

Host: not yet definitively decided, Bishkek, Kyrgyzstan

When: Mai/ June, 2011, date not yet know.

Next WWSM/ symposium will be announced on the WOCAT website as soon as the location and date has been fixed.

WOCAT – DESIRE Symposium

Assessing benefits of SLM – Key for success

L'évaluation, clé de réussite d'une politique de gestion durable des terres

Prof. Abderrahim Benhadda, Dean of the Faculty, Université Mohammed V-Agdal, opened the symposium and thanked all institutions and persons who contributed to the symposium. The permanent Secretary of the Academy of Hassan II of Sciences and Technologies expressed pleasured to participate in the symposium and the Academy. The Representative of the Haut Commissariat des Eaux et des Forêts mentioned the symposium as perfect occasion to discuss problems like degradation and to find solutions.

In the key note speech of Guillaume Benoit, General Council of Agriculture, sustainable agriculture in Morocco in relation to the Mediterranean context was addressed. He emphasized that the Mediterranean and Morocco in particular are vulnerable environments, demanding new contracts between the agricultural sector and societies, founded on innovations.

In the first session an introduction to the WOCAT network and the DESIRE-project was given by the project coordinators Hanspeter Liniger (WOCAT) and Coen Ritsema (DESIRE). The mission of WOCAT is to use and share knowledge about sustainable land management (SLM). The way forward entails WOCAT to join forces for the benefit of SLM, like the collaboration with DESIRE and LADA. Coen Ritsema explained that DESIRE is a scientific project and one of its aims is scientific innovation but the project is also oriented towards applying solutions.

'Making use of SLM assessments at the local level' was the topic of the second morning session. A first presentation was given by Prof. Abdellah Laouina from University of Mohammed V Faculty of Human Sciences, and host of the meeting, showing results from a project dealing with assisted regeneration of cork oak forests. Joris de Vente, a DESIRE study site representative from Spain, introduced the participatory DESIRE approach towards SLM. Mark Reed from the University of Aberdeen gave a presentation to the question how monitoring and assessment of degradation and SLM can be based on both local and scientific knowledge.

In the first afternoon session 'linking science with development' the Green Water Credits project was introduced by Sjef Kauffman from ISRIC - World Soil Information. The main objective of the project is to improve soil water management in rainfed agriculture and create a financial compensation mechanism for farmers applying sustainable land management, thereby ensuring better water quality and quantity downstream. The Moroccan DESIRE team showed a presentation to the assessment of soil erosion and conservation with various methodologies such as 137-Cs measurements. In a further presentation the LADA local level assessment was introduced by Sally Bunning (FAO) as a toolbox for assessing impacts, monitoring and decision making.

The last session addressed SLM benefits beyond the local scale. An introduction to the WOCAT / LADA / DESIRE mapping methodology was given by Godert van Lynden (ISRIC). Dr. Mohammed Ouessar and colleagues from the DESIRE team in Tunisia showed their experiences with the mapping tool for the spatial assessment of degradation and conservation. A further presentation showing mapping results from the FAO-SWALIM project in Somalia was given, rounding up the session.

A round table discussion between the host Abdellah Laouina, the WOCAT coordinator Hanspeter Liniger and the DESIRE coordinator Coen Ritsema was used to draw conclusions of the symposium day.

WORKSHOP PROGRAMME

Date/time	Activity/topic	Responsibilities
Monday 12/10	Arrival of participants and welcome reception in Rabat	
20:00	Dinner and first information in the hotel Mercure in Rabat	
Tuesday 13/10	**WOCAT TOPICS AND TASKFORCES**	*Chair: A. Laouina* *Rapp.: Ch. Hauert*
07:00	Meeting at the Mercure hotel desk	
07:00 – 09.30	Departure from Rabat and travel to Ifrane	
09:30 – 09:45	Short welcome and introduction	Abdellah Laouina, Mohammed Sabir, Hanspeter Liniger
	Coffee Break	
10:00 – 12:30	Group work (TF) 1) Decision support tool 2) Questionnaire modules (watershed) 3) Impact Monitoring 4) WOCAT in research, training and education 5) Mapping	TF-leaders
12.30 – 14.00	*Lunch*	
14:00 – 17:30	Continuation of group work (TF)	TF-leaders
Wednesday 14/10	**WOCAT TOPICS AND TASKFORCES (CONTINUATION)**	
08:00 – 12:30	Continuation of group work (TF) and preparation of short presentation *Including coffee break*	TF-leaders
12.30 – 14.00	*Lunch*	
14.00 – 17.30	Presentation of Topics / Taskforces and discussions 1) Decision support tool 2) Watershed module 3) Impact Monitoring 4) Mapping 5) Digital products (Kurt Gerber) *Including coffee break*	TF-leaders
Thursday 15/10	**NATIONAL/ REGIONAL PROGRESS REPORTS AND PLANNING**	*Chair: I. Providoli* *Rapp.: Ch. Hauert*
08.00 – 12.30	**Presentation of national/ regional progress reports and planning** - Bangladesh - Nepal (ICIMOD) - Nepal (Kathmandu University) - Nepal (SSMP) - China - Mongolia - South Africa - Ethiopia - Somalia - Madagascar - Senegal - Niger - Morocco - CACILM	National and regional representatives

	- Kazakhstan (continuation of presentations on Friday morning) *Including coffee break*	
12.30 – 14.00	*Lunch*	
	Excursion to the Medina of Fes	
Friday 16/10	**NATIONAL/ REGIONAL PROGRESS REPORTS AND PLANNING**	*Chair: S. Bunning* *Rapp.: R. Mekdaschi Studer*
08.00 – 12.30	Continuation of national/ regional progress reports and planning	National and regional representatives
12.30 – 14.00	*Lunch*	
	STEERING MEETING AND PLANNING	*Chair: L. Lehman* *Rapp.: G. Schwilch*
14.00 – 14.30	Donor contribution - expectations/ request to WOCAT	Yves Guinand, SDC
14.30 – 17.30	FAO-LADA: 'Responding to evolving information needs' ISRIC Presentation of major global events in the last year Global activities for next year Organisational and administrative issues: election of Global Management, assignment of Secretariat Next WWSM 2009 – in which form?? *Including coffee break*	Hubert George, Sally Bunning Godert van Lynden Hanspeter Liniger
Saturday 17/10	**FIELD DAY**	
08.00 – 09.30	Field day and travel back to Rabat 3 visits: the Middle Atlas Cedar forest management, a farm in the Sais region (Meknes) and the DESIRE research site (Sehoul)	Abdellah Laouina
19:00		
Sunday 18/10	**FREE (AND/ OR PREPARATION FOR SYMPOSIUM)**	
Monday 19/10	**WOCAT – DESIRE SYMPOSIUM**	
	See programme symposium	

WOCAT – DESIRE Symposium
'Assessing Benefits of SLM – key for success'
'L'évaluation, clé de réussite d'une politique de gestion durable des terres'
19 October 2009; Rabat, Morocco
Chaire UNESCO-GN, Faculté des Lettres et Sciences Humaines, Université Mohammed V-Agdal, Rabat

Programme

Moderator: Gudrun Schwilch

08.00 - 08.30	Registration
09.00 - 09.40	**Welcome and Opening Statement** *Prof. Abderrahim Benhadda, Dean of the Faculty, Université Mohammed V-Agdal, Rabat, Morocco; Representative of the University, the Agriculture Department, the Forest Department, Morocco*
	Key note lecture Sustainable Agriculture in Morocco and the Mediterranean area*, Guillaume Benoit, General Council of Agriculture, Morocco.*
09.40 - 10.30	**Assessing benefits of SLM within WOCAT and DESIRE**
	WOCAT – Network and tools for assessing the benefits of SLM *Hanspeter Liniger, Coordinator WOCAT, CDE Bern, Switzerland*
	DESIRE – Methodology and findings of assessing SLM to combat desertification *Coen Ritsema, Coordinator DESIRE, ALTERRA Wageningen, The Netherlands*
10.30 - 11.00	Coffee break and posters presentations by young scientists
11.00 - 12.20	**Making use of SLM assessments at the local level**
	Example of assessed technology / approach from Sehoul, Morocco *Abdellah Laouina, Moroccan DESIRE team, Chair UNESCO-GN, Rabat, Morocco*
	SLM assessment imbedded into participatory selection and decision process *Joris de Vente / Albert Solé Benet, CSIC-EEZA, Spain*
	How can we base monitoring and assessment of degradation and SLM on both local and scientific knowledge? *Mark Reed, Universities of Aberdeen and Leeds, UK*
12.20 - 14.00	Lunch break
14.00 - 15.00	**Linking science with development**
	Assessing soil erosion and conservation with various methodologies at different scales *Machmachi I., Machouri N., Antari M., Nouira A, Chaire UNESCO-GN, Rabat, Morocco*
	Pilot basins for Green Water Credits and the linkage to WOCAT *Sjef Kauffman, ISRIC/GWC Coordinator*
15.00 - 15.30	Coffee break

15.30 - 17.00	**SLM benefits beyond the local scale**
	LADA local: a local level assessment toolbox for assessing impacts and monitoring and decision making *Sally Bunning, FAO, Italy*
	Mapping the Unknown – The extent of Sustainable Land Management *Godert van Lynden – ISRIC World Soil Information, The Netherlands*
	Mapping the spatial assessment of degradation and conservation *Mohammed Ouessar and team, IRA, Medenine, Tunisia, with introduction from G. van Lynden, ISRIC*
	Assessing land degradation and conservation at a national level using the WOCAT-LADA framework – the case of Somalia *Lewis Njeru, FAO-SWALIM, Nairobi, Kenya*
17.00 - 17.30	**Round table** *Hanspeter Liniger, WOCAT coordinator, Coen Ritsema, DESIRE coordinator and Abdellah Laouina, UM, Morocco*

OPENING AND INTRODUCTION TO WWSM

Rapporteur: Christine Hauert

Welcome speeches

Abdellah Laouina (University of Mohammed V Faculty of Human Sciences - UNESCO-GN Chair)

Abdellah Laouina thanked all participants for coming and also all colleagues from the University and the Moroccan DESIRE team. Furthermore he expressed his thanks to the group of people coming from other Moroccan institutions and to the WOCAT team from Bern and Wageningen for organising and sharing their long experiences in mitigating land degradation. Special thanks went also to the co-organising team of the 'Ecole Nationale Forèstiere Ingénieurs' for providing the venue in Ifrane.

The University Mohammed V is very active in identifying measures and opportunities to remediate land degradation through field studies. The experiences made should be expanded to the whole country, which is why so many Moroccan institutions and organisations were invited to this workshop.

Mohammed Sabir (Director Ecole Nationale Forestière d'Ingénieurs)

Mohammed Sabir emphasized that the Ecole Nationale Forestière d'Ingénieurs is honoured to host the 14th WOCAT Workshop and Steering Meeting in Ifrane. He briefly described the composition of the Moroccan DESIRE team. The group includes four scientists from the University of Mohammed V who in turn collaborate with the University Hassan II in Mohammadia (provide PhD students), Ibn Tofail University in Kenitra and the Centre of Radiologie. The goal is to combat and remediate desertification in Morocco. The approach is to identify land degradation and its causes, measure different degradation processes on field sites and to find solutions for remediation. Field work was started in 2007 and the results that were obtained up to now helped in coming up with options for combating desertification.

Mohammed Sabir welcomed by person his colleagues from the National School of Forest in Salé, INRA / Ministry of Agriculture, National School of Agriculture in Meknes and from the Al Akhawayn University in Ifrane.

Hanspeter Liniger (WOCAT coordinator)

Hanspeter Liniger emphasized the importance of the gathering. He expressed his thanks to the host Abdellah Laouina and his team. He also thanked the participants for coming and the team in Bern for organising.

A short explanation of the aim and schedule of this workshop was given. The 14th workshop consists mainly of the taskforce group work, followed by national/ regional presentations, and the highlight at the last day, the WOCAT-DESIRE symposium in Rabat.

One of the highlights for WOCAT, DESIRE and LADA in 2009 was the COP9 meeting in Buenos Aires, Argentina shortly before the 14th WWSM. WOCAT was frequently mentioned during the different sessions and even had a key note speech at the DSD conference. WOCAT needs to be further mainstreamed in major international programmes.

Last but not least a short obituary was presented for Malcolm Douglas who died a few months earlier. Malcolm has been quite active in WOCAT especially in introducing WOCAT tools and methods in China.

1 TASKFORCE GROUP WORK

Rapporteur: Christine Hauert

At the 13th WWSM in Switzerland 2008 it was decided that at the following WWSM a special focus should be given to the taskforces (TF). Therefore the first two days were completely spent on working in small groups to make progress with the taskforces.

The work within the taskforces was difficult due to the fact that many former TF group members could not participate in the workshop. On the other hand, many new participants provided the opportunity to receive new and valuable inputs.

Prior to the work in the groups short introductions to all TF's were given by the TF-leaders.

1.1. Impact Monitoring

Report by Christine Hauert

Group work members at the WWSM: *Isabelle Providoli, Sally Bunning, Christine Hauert, Asmae Nouira, Ndeye Sokhna Fall, Rachid Mrabet*

The overall aim of the taskforce is to develop an instrument/ tool for participatory impact monitoring and assessment at the local (land user) level. The Impact Monitoring (IM) taskforce has been initiated originally by the CAMP Alatoo team. The CAMP team also took the lead in the taskforce. During a taskforce meeting prior the 13th WWSM in Switzerland in 2008, a first list of indicators was compiled. Unfortunately, the CAMP team could not proceed in leading the IM-taskforce, that's why this taskforce has not made much progress during the last year and after the 13th WWSM in Switzerland.

1.1.1. Results from the group work

Presentation by Isabelle Providoli (Taskforce_IM.ppp)

The first step within the group was to determine the target users of the envisaged IM-tool. It has been discussed that the IM-tool should include monitoring indicators acceptable to the farmers and other stakeholders. Therefore the tool should differentiate between the following two levels:

- Basic level: for Land users and extension workers
- Sophisticated level: For project staff, technical staff, universities and research institutions and links to global issues

During the ongoing discussions the questions came up why WOCAT needs a new IM-tool, since there are already indicators in the WOCAT questionnaires, and LADA-L also provides a sophisticated IM-tool. The following points have been emphasized by the group:

- A clear delineation of the IM-tool to the WOCAT questionnaires on SLM Technologies (QT) and Approaches (QA) is needed. The aim of QT is to evaluate a certain SLM technology, the impact assessment is only a section of this evaluation, but it is not very elaborated and does not provide clear guidelines about the methodology.
- A clear delineation of the IM-tool to the mapping questionnaire (QM) is needed. QM includes some relevant indicators, but again without clear guidelines about the methodology for the assessment of the indicators.
- LADA-local guidelines provides a very elaborated IM-tool

The group came to the following conclusions to ensure a clear delineation to the already existing tools:

→ The WOCAT IM-tool should be simple and easy to use, also at the land user's level. However, the LADA-local can provide valuable input to the WOCAT IM-tool.

→ The IM-tool should be used in order to collect more precise information on local impact, showing specific results complementing QT and QA (for monitoring on yearly/ seasonal basis). The indicators should provide a tool for impact assessment of a specific measure/ SLM technology which can be used as a justification for up-scaling.

The following points need to be considered for the further development of the IM-tool:

- Indicators should be listed in categories addressing environmental, social and economic pillars

- The tool should provide methods for the impact assessment
- Guidance on how to present impact assessment results, e.g. spider web, chart, table, etc. should be given
- The tools should be used in a participatory process to choose observable indicators by local land users
- Impact assessment needs a control group/ area (households/ area with SLM practices and without SLM practices)

Based on the discussion in the taskforce the key indicators presented in table 1 below were selected and divided into different categories. Each key indicator consists of several observable and measurable indicators of which the user can make a selection based on the specific needs. In table 2 an example of different observable and measurable indicators for the key indicator '*water source/ availability and quantity*' is given.

Table 1: Selected key indicators divided into different categories.

	Key indicators (aggregated indicators)
Land	– Land availability – Land use change
Productivity	– Yield – Crop + animal health – Diversity of production – Inputs
Water	– **Water source/ availability and quantity** – Efficient use of water – Pressure/ demand on water (also a socio-economic indicator) – Access to water resources (also a socio-economic indicator)
Soil	– Soil surface condition/ cover – Soil quality – Soil erosion and soil deposition – Soil management
Vegetation and Biodiversity	– Vegetation and litter cover – Vegetation diversity – Fire – Wildlife
Climate Services	– Mitigation & Adaptation – Natural disaster
Socio-cultural and human well-being	– Food & livelihood security – Health – Access to knowledge

Table 2: Example of the key indicator 'water source/ availability and quantity' and the corresponding measurable and observable indicators.

Key indicator (aggregated indicator)	**Measurable/ observable indicators**
Water source/ availability and quantity	– Water use (household, irrigation, etc.) – Source of the water (ground water table, – rivers, streams, etc) – Ground water depth (dry – wet season) – Rainfall (amount and distribution) – Months of reliable water supply – water availability for different uses – Water colour (cloudiness) – Water smell – Source of the water (ground water table, – rivers, streams, etc)

The envisaged IM-tool should provide not only a list of possible measurable and observable indicators but also provide a list of methods and tools which can be used for the assessment of these indicators. A few methods have been already suggested by the group.

Due to time constraints the group was not able to finish the work on the list. The current list of indicators can be requested from the WOCAT secretariat.

Next steps

- Review list of indicators and methods along side QT, QA and QM for harmonisation
- Include available IM information from other programs/ projects (e.g. CACILM)
- Clarification of indicators for more sophisticated technical level assessment, e.g. enabling environment, cost-benefit, carbon sequestration
- Test draft IM tool by WOCATeers with students

Problems: At the moment the group has no clear taskforce leader, therefore it is unlikely that the taskforce will be continued during the next year, also because of other priorities of the management team. For that reason no clear working plan was defined. However, the work done so far should be continued at a later stage, but it needs more commitment of all the people involved.

Taskforce members: Sally Bunning, Isabelle Providoli, Christine Hauert, and…???

Group work of the IM-taskforce (above) and the taskforce on 'decision support tools' (Photos: HP Liniger).

1.2. Decision support tool

Report by Gudrun Schwilch

Group work members at the WWSM: *Gudrun Schwilch, Lehman Lindeque, Njeru Lewis, Rokhaya Daba Fall, Abdoulaye Soumaila, Nurymgereyev Kanysh, Nadia Machouri, Wang Fei, Yousra Laghazi, Miloud Chaker, Richard Fulss*

Two different decision support system (DSS) levels can be distinguished: 1) the local level technologies based on DESIRE working block 3 and 2) the regional level based on the LADA/WOCAT mapping conducted in South Africa. Unfortunately, no WOCAT partner managed to test the tools in their own country, as it was planed after the last WWSM in Switzerland. The decision support tool at the regional level, which is based on the WOCAT / LADA / DESIRE mapping methodology, made considerable progress by including the Dynamics Maps software to run queries and package results (maps, tables, summaries etc.) for specific target groups (decision makers). The local level decision support tool developed within the DESIRE project was applied in 14 study sites within their second stakeholder workshop. The workshop reports were analysed and the synthesis presented in a DESIRE report.

The aim of the taskforce group work was the improvement of the two tools as well as the integration and combination of the two levels.

At the beginning of the workshop the levels were again introduced to the participants.

1.2.1. Local Level Decision support tool

Presentation by Gudrun Schwilch (Local DST-DESIRE.ppt)

The local level decision support methodology was developed for DESIRE working block 3. The selection of SLM technologies for a specific local area is based on the options from the WOCAT database (including locally applied technologies) and a scoring and decision process with the software 'Facilitator' within a stakeholder workshop. More information about the methodology can be found on p.85 of last year's 13th WWSM report or on the WOCAT website. The tool allows reaching a final decision on which technology should be selected for implementation by negotiating the best options among stakeholder groups. Within DESIRE, this implementation process is currently being tested within working block 4.

1.2.2. Regional Decision Support System

Presentation by Lehman Lindeque (Regional DSS Oct 2009_Lehman_RSA.ppp)

Background

There is a need for informed decision making and the WOCAT and LADA experiences and lessons learned at global, regional and national level should help to achieve better land management. But how do we move from QM data to informed decision making? To answer this question a Regional DSS Task Force started in October 2008 in South Africa.

Questions to be answered at regional level

- How do we take decisions under conditions of uncertainty?
- There are no magic solutions for decision makers facing all these uncertainties
- What to do with our limited resources to ensure future sustainable use of natural resources? (where, when and how)
- Considering generic responses to land degradation: what should our response be to land degradation?

How was the DSS developed?

- Develop definitions for different responses or different scenarios (Prevention, Mitigation, Rehabilitation or Abandonment) for different land uses. E.g. 'prevention' is required for an area where less than 10% is degraded. The goal is to move the status of areas which require 'rehabiliation' now to a status requiring 'only' mitigation or prevention (jumping over a certain threshold). In South Africa a comparison between 1999 and 2009 was made for selected Map units.

- Identify areas for future prevention, mitigation and rehabilitation. Where to invest: area politically interesting versus biophysically ideal (e.g. for food production as main aim).
- QM data in off-line viewer developed with Dynamic Maps: allows running queries and show statistics and maps. Possibility to add additional info to work towards more certainty.
- Package results (maps, tables, summaries etc.) for specific target groups (e.g. decision makers)
- Where does QA & QT fit? Mapping gives focus of areas, while QT/QA give options for answers.

1.2.3. Results from the group work

After the presentation and introduction of the different DS-levels the group started to discuss how the tools can be improved.

Improvements local level

- Conduct DSS process at a homogeneous unit, very local, level
- Framework conditions (e.g. national laws) are important to consider (these are discussed during 1st stakeholder workshop)
- Stakeholder workshops require certified moderators (according internat. and national standards)
- Stakeholder selection: through elders / leaders, associations or market places
- Initiate stakeholder collaboration also for later monitoring

Approaches

- Look for approaches from the immediate and broader neighbourhood, adopt to own socio-cultural situation
- After selecting technologies, design own/new approach based on ideas from QA database and predefined steps that help to make up an approach
- Suggestions to change framework conditions should be taken to the next decision level (in a decent way)
- Focus on local conditions and not try to achieve too much (remain focused)

Improvements regional level

- Requires clear steps for decision making including an interpretation of maps, clear result and commitments (→ guidelines)
- How to further communicate to decision makers? (reports, on-line info, printed maps, feedback workshops?). Provide options.
- Not aiming for a sophisticated decision support SYSTEM (on-line, independent) -> rather aim for a facilitated process

Target group and training, PR/PA

- Target group: WOCAT partners in countries
- Target decision maker at regional level: officers at ministries, responsible for extension programmes, law enforcement (eg. Water act), funding agencies, project officers
- Target decision makers local level: land users, leaders, local authorities, donors, associations
- Definition of their role: Facilitator of process
- Regional trainings needed (e.g. West Africa)
- Regional WOCAT partners should define regional / national strategies on how to use the methods

Conclusions

- Regional DST to enable decision makers to derive possible responses for different areas / problems
- Improve regional DST to get clear steps for decision making including interpreting of maps, clear result and commitments (→ guidelines for process)

- Search for possible technologies after identifying focus areas at the local level
- Integration of local and regional level: so far keep 2 level/steps but with cross-references, too early to integrate the two levels in one system
- After selecting technologies, design own/new approach based on ideas from QA database and predefined steps that help to make up an approach
- Include decision makers (main stakeholders) in process to ensure use, mainstreaming and commitment in political process
- Test and develop at the small-scale first and then out-scale

1.2.4. Working plan 2010

Taskforce members 'Decision support tool' for 2010: Gudrun Schwilch, *Lehman Lindeque, Njeru Lewis, Rokhaya Daba Fall, Abdoulaye Soumaila, Kanysh Nurymgereyev, Nadia Machouri, Wang Fei, Yousra Laghazi, Miloud Chaker, Richard Fulss (Alexander Schöning, Yuji Niino)*

Activity	**Timing**	**Responsible**	**Funding**
1) Local (technology) level			
Testing local tool in 3x Senegal 1 x South Africa 2 x Niger 5 x Central Asia x China x ICIMOD	 April 2010 Sep 2010 Feb-Sep 2010 March 2010 ? ?	 Rokhaya Fall Zanele Mkize? Soumaila Kanysh Wang Fei Isabelle	 Inst. of Pedology LANDCARE GREAD CACILM ICIMOD
Improve local DST tool and rewrite guidelines	Draft by Feb 2010	Gudrun Schwilch	CDE/ WOCAT???
2) Local (approach) level			
Continued TF discussion	Oct 2010	TF	
Discussion with Sustainet	Jan 2010	Alexander Schöning/ GS / HPL	CDE/ GTZ
3) Regional (mapping) level			
Define stepwise process	March 2010	Lehman Lindeque / Gudrun Schwilch / Njeru Lewis	DoA/ ARC/ LADA / FAO / CDE
Guidelines for regional DST process	Oct 2010	Lehman Lindeque	DoA/ ARC/ LADA
Testing of regional DST: - Senegal - Central Asia - China - Mongolia			
4) Integration of the two levels			
Training for WOCAT countries: - West Africa - WWSM	 9-12 March 2010 Oct 2010	?	?

Promotion: - Feedback through web-forum - Further promotion	On-going After Oct 2010?		

Taskforce working on the watershed module (above) and the mapping taskforce (below) (Photos: HP Liniger)

1.3. Watershed module

Report by Rima Mekdaschi Studer

Group work members at the WWSM: *Rima Mekdaschi Studer, Laouina Abdellah, Sudibya Kanti Khisa, Sabita Aryal, Eric Roose, Rachid Bouabid, Mohamed Sabir, Babacar Ngom, Josoa Randriamalala, Bishnu Dhital, Hanspeter Liniger*

At the beginning a short introduction to the watershed module and the idea of the modular questionnaire system was given, since most of the group members newly joined the taskforce.

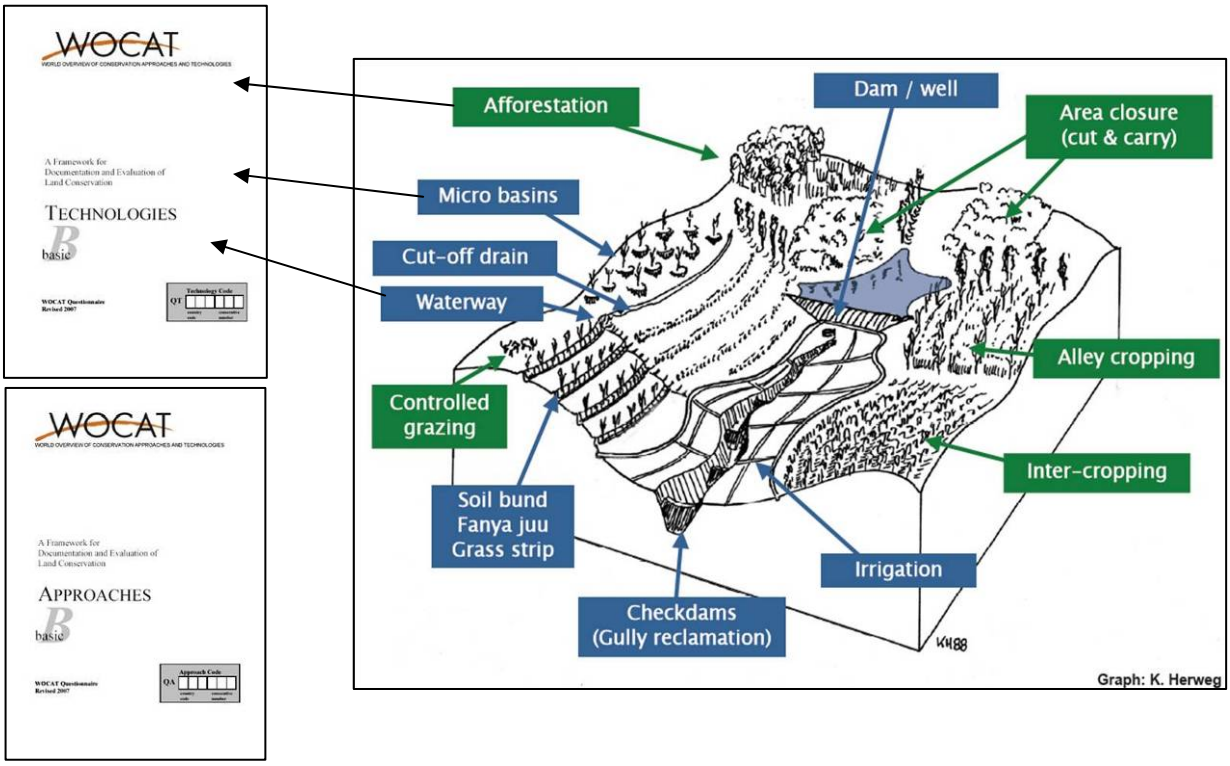
Background and introduction of the watershed module

Presentation by Rima Mekdaschi Studer (watershed WWSM09c.ppp)

The revision of the WOCAT questionnaires in 2007/ 2008 has led to the idea of a combined modular system consisting of the main questionnaires (QT, QA, QM) and of additional questionnaire modules covering specific topics. For more information on the questionnaire revision and the WOCAT modular system refer to the previous workshop proceedings.

The watershed module is the first module to be made available. In 2009 a new draft version was developed and commented upon by TF members. Unfortunately the planned field testing of the tool was not possible prior to the 14th WWSM.

The aim of the watershed module questionnaire (QW) is to show spatial arrangement and the interrelation of the different technologies/ measures (where in the system, topo-sequence) and help to evaluate impact and outcomes of these techniques holistically (as a system). Ideally all (or at least a number) of the different technologies and approaches that exist and are applied in a watershed are documented separately in a QT or QA beforehand. With this in mind the group members went through the questionnaire question by question and judged if the answers and information given will serve the purpose.



The module should help to evaluate different technologies in a watershed holistically as a system.

In the following table the structure of the watershed system questionnaire and an extract of the questions asked are presented. In addition comments and criticisms that were raised during the group work, possible solutions as well as challenges are shown.

The watershed questionnaire (QW) is divided in three parts that correspond to the technology questionnaire.

Part 1: General information	1.1 Contributing watershed management specialist 1.2 Brief identification of watershed 1.3 Watershed information 1.4 Description of the watershed 1.5 Land use/cover maps
Comments → Solutions Objective of documentation → assessment of impacts after implementation; documenting experiences 1.1 Who are the specialist(s) when it comes to a watershed? → specialists who know the watershed and the land users who live in the watershed; participatory approach (less quantifiable data, it is always a trade-off) 1.3.1 Up to which size of a watershed is this questionnaire applicable? → – Mini, Micro, Medium scale – (Macro) → focus on subwatersheds 1.3.2 Definition of watershed used is not clear and straight forward → find a simple, hydrological definition 1.4. A GIS Land use/ land cover map is not enough to show the staggered action of measures → divide watershed into 1-4 sections along a transect (characterization of the watershed will be done for each section separately) Map is needed to define/ place these sections within a watershed (1.4.2). 1.5 Need more precise information and assessment of land use in the watershed → describe land use of each section defined in the watershed	
Part 2: Watershed characteristics and its management	2.1 Overview 2.2 Natural environment 2.3 Human environment 2.4 Watershed integrated management
Comments → Solutions 2.1 Major differences of the 2-4 sections in a watershed should be highlighted 2.2 An average over the whole watershed has no meaning → describe and characterise natural environment for each section of the transect separately Be consistent with the exactness of the information asked, missing some very relevant soil information → add questions on soil depth, texture and stoniness of terrain 2.3 Relevant questions for a watershed are missing → add question on: the effect of migration on watershed management; constraints related to land tenure; difference in resource use of the different stakeholders within a watershed. Some aspects of human environment describe an interrelation among sections (e.g. upstream/ downstream) → identify these questions by adding in or over the whole watershed 2.4 Approaches & enabling environment should be more prominent → add a table on approaches as for the technologies; add a question on policy and institutional aspects relevant at watershed level Challenges: 2.4.1.4 How to show/express sensitivity and/or tolerance to climate extremes for the whole watershed.	

Part 3: Analysis of watershed management	3.1 Impacts: benefits and disadvantages 3.2 Concluding statement
Comments → Solutions Relevant questions related to adoption and hence impact are missing → add questions on: policy support and enabling environments from the public sector; driving institutions; decision making provess Challenges: – How to express impacts (benefits and disadvantages) for the whole watershed (weighted average, average of all sections?) – Is off-site impact needed in the watershed – How to use this information for further watershed management	
Annex	Available documentation Evaluation of the questionnaire PES information Additional information Land degradation types and it causes
Comments → Solutions Relevant questions related to PES are missing → add questions on: who are the service providers, service payers and intermediates;	

Points raised in the plenum

How can the WOCAT tools (e.g. QT) be used for monitoring? QT can be used more than once for the same technology or area. For monitoring purposes QT can be filled again and again but at longer intervals. The LADA local assessment tool in combination with QT, QA and QW can be used for monitoring. To really show benefits or impacts a control area is needed. Document a similar area but where no SLM has been applied can serve this purpose, or compiling the information of the same area before SLM was applied.

To measure the scaling up process within a watershed, introduce the WOCAT-LADA mapping tool.

The challenge now is to make use of this QW tool. China, Bangladesh, LADA, ICIMOD, ICARDA, Mongolia, Madagascar, Ethiopia, India and Morocco have expressed their interest in the tool.

LADA asked for the QW to be translated into French, which is essential for LADA to test the tool in some of it's pilot countries and for some of the French speaking WOCAT partner countries.

1.3.1. Working plan 2010

Watershed Module Taskforce members for 2010: Sanjeev Bhuchar, Rima Mekdaschi Studer, *Sudibya Kanti Khisa, Laouina Abdellah, Rachid Bouabid, Sabita Aryal, Madhav Dhakal, Niranjan Sahu, Sally Bunning, Isabelle Providoli, (Daniel Danano)*

- Incorporate the improvements and changes suggested
- Solve still open questions. How? E.g. consult experts, TF meeting
- Send draft for field testing to WOCAT partners interested
- Collect, consolidate experiences and comments from the field and finalize QW
- Send final version to taskforce members for approval
- Final approval at WWSM 15
- Translate QW into French, Spanish, etc.

Budget: The module shall be tested through students to save costs. For the translation of the module a budget is required.

The following institutions and countries promised to test QW in the field and see what works and what does not work: LADA (Senegal, Haiti), Nepal, India and Morocco.

Next questionnaire module: in 2010 it is foreseen to start developing a first draft of a climate change (CC) module for CC proofing of technologies. ICIMOD and other institutions have shown interest in the development of this CC module.

1.4. Mapping

Report by Godert van Lynden

As reported in previous Workshop Proceedings (e.g. WWSM13) the mapping manual (QM) has been revised significantly in the past years in a collaborative activity between WOCAT, LADA and DESIRE. Meanwhile, major efforts have been underway to change the QM database from an off-line version in MS Access with Map Objects towards an interactive on-line database. This was mainly in collaboration between South Africa and CDE, with various inputs from FAO and ISRIC. Since WWSM13, considerable progress was made and the on-line QM database is now functional, though some improvements are still needed (and testing is important!). Data entry and editing is now possible, but not yet to display the data a in map format though an (interactive) viewer, which would make data entry and editing more effective. Work is ongoing and a β version expected early 2010.

Meanwhile the 6 LADA pilot countries have used QM to different degrees, with some interesting outputs produced especially by Senegal (entire country), Tunisia and S. Africa. The DESIRE partners should also have embarked on a QM exercise at study site level, but very few results are available as yet.

Group work members at the WWSM: *Godert van Lynden, Carin Pretorius, Kurt Gerber, Wang Fei, Azhar Yeszhanova, Hubert George, Jamal Al Karkouri, Bolor Radnaabazar, Lamchin Munkhnasan, Mohammed Sfa; Rokhaya Daba Fall, Lehman Lindeque*

The first step within the group was to give a brief overview of the on-going activities in the participating countries:

- Kazakhstan: not yet started QM, made Land Use map;
- Morocco: QM done for DESIRE (Study Site level), Excel sheets used. Not yet entered into on-line db;
- Mongolia: have had training in QM, used in small area. Using old Russian Land Use system;
- China: LUS map ready according to Chinese system, QM to start;
- Senegal: QM done for LADA by Centre de Suivi Ecologique. Used Excel sheets. To check and compare maps CSE & Inst. de Pédologie (LADA issue);
- S. Africa: QM used in workshops at district level (1000 matrix tables, 4½ provinces out of 9), harmonised at province level. Used own LU base map and Excel sheets for data entry. “Consensus mapping”!

1.4.1. Results of the group work

On-line system: Prior to the WWSM the on-line data entry system has not been used yet by anyone of the participating countries (as it was available only recently before the WWSM). However, it has been already used by several DESIRE partners.

Off-line system: is needed (when no Internet connection) + data exchange system!

Data viewer (on-line version under development) needed for two purposes:

- for data entry: show direct result of entered data for checking and correction
- for any users: showing limited number of predefined maps

For other purposes GIS can be used.

Dynamic Maps – off line system (viewer) – no editing or entering of data.

LU(S) map is only the start (the base map) of the QM exercise, and intended to provide mapping units that will be evaluated with respect to degradation & conservation! QM is not a Land Use mapping exercise.

LUS map is not to replace existing LU maps, but rather to be used where LU information is scant or lacking.

Steps	**Tools/Procedures**	**Issues**	**Recommendations**
General	WOCAT LADA/DESIRE	Lack of knowledge	Need basic training on mapping process a.s.a.p.!!!
Mapping Unit	LUS? LU/LC? Admin? Other? Or combinations	Flexibility; Use existing system; Use for different purposes acceptance from stakeholders Land use is changing over time;	Need simple specification of baseline map suitable for online system baseline map must be sent to and uploaded by CDE Different map versions/edition
Data entry, quality assurance, viewing	on-line: data capturing QM off-line: data capturing	Viewer Additional guidance needed for evaluation of certain ecosystem impacts (e.g. biodiversity) Missing desktop application How to import data into online system (easy way)? Storage (databank)	Direct map/feedback functionality Online system will be done before end of this year Use mapping tool in different countries as a pilot and get feedback To be considered later on Tool to be expandable to accommodate additional modules Small workshop among key players of off-line system to find proper solution There is no easy way: use standard excel format
Dissemination	Dynamic Atlas/Maps Website On-line and offline Viewer	Just for viewing not for editing Harmonising: scale, mapping unit etc., Different languages	Use the online viewer Use GIS Feedback workshop after the implementation of QM

1.4.2. Working plan 2010

Mapping taskforce members for 2010: Godert van Lynden, *Carin Pretorius, Kurt Gerber, Wang Fei, Azhar Yeszhanova, Hubert George, Bolor Radnaabazar, Lamchin Munkhnasan, Rokhaya Daba Fall, Lehman Lindeque (Jamal Al Karkouri, Mohammed Sfa, Wolfgang Prante)*

Item	**Responsible**	**Deadline**	**Budget**
Identify Task Force members (NB: that can really contribute)	Godert	Immediate	N/A
Plan (int'l) mapping training	WOCAT MG, secretariat	A.s.a.p., but system must work	To be identified

Finish on-line Viewer development	Kurt, Carin	End of 2009	Available
Decide on pre-defined map queries for on-line viewer	TF members	Workshop before end of 2009	?
Using and testing On-line QM system (and give feedback!!!)	TF members, all	Ongoing!	N/A
Off line data entry system (Desktop application)	Kurt, Carin	End of 2010; also discuss in above workshop	Available?
Off-line viewer	Kurt, Carin	End of 2010	Available?

1.5. Digital products

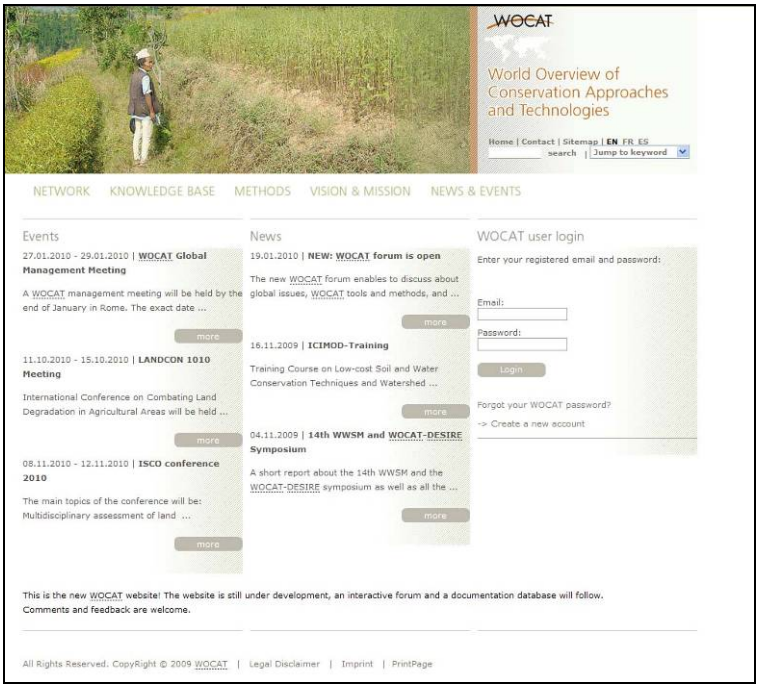
1.5.1. New WOCAT website

Report by Christine Hauert

A short introduction to the new WOCAT website was given, which is up and running since September 2009.

The new website is based on a Content Management System (CMS) to facilitate the management of the website and also the integration of active sites.

The website has a completely new structure and is divided into the 5 main themes: network, knowledge base, methods, vision & mission, news & events.



What is also new is the possibility to create a WOCAT account. The account gives access to the WOCAT forum, databases, online address database, etc. All people who have been in the former WOCAT address database at one stage, automatically get an online account. Therefore users are requested to check whether they already have an account before creating a new one. This can be done by using the function 'forgot your WOCAT password' below the login fields. If an email-address is already registered, a password for login will be sent to this email-address. Otherwise you will receive an email with the message that the username could not be found, in which case one should register as a new user.

In future the new online address management will also handle the distribution of the WOCAT newsletter and the WOCAT-L emails. So far the address data for the WOCAT-L mailing list was stored on a FAO-server, which was independent from the former WOCAT access database. Now, with the new CMS-system it is foreseen to have only one address database. Therefore, to further receive the WOCAT-L emails and newsletters, a WOCAT account must be created.

The new WOCAT website contains a forum which will enable discussions on specific selected topics. The WOCAT forum is only accessible in the logged-in modus.

1.5.2. Map viewer

Report by Kurt Gerber

Since September 2009 Carin Pretorius and Kurt Gerber have been working on a new Map viewer system.

A first prototype version was shown during the WWSM. With the map viewer it will be possible to visually select the map units for which QM can then be filled in. It will show a base map in front of Google Maps which can be used for orientation.

The base map data should be sent to the WOCAT secretariat for integration into the on-line system. Before the data is integrated in the global online database it has to be approved by the WOCAT secretariat.

1.5.3. Other taskforces

The taskforces on 'WOCAT in Research, Training & Education' and 'Strategy and Communication' were not discussed during the workshop, therefore no plans for the next year were developed. The latest working plans of these taskforces are available in the proceedings from 2008.

Discussion and comments about databases and tools

- The further development of the online tools should be highest priority for WOCAT and the process needs to be accelerated. The online QT is still outstanding as well as the map viewer and the offline system of the databases.
- Verify opportunities for wider use of Dynamic Maps as an option for an offline mapping tool and for decision making on LD/ SLM as in South Africa
- WOCAT should facilitate countries to test the watershed module, the mapping methodology and the decision support tools.
- Translated versions of all tools e.g. new database systems are needed, but not before they are really finalised.
- WOCAT countries/ partners should be encouraged to continue to add data to databases on QT, QA and QM. It was suggested that a toolkit is required for standardisation and certification of WOCAT data and training in a country.
- A remark was made that a flexible database system is needed, e.g. for a specific climatic zone and not consisting all data from the database. → However, this is already partly possible within the current database system either through a selection of case studies by using the different search functions or be establishing a national and or regional database consisting only of selected case studies.
- The WOCATeers were invited to provide feedback and comments to the WOCAT digital tools (databases, map viewer and website).

2 PROGRESS REPORTS AND WORKPLANS

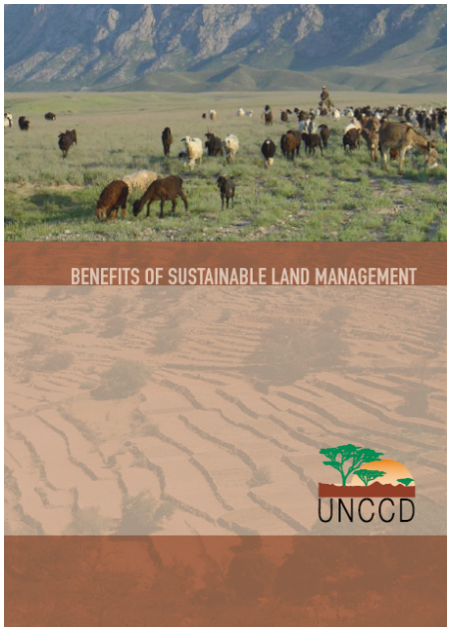
2.1. Activities at the global level

Rapporteur: Rima Mekdaschi Studer and Christine Hauert

2.1.1. Global Management review – CDE

Report by Hanspeter Liniger (CDE_SteeringMeeting.ppt)

1. Knowledge about SWC and SLM



The publication **'Benefits of Sustainable Land Management'** has been prepared at the request of the UNCCD-secretariat on the occasion of the meeting of the Commission on Sustainable Development (CSD) in May 2009 in New York. The UNCCD-publication has been jointly elaborated and compiled by WOCAT and CDE, and financed by SDC and UNCCD secretariat. The document highlights local, regional and global benefits of SLM and illustrates the importance of ecosystem services provided by sustainable land management.

WOCAT was asked to do a **Consultancy** on developing a strategy for the assessment and dissemination of best practices on implementation of the **UNCCD**. The consultancy was requested to comprehensively address issues of defining and classifying, identifying sources and providers, collecting and validating as well as disseminating and identifying end users of best practices in a report to be provided to CRIC 8.

WOCAT was involved in **backstopping activities** of new national/ regional overview books and factsheets. A Mongolian national overview book of SLM technologies and approaches was published. A further Bangladesh publication with new case studies from different regions in Bangladesh is planned for 2010.

About **20 new technologies and approaches were provided to the global WOCAT database** on SLM technologies and approaches mainly through the DESIRE-project. New case studies from Morocco, Botswana, China, Cape Verde, and Tunisia were documented. The updating of the WOCAT database should remain a special focus of WOCAT, since the databases are a basic pillar of WOCAT and SLM knowledge management.

'**SLM in Practices – Promoting Knowledge on Sustainable Land Management for Action in Sub-Saharan Africa**': In 2008 a contract with FAO was signed for the development of guidelines for best SLM practices for Sub-Saharan Africa (SSA). The goal of the guidelines is to identify, analyze and disseminate promising SLM practices for SSA, based on a solid scientific background as well as based on experiences and representative case studies. The guidelines will discuss about 12 different groups of SLM practices in SSA including latest trends and opportunities as well as costs of implementation. For the COP9 a first draft version was prepared, containing 4 different SLM groups.

WOCAT/ CDE was mandated by the **GEF KM:Land** initiative to prepare a report on impact indicators. The document proposes a selection of impact indicators and methodologies to be used at the project level as a contribution to the GEF Project "Ensuring Impacts from SLM – Development of a Global Indicator System" which is managed by UNU-INWEH. A first draft version of the report was presented on the GEF Expert Advisory Group meeting held in Rome from 1-3 June 2009.

WOCAT has contributed to the '**white papers' prepared by the Dryland Science for Development (DSD)** consortium for the session of the CCD Committee on Science and Technology (CST) at COP9 in Buenos Aires. WOCAT contributed to working group 2 on 'Monitoring and Assessing Land Rehabilitation and Sustainable Land Management efforts' and working group 3 on 'Impacts of Economic and Social Drivers and Knowledge Management on Monitoring and Evaluation'.

WOCAT is involved in the development of a **New World Atlas on Desertification,** Land Degradation and Drought (WAD). In response to the interest expressed by the UNCCD CST for an updated World Atlas on Desertification, the European Commission's Joint Research Centre (JRC) in partnership with UNEP, is coordinating the compilation of a new atlas.

2. Tool (and method) development

Special efforts and investments were given to the development of the **new digital products of WOCAT**. The development of the new WOCAT website based on a content management system (CMS) started in 2009 and was activated in September 2009. The CMS-website facilitates the use and integration of different functions such as the new online databases and interactive communication platforms like a forum. The new online database on SLM approaches is in use since beginning of 2009. The development of the new QT online database is ongoing. The online mapping database has been revised and is working in a new system which should facilitate the development of a map-viewer.

WOCAT has considerably contributed to the finalization of the **LADA-local manual** for Impact Assessment.

A new collaboration with FAO for the development of a **Global Map of SLM** on request of the 2010BIP-programme by UNCBD was started. The WOCAT inventory sheet on SLM technologies has been adapted to be used for assessing SLM at the national level.

3. Information sharing and networking

A new initiative was started in **Bhutan**. The Bhutan initiative was launched by ICIMOD during a workshop in 2008.

WOCAT has maintained constant close contact with **network partners**. Among others support was given in the use and development of a Mongolian-WOCAT database and website.

WOCAT was further integrated in, and collaboration enhanced with, **international organisations** and institutions such as UNCCD, FAO-LADA, Sustainet (GTZ), GEF, TerrAfrica, etc.

Requests were coming **from FAO-TerrAfrica, UNCCD and GEF** to use WOCAT tools and databases as well as the network for knowledge management and promotion of best SLM practices and assessment of impacts.

A one-day meeting was held in March 2009 in Bonn to enhance awareness and explore collaboration and aligning efforts and activities of **UNCCD**, WOCAT/CDE, ALTERRA, ISRIC and DESIRE.

WOCAT participated at the **UNCCD second Interagency Taskforce Meeting** and contributed to the discussion on 'improving the UNCCD procedures for communication of information, as well as the quality and format of reports'. The meeting was held in Bonn, 14-15 May 2009. CDE/ WOCAT presented strategies on how to collect, validate, analyze and disseminate 'best practices' which have become an essential element in the review of UNCCD implementation

WOCAT participated at the **COP9 in Argentina**. A joint WOCAT-LADA-DESIRE side event was held to show results and promote the tools and methodologies. Furthermore, WOCAT was invited to have a key note address on Sustainable Land management at the DSD conference 22-24 September 2009, parallel to the COP conference.

Workshops and conferences attended in 2009:

- Participation at the international meeting of the LADA-project, 7-9 April 2009, Nairobi, Kenya. The meeting invited other international organisations in order to discuss the forthcoming of the LADA-project and the further use of the LADA methodologies.
- Participation at the international Workshop on 'Sustainable Land Management in the Highlands of Asia at Present and in Future under the Impact of Global Changes', 17-23 May,

2009 Shangrila in Northwest Yunnan, China. The workshop provided a platform for further presenting the WOCAT tools and methodologies in Asia and especially the Himalayan region.

- Participation at the World Congress of Agroforestry, from 23 - 28 August, Nairobi, Kenya.
- The collaboration of WOCAT with the Central Asian Countries Initiative for Land Management (CACILM) has been enhanced. A letter of intent has been prepared by CDE/WOCAT and sent to the head of the CACILM multi-country secretariat in Kyrgyzstan in order to show possible fields of collaboration.

4. Research, training and education

- LADA local workshop, 26-31 January 2009, Mendoza, Argentina. The workshops aim was to finalize the LADA local manual for impact assessment.
- Training workshop for WOCAT-LADA mapping tool, 3-9 September 2009, Ulaan Baatar and Selenge Aimag, Mongolia. The aim was to introduce and 'hands on' training of the mapping tool to a number of organizations that are active in the field of sustainable land management in Mongolia. In addition already documented SLM technologies related to pasture land management were revisited in order to verify data quality.
- Supervision of ongoing MSc-studies carried out in Tajikistan, Switzerland, Iceland and Argentina using the new WOCAT-LADA mapping methodology.
- Supervision of PhD-Study on 'Mapping land degradation and natural resource conservation in South Africa'.
- Supervision of BSc-studies related to SLM practices and climate change and biodiversity.

5. Basic enabling activities at the global level

Co-organisation of the **14th Annual WOCAT Workshop and Steering Meeting (WWSM)** in Ifrane and Rabat, Morocco, from 13-19 October 2009 and co-organisation of the WOCAT-DESIRE symposium on 'Assessing Benefits of SLM – key for success' on Monday 19 October in Rabat, Morocco. The symposium shall enhance the collaboration between WOCAT and DESIRE and further promote WOCAT within the DESIRE.

Translation of 'where the land is greener' into Spanish and French has been finished. Adaptation of layout is still ongoing

Intense E-mail communication for supporting and **backstopping** of different WOCAT partners/ initiatives was maintained.

The **WOCAT webpage** was regularly updated.

Two **WOCAT newsletters** were published and distributed within the WOCAT network. The newsletter informs about special activities/ achievements from different regional and national initiatives, about collaborations of WOCAT and informed about progress made in the WOCAT taskforces.

Secure new and continued funding. A new contract with FAO was signed in February 2009 for the backstopping of LADA activities at the local and national level.

WOCAT global management meetings were held in Buenos Aires and in Morocco following the WWSM. The meetings aimed to clear the roles of CDE, FAO and ISRIC within WOCAT. A further aspect discussed was the communication within the global management team. A general agreement was made that the communication needs to be improved, and therefore it was decided to conduct a monthly Skype-conference to inform each other about latest developments and achievements.

WOCAT at the COP9 in Buenos Aires

A very special highlight in 2009 was the participation of WOCAT at the COP9 in Buenos Aires and the WOCAT key note at the first CST/ DSD scientific conference on 'Experiences with Monitoring and Assessment of SLM'. As a result of which WOCAT was frequently mentioned during the different sessions. WOCAT needs to be further mainstreamed it in major international programmes.

Together with LADA and DESIRE a side event was organised on 'Assessing land degradation and sustainable land management – the WOCAT/LADA/DESIRE approach'. The side event aimed to further promote the WOCAT/ LADA/ DESIRE tools and methodologies, but also to enhance the collaboration of the three organisations. The WOCAT/LADA/DESIRE achievements were highly acknowledged during the DSD conference by different participating institutions and organisations.

Not only the role that WOCAT could take at the UNCCD-DSD but also various requests and collaborations in the last year can be seen as a major breakthrough in terms of recognition of WOCAT.

WOCAT can become a global standard. However, the expectations are huge and therefore it is crucial that the tools (databases, etc.) are working and that training material is available.

For more information to the WOCAT activities in 2009 see also Annex 3.

Training workshop in Mongolia (above, Photo: R. Mekedaschi Studer); WOCAT presentation at the DSD conference during the COP9 in Buenos Aries (Photo: Klein)

2.1.2. WOCAT Secretariat (administrative and logistic)

Main activities

- E-mails: main persons involved in maintaining and enhancing the contacts and reacting to requests are: Christine Hauert, Franziska Jöhr, Godert van Lynden, Rima Mekdaschi Studer, Gudrun Schwilch, and Hanspeter Liniger.
- Co-organising of WOCAT Workshop and Steering Meeting in Morocco
- Co-organising the WOCAT-DESIRE symposium on 'Assessing benefits of SLM – Key for success'
- Production of WOCAT Workshop and Steering Meeting proceedings, and proceedings of the WOCAT symposium 2008
- Handling of sales and distribution of overview book

2.1.3. Funding 2009

a) SDC

- The annual budget is about USD 441'000 (CHF 432'000 against exchange rate at 1.7.08) for the current phase 2008-2011

b) FAO-LADA

WOCAT has received a first payment of 15,000 USD in 2009 from FAO – LADA based on a contract for a financial contribution of 48,000 USD (~49,700 CHF) for backstopping activities of the LADA-project at national and local level.

d) SDC Project for Coping with Desertification in Mongolia 2007 – 2013

About USD 35,000 for component 4: SLM Knowledge management for informed decision making and strengthening the development and application of proper technologies to combat desertification.

e) TerrAfrica guidelines for best SLM practices

A contract with FAO on a financial contribution of 90'000 USD for the development of the guidelines for best bet SLM technologies and approaches in SSA was signed in October 2008. The first payment (25,000 USD) has been received in 2009.

f) GEF KM:Land initiative

A contract has been signed with UNU-INWEH on 50,000 USD (~51,800 CHF) for the preparation of a report on project-level indicators for the GEF-initiative KM:Land. The first rate of 15,000 USD has been paid in June 2009. Due to a change in the request coming from KM:Land to WOCAT/CDE, the assignment will not be completed.

g) UNCCD

For the Consultancy on developing a strategy for the assessment and dissemination of best practices on implementation of the UNCCD, WOCAT a payment of 12'000 USD from the UNCCD Facilitation, Coordination & Monitoring of Implementation (FCMI) Unit has been received.

f) Other donors

- EU-DESIRE project: about USD 400'000 (EUR 300'000) for 5 years (2007-2012)

2.1.4. Financial contributions 2009

Financial Contributions to WOCAT between 09/05 and 10/09 (in USD)								
	10/7-10/08			09/92-11/08	11/08-10/09			09/92-10/09
	Cash	In-kind	Total	**Total**	Cash	In-kind	Total	**Total**
Bangladesh (CHTDB)	2'000	50	2'050	**17'100**	4'000		4'000	**21'100**
CDE	1'400		1'400	**73'200**			0	**73'200**
Central Asia CAMP			0	**60'640**			0	**60'640**
China (ADB/ GEF-national level)			0	**89'100**			0	**89'100**
China (FJSWCO, ADB/ FSWCC)			0	**69'000**			0	**69'000**
China (SWCMC)	1'500		1'500	**397'700**			0	**397'700**
CIS – Vrije Universiteit			0	**126'350**			0	**126'350**
CTA			0	**26'500**			0	**26'500**
DANIDA			0	**355'700**			0	**355'700**
DED (Niger)			0	**6'000**			0	**6'000**
Ethiopia (ESAPP)			0	**59'735**			0	**59'735**
Ethiopia (MoA, WFP)	10'000	3'000	13'000	**63'900**	10'950		10'950	**74'850**
FAO (LADA, Asia and the Pacific, TerrAfrica)	63'000	2'400	65'400	**1'140'040**	41'000	30'000	71'000	**1'211'040**
GEF (UNU-INWEH)					15'000		15'000	**15'000**
Ghana (VECO)	3'000		3'000	**3'000**			0	**3'000**
GTZ (OSS)			0	**243'000**			0	**243'000**
IBSRAM			0	**5'500**			0	**5'500**
ICARDA			0	**35'000**			0	**35'000**
ICIMOD	16'000	2'000	18'000	**88'500**	21'300	13'900	35'200	**123'700**
ICRISAT (Niger)			0	**31'000**			0	**31'000**
IDRC			0	**85'000**			0	**85'000**
India (ORISSA)	0	25'030	25'030	**102'955**	7'000		7'000	**109'955**
India (WDCU)			0	**75'000**			0	**75'000**
Indonesia (ASOCON)			0	**104'028**			0	**104'028**
Indonesia (GOV.)			0	**63'028**			0	**63'028**
INSAH (CILSS)			0	**10'000**			0	**10'000**
ISRIC		40'000	40'000	**340'000**		30'000	30'000	**370'000**
Kazakhstan			0	**25'150**			0	**25'150**
Kenya (MoA-SWC)			0	**20'500**			0	**20'500**
Kyrgyz Rep (Camp Alatoo, UNCCD-GTZ/ OECD)			0	**101'700**			0	**101'700**
Madagascar (DERAD)					900		900	**900**
Mongolia (SDC)	37'688		37'688	**56'688**	57'500		57'500	**114'188**
Morocco (MADRPM, DESIRE)	4'600	700	5'300	**52'800**			0	**52'800**
Nicaragua (PASOLAC/ GTZ/ LA)			0	**74'000**			0	**74'000**
Niger (GREAD)					2'950	650	3'600	**3'600**
Nigeria (Uyo University)	700	1'000	1'700	**4'200**			0	**4'200**
OSWU			0	**4'000**			0	**4'000**
Pakistan (IC)			0	**6'500**			0	**6'500**
Philippines (BSWM/ UPLB/	6'000	1'800	7'800	**89'850**			0	**89'850**
RSCU/ RELMA			0	**186'500**			0	**186'500**
SADC			0	**6'000**			0	**6'000**
SDC	441'100		441'100	**3'689'050**	441'100		441'100	**4'130'150**
SDC (CA, IRHA, COP8)			0	**69'000**			0	**69'000**
SDC (Impact Monitoring)	32'900	0	32'900	**32'900**	5'000		5'000	**37'900**
Senegal (INP)					21'406		21'406	**21'406**
Serbia (Belgrade University)	24'000	5'000	29'000	**71'000**		4'000	4'000	**75'000**
South Africa (DoA, NDA/ ARC-ISCW)*	30'500	56'000	86'500	**470'746**			0	**470'746**
SOWAP (Syn.)			0	**89'700**			0	**89'700**
Syngenta Foundation			0	**131'500**			0	**131'500**
Tajikistan			0	**23'500**			0	**23'500**
Tanzania (MAFS-SCLUPU)			0	**7'890**			0	**7'890**
Thailand (LDD)			0	**51'500**			0	**51'500**
Togo (University of Lomé)			0	**6'367**			0	**6'367**
UNCCD					12'000		12'000	**12'000**
UNEP			0	**100'000**			0	**100'000**
WASWC			0	**15'500**			0	**15'500**
Total	**674'388**	**136'980**	**811'368**	**9'057'517**	**640'106**	**78'550**	**718'656**	**9'776'173**

2.1.5. Tentative budget/ expenditures global WOCAT (CDE) 2009

WOCAT Phase 6 1.1.08 - 31.12.11

Overview of funds from SDC and other donors: Budget and expenditures (in CHF)

Kto	Description	Budget 09 1.1.09-31.12.09	Previous Expenditures	Expend. 1.1.09-31.12.09	Total 1.1.08-31.12.09	Saldo Year 2009
		DEZA	DEZA	DEZA	DEZA	DEZA
1	**Personnel**	***300'000.00***	362'193.75	***321'239.65***	683'433.40	-21'239.65
1	*Coodination*		190'096.25	169'221.00		
11	*Project work*		157'771.25	131'156.15		
13	*Travel time*		330.00	16'217.50		
15	*Backstopping*		13'996.25	4'645.00		
2	**Travel**	***20'000.00***	5'133.90	***22'373.50***	27'507.40	-2'373.50
3	**Materials**	***31'000.00***	9'914.42	***12'825.66***	22'740.08	18'174.34
4	**Mandates**	***81'000.00***	68'036.74	***139'721.33***	207'758.07	-58'721.33
	WOCAT workshop, steering meeting		54'266.70	38'504.28		
	Translation WOCAT book			32'495.62		
	Seedmoney, support nat. initatives			4'252.09		
	Development databases, web			59'509.44		
	Miscellaneous costs			4'959.90		
5	**Impact Monitoring Central Asia**	***40'000.00***	14'716.70	***19'844.30***	34'561.00	20'155.70
			0.00	***0.00***		
	Total 1-5	**472'000.00**	459'995.51	**514'459.74**	975'999.95	-42'459.74
6	**Distribution Books**		-3'041.55	***-1'544.70***	-4'586.25	1'544.70
	GRAND TOTAL	**472'000.00**	456'953.96	**512'915.04**	971'413.70	-40'915.04

WOCAT Phase 6 1.1.08 - 31.12.11: Overview

Overview SDC and other donors

Budget 1.1.09-31.12.09	Previous Expend.	Expend. 1.1.09-31.12.09	Previous Expend.	Expend. 1.1.09-31.12.09	Previous Expend.	Expend. 1.1.09-31.12.09	Previous Expend.	Expend. 1.1.09-31.12.09	Previous Expend.	Expend. 1.1.09-31.12.09	Expend. 1.1.08-31.12.11
Overall	DEZA	DEZA	LADA_FAO	LADA_FAO	TerrAfrica	TerrAfrica	GEF	GEF	UNCCD	UNCCD	Overall
	362'193.75	321'239.65	13'065.00	30'172.50	25'120.00	109'302.50		15'268.75		11'970.00	888'332.15
	0.00	169'221.00									
	0.00	131'156.15									
	0.00	16'217.50									
	0.00	4'645.00									
	5'133.90	22'373.50		5'930.85							33'438.25
	9'914.42	12'825.66									22'740.08
	68'036.74	139'721.33									207'758.07
	54'266.70	38'504.28									
		32'495.62									
		4'252.09									
		59'509.44									
		4'959.90									
	14'716.70	19'844.30						0.00			34'561.00
	0.00							0.00			
	459'995.51	514'459.74	13'065.00	36'103.35	25'120.00	109'302.50		15'268.75		11'970.00	1'185'284.85
	-3'041.55	-1'544.70						0.00			-3'041.55
0.00	456'953.96	512'915.04	13'065.00	36'103.35	25'120.00	109'302.50		15'268.75		11'970.00	1'180'698.60

2.1.6. Publicity

- WOCAT on the Internet (www.wocat.net): see statistics below
- WOCAT newsletter (2x) and contributions to WASWC newsletters
- WWSM13 proceedings 2009 and proceedings of the WOCAT symposium
- Meetings and workshops:
  - Participation at the LADA-local workshop January 2009, Mendoza, Argentina
  - Participation at the international meeting of the LADA-project, 7-9 April, Nairobi, Kenya
  - Participation at the international Workshop on 'Sustainable Land Management in the Highlands of Asia at Present and in Future under the Impact of Global Changes', 17-23 May 2009, Shangrila, China
  - Participation in UNCCD second interagency taskforce meeting, 14-15 June 2009, Bonn
  - Participation at the 2nd World Congress of Agroforestry, Nairobi, Kenya, 23-28 August 2009
  - Participation in the DSD-preparatory conference for the 'development of draft synthesis and recommendations for the UNCCD scientific conference at COP9', from 20 – 22 July in Ispra, Italy.
  - Joint WOCAT/LADA/DESIRE side event and stand at the COP9 in Buenos Aires, Argentina, 21 September – 3 October 2009
  - Presentation on SLM at the DSD conference from 21-24 September in Buenos Aires parallel to the COP9 meeting
- Posters:
  - Poster presented at COP9
- Papers presenting WOCAT:
  - Appraising and selecting conservation measures to mitigate desertification and land degradation based on stakeholder participation and global best practices, by G. Schwilch, F. Bachmann, HP. Liniger, in Land Degradation & Development, 2009

2.1.7. WOCAT website statistics

Compiled by Gudrun Schwilch

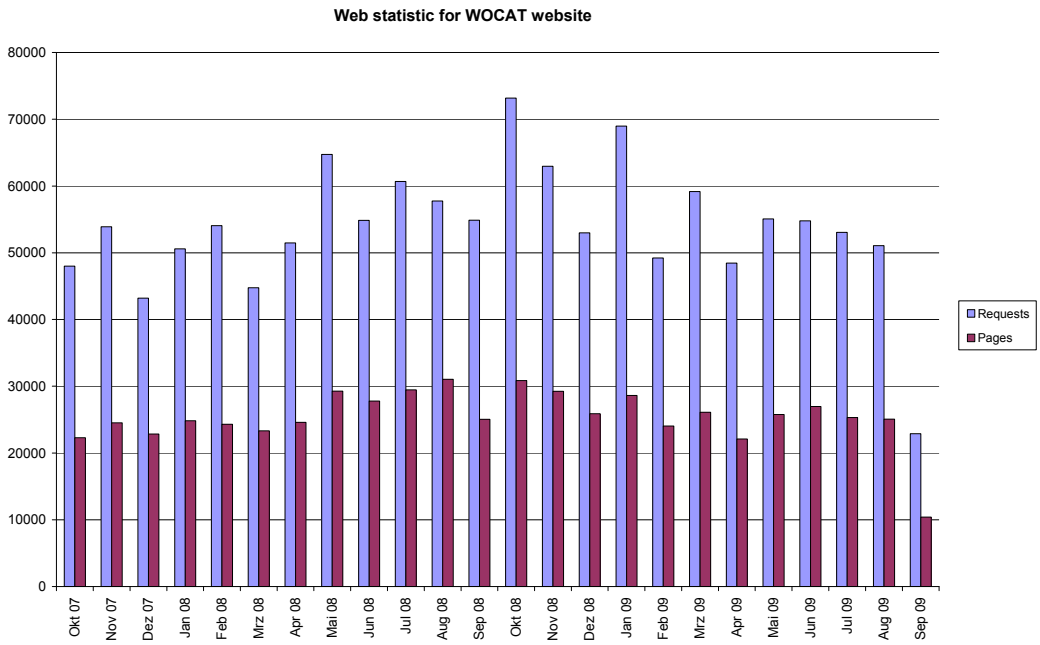
See also http://www.wocat.net/WOCATlog09.htm (best in Mozilla Firefox).

Website statistics Nov. 08 to 18 Sep 09 (10.5 months):

- Total requests: 651,798 (1,850 per day). 2008: 664,002 (1,814 per day);
- Total pages: 300,430 (852 / day). 2008: 317,870 (868 / day);
- Distinct hosts: 19,627 (number of different computers). 2008: 23,081;
- Number of hits generally going slightly down, highest peak was in October 08 (maybe due to symposium in Switzerland).

These statistics needs to be interpreted with some caution. The number of requests does not reflect the number of visitors because each graphic file on a web page counts as one request. On the other hand, certain visits are not counted, if the user has visited this page before and it is still in his cache and not refreshed. Or the Internet Service Provider's (ISP) cache has saved it, because somebody else from the same ISP has looked at that page recently. The proportion of requests retrieved from the cache can make up to 50%, so half of the user's requests are not counted.

Further reading on www.analog.cx/docs/webworks.html.



Most requested pages

English:

- Home (default.asp) with 132,681 requests is the absolute leader of the requested pages! But this is rather pointless as it only indicates that many people get to the WOCAT home page but maybe not any further.
- Database (databs.asp): 3,574
- Overview book (overviewbook.asp) with 2,466 hits and Overview book download page (overviewbookpdf.asp) with 2,786 hits
- Symposium 2008 (symp.asp): 2,424
- Introduction to WOCAT (about1.asp): 2,371
- World map (worldmp.asp): 2,177
- Questionnaires (quest.asp): 2,172
- Google Earth (googleearth.asp): 2,168
- Regional initiatives (reginits.asp):2,158
- Books (books.asp): 2,143

French:

- Accueil / Home (default_F.asp): 1,339
- Bases de données / database (databs_F.asp): 1,037
- Questionnaires (quest_F.asp) : 1,014

Spanish:

- Climate change and SLM (climate_s): 1,383
- Inicio / Home (default_S.asp): 1,325
- Últimas noticias (newslat_S.asp): 1,121
- Bases de datos / database (databs_S.asp): 1,039

The most frequently downloaded files:

- MSc Thesis Nicole Güdel (in German only!): 6,300
- Google Earth WOCASES (wocases.kmz): 6,246
- On the third place (6,215 requests) is part 1 of the book 'where the land is greener', followed by the other parts (all above 5,200 downloads). We only provide a low resolution pdf, and with suppressed printing and text copying mechanism.
- Database manual: Spanish 4,719, French 3,374 and English 1,685
- Map Questionnaire: Spanish 3,970, French 3,293, English 2,498
- South Africa Info Book: 3,891
- Basic QT questionnaire: Spanish 3,343, English 3,343, French 1,600
- The report from the WWSM12 in Switzerland, 2008: 2,837.

2.1.8. Global Management review - ISRIC

Report by Godert van Lynden

Godert van Lynden is member of the Global WOCAT Management Team since the 1st WWSM.

Activities related to WOCAT

Assistance in general coordination of the network

- 2 WOCAT Newsletters (December 08, July 09);
- Maintenance of WOCAT-L (mailing list);
- Regular feedback on Email requests;
- Co-organising of WWSM13;
- Participation in tools development, feedback on (digital) products;
- Contribution to QM revision and db;
- Presentation for and enhancing contacts with WUR and other groups;
- PR activities and exploring additional funding opportunities.

Participation in meetings and workshops

- UNCCD CRIC7 (Istanbul, October 08);
- Desertification Atlas Meeting (Ispra, December 08);
- Visit to UNCCD secretariat with DESIRE delegation (Bonn, March 09);
- Participation in LADA meeting 7-9 April 2009, Nairobi, Kenya;
- WG2 DSD Scientific Conference for UNCCD White Paper
- UNCCD COP9 (Buenos Aires, September 09);

WOCAT within other (ISRIC) projects:

- DESIRE
  - WOCAT mapping is a major component in DESIRE WB1;
  - Participation in 2 DESIRE WB leaders meetings;
  - Participation in 3rd DESIRE plenary meeting (Turkey, April 08);
- LADA, through “GLADA”(Global assessment) and QM development;
- Green Water Credits project (GWC - see also presentation in Symposium).

Funding (mostly personnel time) through the DESIRE budget (DESIRE-related WOCAT-activities) and through the ISRIC core budget. NB: DESIRE contribution going to decrease because of ending activities.

2.1.9. Global Management review - FAO

Report by Sally Bunning and Hubert George

LADA-Local

- LADA country teams trained in LADA Local toolbox with attention to degradation and improvement
- Revised LADA local manual sections on water and ecosystem services with WOCAT and prepared a section of LADA local manual on SLM assessment, to encourage countries to review successful SLM measures in local study areas, and not only focus on degraded areas.
- LADA international workshop (Mendoza, April 2009) reviewed use of LADA-Local tools and methods with countries, CDE participated to ensure harmonisation of local and national tools and to promote integration of SLM best practices assessment (40 participants).
- Backstopping to local LD assessments in China (Chifung), Tunisia (Siliana, Kerouian), Senegal
- Outstanding: Need to encourage reviews of SLM best practices (QT; QA) (e.g. effectiveness for prevention, mitigation, rehabilitation, level of and constraints to adoption, costs) in LADA local study areas to support recommendations and complement national reviews

LADA-National

LADA-WOCAT collaboration in national LD and SLM assessment. LADA contracted WOCAT for "provide assistance to national land assessment exercises by LADA countries by doing quality control of results submitted and suggest corrections where required."

- LADA international workshop in South Africa (Sept 2008, 20 persons, 13 institutions) enabled the training in and testing of the LADA-WOCAT off-line data entry and mapping tool (QM). CDE and ISRIC participated.
- Outstanding: The interactive viewer and the on-line version of QM are not yet ready.

Publications

LADA contracted WOCAT to "Review and comment on draft publications for local and national assessment publications to be prepared by LADA countries."

- Draft LADA Local reports from China (1), Argentina (5), South Africa (1) received and commented by FAO and some made available to UEA for comments
- Outstanding: peer review by WOCAT and UEA of final draft publications

Best SLM practices

WOCAT/ CDE received a contract from LADA to "Review and comment on draft publications on agricultural good practices by 6 LADA countries using WOCAT standards."

- China publication completed in 2009 with 49 technologies/approaches)
- Argentina best practices review 2008 did not use WOCAT tools (what progress after CDE mission to Argentina?)
- Outstanding: No reports of progress in other LADA countries yet.

Awareness raising

Raised awareness of and potential use of LADA-WOCAT tools by development partners and projects

- Presentations of LADA–WOCAT tools at SWALIM workshop (40 participants) led to use of national tools by SWALIM in 2009 (LUS map, LD and SLM assessment) and proposed use of local tools in 2010
- WOCAT & UEA illustrated national and local approaches, using final versions of manuals and pointed to parallelism between LD and conservation assessments. WOCAT presented example of South Africa output map and raised issue of final presentation of assessment results

Joint WOCAT-DESIRE-LADA side event

A joint side event to demonstrate the effective LADA-WOCAT-DESIRE collaboration and raise interest in the use of the tools and methods was organised at the COP9 in Buenos Aires.

- Prepared the flyer with inputs by WOCAT-DESIRE to attract participants
- Contributed to the side event through presentations on LADA and co-facilitated the discussion. 80 persons participated and received LADA folder and WOCAT SLM brochure. This demonstrated the benefits of exploiting synergies and identifying complementarities between the 3 partners

Publication on SLM in Sub-Saharan Africa for Terrafrica/SIP

- Contributed to development of the outline and format for the SLM technologies and approaches as part of FAO TerrAfrica team and proposed experts worldwide for review.
- By Nov 2009 will review and provide suggestions on the draft SLM fact sheets so far prepared by WOCAT

LADA/ WOCAT Training Asia

The regional LADA training workshop for SE Asia (27-30 April 2009) was attended by 50 participants including LADA team (HQs, LADA China, RAP), and 7 SE Asian countries some represented by WOCAT members (the Philippines, Indonesia, Thailand, Myanmar)

WWSM participants during the presentations (Photos: HP. Liniger).

2.2. National and regional activities

2.2.1. ICIMOD

Report by Isabelle Providoli (ICIMOD progress.ppt)

Progress report 2009

The HIMCAT site was updated and continued in 2009 and got a new look by integrating the site into ICIMOD's website. The spring 2009 issue of HIMCAT newsletter has been published on "Strengthening of SLM knowledge sharing in the Himalayan region through spreading of WOCAT tools". The site is still not too active yet and the contributions from members are rather limited.

The 1st Steering Committee (SC) meeting of NEPCAT was organized in February 2009. The Director General of the Department of Soil Conservation and Watershed Management has been Chairing the NEPCAT SC, with DoA an active Assistant Chair, and ICIMOD acting as Secretariat. To ensure continuity, SC would meet twice a year.

The International Shangri-La workshop 2009 on SLM in the highlands of Asia was organised jointly by Kunming Institute of Botany, Chinese Academy of Sciences (KIB-CAS), World Agroforestry Centre (ICRAF), and the International Center for Integrated Mountain Development (ICIMOD) in May 2009. The Shangri-La workshop aimed to explore issues of sustainable land management at present and in future under the impact of various socio-economic changes (and in particular climate change) across many levels – from village and watersheds to transbasin and global. One of the group work sessions was specifically on WOCAT tools.

Eleven technologies and approaches (SSM-P documented and compiled) from the NEPCAT fact sheets on "Natural Resource Management Approaches and Technologies in Nepal" have been put into the WOCAT global databases and has been handover to SSM-P.

Two WOCAT trainings were organized in Nepal and Pakistan in April/May 2009, respectively. Altogether 37 participants from 21 organizations have participated in the trainings. ICIMOD, SSM-P and KU have jointly organized WOCAT training in Nepal. In Pakistan, the training was jointly organized by ICIMOD and Interoperation. PAKCAT network has been established in Pakistan. A module of 1 hour was integrated in ICIMOD's 3rd training on "Low Cost Soil and Water Conservation Techniques and Watershed Management Activities," in Nepal in April 2007.

The preparation of BANCAT fact sheets containing 21 Technologies and approaches has been supported financially by ICIMOD. The publication should be ready for printing by end 2009.

The ICIMOD team contributed to WOCAT task forces over the year. A major contribution was provided to the watershed module.

Work plan 2010

The HIMCAT extranet will be continued and further activated. New information about HIMCAT countries will be included on the website. The publishing of two HIMCAT newsletters per year (in July and Dec) will be further continued.

The HIMCAT countries WOCAT networks will be further strengthened. ICIMOD will provide backstopping support and specific WOCAT trainings will be held in Nepal, Myanmar and India. New WOCAT initiatives will be started in Afghanistan (AFGCAT) and Myanmar (MYACAT).

In Nepal more technologies and approaches will be documented in collaboration with Kathmandu University (KU). In addition to that ICIMOD and KU will jointly test the new watershed module.

2.2.2. Nepal – Kathmandu University

Report by Sabita Aryal Khanna (Kathmandu University.ppt)

Kathmandu University is an autonomous, not-for-profit, non–government, public institution dedicated to maintain high standards of academic excellence. It is committed to develop leaders in professional areas through quality education. It is located in a mountainous landscape in Dhulikhel Municipality about 30 kilometres east of Kathmandu. KU is in continuous progress since 17 year, always aiming to provide good environment to develop research in various fields.

Kathmandu University is very open to fruitful collaboration in the field of education such as academic exchange and for research collaborations. KU has been successfully collaborating with more than fifty universities and institutions of national/ international repute for faculty and students exchange program, credit transfer and joint research works, mutual cooperation, recognition of KU certificates & degrees, and information exchange. KU has a bilateral MOU signed with University of Berne, Switzerland.

From 6-11 April 2009 the School of Science, KU organized NEPCAT training on documentation and dissemination of SLM technologies and approaches using WOCAT tools, in association with ICIMOD and Helvetas. Two faculties participated in that training. WOCAT tools of QTs and QAs are incorporated in the study of undergraduate students. And the tools have been practiced by our faculties and students for the documentation of SLM practices.

The generous invitation extended by the WOCAT secretariat Bern and ECES-ICIMOD for the participation in the 14th annual WOCAT Workshop and Steering Meeting (12-19 October 2009) has been highly appreciated by our University.

Work plan 2010

The promise made during the workshop for contributing to the finalization of the watershed module with field testing as well as involvement in the impact monitoring and decision support taskforces will be carried out in association with ICIMOD. At the same time we are looking for various possibilities to be involved with WOCAT in academic research activities for Master and Doctoral degree. Thus there are tremendous possibilities to have collaboration between WOCAT and KU in the near future.

2.2.3. Nepal – SSMP

Report by Bishnu K. Dhital (Nepal SSMP_2009.ppt)

The Sustainable Soil Management Programme (SSM-P) started in 1999, and was implemented by Helvetas-Intercooperation in the 10 mid-hill districts of Nepal. The target community of the programme is the poor and discriminated sector who normally can not afford expensive agricultural inputs from the market. Thus the aim of the programme is to combat poverty and productivity decline through the promotion of proven and appropriate soil and crop management technologies. The technologies are mainly based on local resources which otherwise are neglected or not properly managed and utilised. For example, promotion of FYM improvements, collection and utilisation of cattle urine, promotion of composting, crop and weed biomass recycling in the soil, integration of herbaceous and tree legumes into farming systems, promotion of Integrated Plant Nutrient Management System, promotion of botanical and biological pest management practices etc. These are the core Sustainable Soil Management (SSM) practices promoted by SSM-P. Another promoted SSM practice is the promotion of vegetable crops, cash crops and food crops production as per the need and requirement of the local community members along with the use of SSM practices.

All these technologies are very important for Sustainable Land Management (SLM). Therefore, this practices and their impact on farmer's fields were presented during the 14th WWSM in Morocco. SLM should not just focus on soil and water conservation, it should also specifically emphasise soil fertility management to the farmers. Hence, SSM-P suggests to the WOCAT team to consider integrating Sustainable Soil Fertility Management as an important component of SLM. Soil fertility management is very important in the developing world where livestock-crop integrated farming systems are common. More technologies and approaches related to Sustainable Soil Fertility Management (SSFM) should be considered and documented by WOCAT, and maybe even a specific integrated crop-livestock module should be developed. SSMP would be very interested in a further collaboration especially in the development of such a module. However, SSMP might not be able to take a leading role within the proposed module taskforce, but to would like to be an active member of the module team.

2.2.4. Bangladesh - BANCAT

Report by Sudibya Kanti Khisha (BANCAT Achievements-Work-plan.ppt)

Achievements in 2009

1) BANCAT Working Group (WG) Meeting: The Coordinator of BANCA Sudibya Kanti Khisha held personal discussions with some members of the WG to review the progress achieved in the last year and prepare the work plan for the next year.

2) Assessment and documentation of Natural Resource Management (NRM) from different agro-ecological zones (AEZ) of Bangladesh: About 22 new SLM Technologies and Approaches (As and Ts) could be documented and formatted in the 4 page summary format. With the personal initiatives taken by Isabelle Providoli, the HIMCAT Coordinator of ICIMOD, a financial support of USD 4000 was granted to BANCAT by ICIMOD to carry out an assessment and documentation of As and Ts from different AEZs of Bangladesh followed by a training workshop organized for the post-graduate students and their supervising teachers of different universities. In that respect, an agreement between ICIMOD and BANCAT was signed on 19 May 2008. A theoretical training workshop on WOCAT tools followed by a practical field exercise on how to fill in the QT and QA was organized on which 17 students and their supervising teachers including one NGO leader participated.

3) Updating BANCAT website: The website was upgraded from 100 MB to 500 MB and the first publication of BANCAT documentations from Chittagong Hill Tracts was placed on the website.

Work plan for 2010

1) BANCAT working group meeting: A BANCAT working group meeting is planned to review the achievements of the last year and prepare a work plan for the next year. Funding: USD 100 (available).

2) Continuation of documentation of NRM As and Ts: Subject to the availability of fund, more Ts and As will be documented. Funding: USD 4’000 (Required).

3) Publication of documented Ts and As and fact-sheets: Documented Ts and As will be produced as factsheets and published as BANCAT factsheets for which Isabelle Providoli, HIMCAT Coordinator of ICIMOD, arranged a fund of USD 1’935 from ICIMOD. An agreement was signed between ICIMOD and BANCAT on 27 August 2009. These fact sheets are now in press and are expected to come out in printed form by November 2009. Funding: USD 1’935 (available from ICIMOD).

4) Seminar for launching of BANCAT factsheets: A seminar for launching of the published BANCAT fact sheets will be arranged to a wider audience of NRM professionals of both government and non-government organizations to popularize WOCAT tools and BANCAT activities in Bangladesh. Moreover, popularization efforts will be continued through participation in different workshops/seminars. Funding: USD 2000 (required).

5) Updating BANCAT website: The website will be regularly updated and the fact sheets will be posted in the website. Funding: USD 100 (available).

2.2.5. India

Report sent by Niranjan Sahu

Orissa Watershed Development Mission (OWDM) is the partner organization of WOCAT in Orissa, India. Initially, WOCAT tools were tested and technologies and approaches were documented in the two bilateral Projects namely Danida assisted Comprehensive Watershed Development Project (CWDP) and DFID assisted Western Orissa Rural Livelihoods Project (WORLP). Several technologies and approaches have been documented in these project areas. During 2009, efforts have been taken to sensitize project functionaries in mainstream watershed projects such as IWDP, DPAP etc. Thus one sensitization workshop in each district of Nuapada and Kalahandi was organized. Twenty project staffs were oriented on WOCAT. Further, the impact assessment conducted for WORLP also used WOCAT impact assessment indicators, for identification of appropriate IA indicators for evaluation of the project.

2.2.6. China – Institute of soil and water conservation, CAS and MWR

Report by Wang Fei (WOCAT-China.ppt)

The WOCAT methodology was used within the DESIRE-project in the Loess Plateau, China. WOCAT plays an important role within the DESIRE approach since it provides a linkage of the different working blocks. Two workshops were held in 2008, the first one was on land degradation and desertification – existing and potential prevention and conservation strategies used and the second was on selection and decision on technologies / approaches to be implemented. There were 17 stakeholders involved including land users, researches, NGOs and GOs. Four workshops were held at county level in Ansai County and small watershed level. The results of this multi-stakeholders decision process could help to make a better long-term plan about sustainable land management in the Loess Plateau.

In 2008 and 2009, we translated the latest version of WOCAT QT and QA into Chinese and shared them with LADA project. The questionnaires were uploaded to the WOCAT website.

Based on the field survey, 3 different technologies were collected and documented: terraces, check dam for land and year-after-year terraced land in the Yan River Basin. The technology of the 'year-after-year terraced land' is a special local way for terracing orchards by a continuously enlargement of the terraces year after year leading to an increase in the soil moisture through the growth of the trees. Furthermore the labour for land preparing can be distributed in different years.

Professor Li Rui and Dr. Wang Fei took part in the Shangri-La Workshop in May 2009 on Sustainable Land Management in the Highlands of Asia in Yunnan, China. The process and results of WOCAT were shared with other participants. The research groups from different Chinese organizations discussed the further development of WOCAT in China with Dr. Hanspeter Liniger.

Invitation to LANDCON conference

The First Plenary Meeting of World Association of Soil and Water Conservation and the International Conference on Combating Land Degradation in Agricultural Areas will be held from 11-15 October 2010 The LANDCON conference will take place Xi'an, Shaanxi Province, P. R. China.

Work plan 2010

- Integrate new technologies from the Yan River basin into the database
- Documentation of 2-3 new approaches from the basin
- Conduction of WOCAT mapping in the Kelai Watershed

2.2.7. China – SWCMC

Report sent by Meng Lingqin

WOCAT in Northeast China in 2009

1. Collection of three SLM technologies in Northeast China in 2009. The technologies are: 1) 'Mousehole SLM technology'. The technology is used on sloping farmland; 2) 'Wicker waterway'. The technology is used to protect gullies from water erosion; 3) 'Turf belt'. The technology is used to erase Ephemeral Gully from sloping land. All case studies are available in Chinese.

2. It was planned to update the Chinese WOCAT Questionnaires to the latest version of 2008. However there were already current Chinese versions available on the WOCAT website. So the work was not necessary.

Plan for 2010

1. Translation of the three SLM technologies (mentioned above) into English. Collect 1-2 new SLM technologies in Northeast China.

2. After finishing the work of translation and collection of new SLM technologies, a WOCAT workshop will take place in the Songliao water resources commission, ministry of water resources, China. In the workshop 15 technicians will be trained, coming from three provinces of Northeast China, to use WOCAT tool to collect and document SLM information.

3. Screen out 100 QA and QT from WOCAT database with 15 new SLM techniques from Northeast China to compile a book and publish the book in 2011. The work on the book will be in collaboration with Mr. Wang Yaolin.

2.2.8. China - GEF/OP12

Report sent by Wang Yaolin

1. Shangri-La Workshop on Sustainable Land Management in the Highlands of Asia: Mr. Wang Yaolin, as a representative with PRC-GEF Partnership on Land Degradation Prevention in Dry-land Ecosystems, attended the Shangri-La Workshop on Sustainable Land Management in the Highlands of Asia during 18-22 May 2009. A report on Gansu Sub-Project of PRC-GEF Partnership on Land Degradation in Dry-land Ecosystems Capacity Building to Combat Land Degradation as well as a presentation on posters on the WOCAT-related book, Best Practices for Land Degradation Control in Dry-land Areas of China, were prepared and presented at the meeting. In addition, some books of Best Practices for Land Degradation Control in Dry-land Areas of China were spread for publicity about WOCAT.

2. Inclusion of initiatives on WOCAT activities in the second term of the PRC-GEF Partnership on Land Degradation Prevention in Dry-land Ecosystems: In the preparation of the implementation program for the second term of PRC-GEF Partnership on Land Degradation Prevention in Dry-land Ecosystems, the collection and publishing of some other SLM technologies and approaches with the WOCAT format, either in cooperation with Focus Point UNCCD, China, or independently implemented by GEF/OP12 Project Office, was discussed and included in the draft implementation program.

Plan for WOCAT activities in GEF/OP12 Project for the year 2010

1. Collecting and publishing best practices in land degradation control in arid and semi-arid areas in China. The Central Project Management Office (CPMO) will organize 6 provincial project management offices to be involved in this activity, which includes training, screening out, investigation on the spot, sorting out, writing, and publishing.

2. WOCAT training requested by the GTZ Program in Tibet. The GEF/OP12 Gansu Project Office will carry out a training course on use and extension of WOCAT tools in Tibet for the water conservancy sector.

3. Take part in the monitoring and evaluation task force of WOCAT

2.2.9. Mongolia

Report by Munkhnasan Lamchin and Bolor Radnaabazar (Mongolia_WWSM2009.ppt)

Coping with Desertification Project of Swiss Development Agency in Mongolia mandated Desertification Study Centre (DSC) of Geo-Ecology Institute of Mongolian Academy of Science to document, share and disseminate technologies and approaches relevant to coping with desertification in Mongolia. The WOCAT concept and methodology is well accepted by DSC, and seen as an important tool that can be applied in Mongolia for compiling existing technologies to be shared through a global SLM database. Staffs of DSC are well trained on WOCAT tools and a focal point of WOCAT has been appointed by the Institute.

Mongolian Overview book

The WOCAT basic questionnaires on SLM Technologies and Approaches for documenting local experiences were translated into Mongolian language. 19 technologies were documented, describing experiences on grazing land using agronomic, structural and management measures and including technologies which were implemented by UNDP Sustainable Grassland Management Project. The case studies were documented together with experts and successfully compiled into a Mongolian Overview book.

Latest news: Workshop on Land degradation and conservation mapping in Mongolia

The Coping with Desertification Project in collaboration with the Desertification Study Centre (DSC) of the Institute of Geo-Ecology and facilitated by the Centre for Development and Environment in Switzerland held a training workshop on introducing WOCAT's methodology and tools in particular its mapping tool in September 2009. The mapping tool shall be used to evaluate/survey land degradation and conservation in Mongolia. Participants were representatives from CODEP partner organizations, scientific institutions, universities and institutes, international projects and programmes. During the morning session CDE/ WOCAT representatives shared their valuable knowledge in sustainable land management. Staff from

DSC introduced their activities in terms of collecting, documenting and evaluating existing and traditional SLM technologies and approaches and entering this data into databases. These data as well as gained knowledge and experiences will be crucial for proper decision-making at field level and policy discussion process at national level.

The afternoon session was dedicated to land degradation and conservation mapping and the attendants were introduced to different types of land use systems. Twelve land use systems which should be used in the Mongolian baseline map were agreed upon. The baseline map of land use systems is the starting point for the mapping exercise. The necessary set of data on degradation and conservation that should be collected with the mapping questionnaire and later entered into the mapping database was discussed.

National Agency for Land Affairs, Geodesy and Cartography is working on updating the mapping of integrated land management in Mongolia. So far 6 aimags are covered.

DSC will make a mapping of land degradation and conservation starting from these 6 aimags and based on already collected and compiled data as well as 'local' experts experience. DSC will work out a work plan, which will be implemented starting from 2010.

Activities in general in 2008 - 2009:

- Introduction of WOCAT training to DSC staff by CDE/CODEP
- Training on WOCAT, International backstopping by CDE
- Training to data collectors in local areas by DSC
- MONCAT Secretariat was formally established within Geo-Ecological Institute. The Secretariat divides into MONCAT working group, which consist of 3 full scientist and specialists and Review Panel with 8 members.
- Translation of QT and QA into Mongolian language
- Documentation of 19 technologies
- Translation of the database into Mongolian language
- 4 pages of summary of 19 technologies be ready to represented in the Science and Technology Exhibition
- Students practical work (3 students trained on WOCAT questionnaires and filled out 5 technologies in Khovd aimag)

Tasks for 2010:

- Awareness raising / promoting MONCAT as a platform for KM (linking with all partners in SLM in Mongolia) => e.g. launching MONCAT
- Data collection / Quality assurance for Ts / As (field as form other projects)
- Harmonization of knowledge for use
- Mapping data collection in Soums
- Training additional persons to collect data
- Outputs: in Mongolia & International: Inventory/book, maps, papers
- Improving own capacity to handle MONCAT
- Linking MONCAT with WOCAT
- Providing service for Decision Support (to projects, planners, …)
- Identify knowledge gaps and initiate appropriate research / surveys: including young researchers, postgraduate students
- Integrate MONCAT tasks and own research mandate at DSC (getting a further degree)
- Link with CC, Biodiversity and Water
- Host international workshop on 'standard methodology to assess and monitor desertification and land degradation'

Strengthening Link between components of CODEP:

- Collection of Khovt PTD experiences and Ts and As in the region (2+4)
- Collaboration with NCCD: Documentation of their experiences (?) (1+4)
- NCCD focal point to use WOCAT for reporting (request to their projects to document their experiences),
- NCCD to make use of and provide to MONCAT database

Discussion of Eric and Josoa during a break, and national presentations of Mongolia and Senegal (Photos: HP. Liniger).

2.2.10. CACILM - Kyrgyzstan

Report by Kanysh Nurymgereyev (CACILM.ppt)

Central Asian Country Initiative for Land Management (CACILM) is a partnership between Central Asian countries and international donor community to combat land degradation and improve rural livelihoods and adapt to climate change in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, and Uzbekistan. CACILM has started in 2006 with an inception phase and will be running until 2016. The main donors behind CACILM are GEF, the Asian Development Bank (ADB), UNDP, GTZ, IFAD, Global Mechanism, FAO, and ICARDA.

The CACILM activities include different projects:

National Projects:

- 5 Medium Sized SLM Demonstration Projects (KAZ, KYR, TAJ, TUR, UZB)
- 2 Full Sized Investment Projects (TAJ, UZB)

Multicounty projects/ components:

- SLM research - ICARDA
- SLM Information system – ADB
- SLM Knowledge Management – ADB
- SLM capacity building – UNDP/GTZ

Monitoring and Evaluation System

A M&E system at the country and multicountry level was established. To monitor the results of NPFs (National Programme Frameworks) and of CMPF (CACILM Multicountry Partnership Framework) different indicators have been used. The inception phase was a testing time for M&E and indicators. Numbers of gaps have been found in the system like disconnection project indicators and NPF indicators, lack of common methodology in projects to assess livelihood indicators and calculate economic benefit of projects activities.

For the M&E system CACILM was in contact with GEF and UNCCD in order to correlate indicators for assessing land degradation and to ensure linkages to the global impact assessment. Therefore indicators are reviewed to strengthen the link project-country-region-global. During the implementation phase the cooperation with CACILM component SLMIS (Sustainable Land Management Information System) will be strengthened in order assess spatial land degradation indicators such as Land cover/Land use, land productivity.

SLM Research

ICARDA has the lead SLM-research. The objectives are:

- to test agro-technical approaches and techniques on demonstration plots to address country specific needs in SLM and
- to increase capacity of national research institutions

SLM information System

The objectives of the SLM information system (SLMIS) are:

- Provide baseline agricultural, rural land use and livelihood information
- Identify LD and other environmental hotspots and brightspots
- Assist in monitoring of CACILM National Projects
- Assist the national institutions (NSIUs, NSECs, NCCs)

Knowledge Management

The objectives of the knowledge management component are:

- Integration, exchange and access of knowledge amongst CACILM projects, partners, stakeholders
- Foster necessary coordination and communication among project teams
- Strengthen sustainable land management through facilitated learning and information sharing

Different products are planned such as brochures, leaflets, posters, etc. and an ‘Atlas of Natural Resource in Central Asia and Economic Analysis of SLM Practices’ prepared by ADB with assistance of CACs.

2.2.11. Kazakhstan – Institute of Geography

Report by Aigul Zhanserikova and Azhar Yeszhanova (Kazakhstan WOCAT 2009.ppt)

The Institute of Geography of the Ministry of Education and Science in Almaty, Kazakhstan attended the 11th WWSM in South Africa in 2006. Since then the work has been mainly linked with SLM projects at the Institute of Geography (research, mapping) and in a collaboration with CAMP-Consulting (trainings).

1) In 2009 the first phase of CACILM Multi-country Partnership Framework Support Project – Sustainable Land Management Information System (SLMIS) (2008-2009) was finished (lead organisation in Kazakhstan is the Institute of Geography).

Main results:

- Institutional Arrangements with main organizations, ministries and other stakeholders
- Compilation and collection of all information available at national level (4 southern oblasts) that relates to land degradation and land conservation assessment
- Database that relates to socio-economic aspects and indicators of land degradation
- Design, development, and initial deployment of an SLMIS at the national level
- Mapping with capturing, storing, and processing the raw remote sensing data (map of land use by FAO-LADA methodology, brightspots and hotspots, degradation type and level maps for GEF-sites and series of maps relates to land degradation assessment (soil, vegetation, climate, water management, etc.)
- CACILM Sustainable Land Management Information System Design Workshop was held in Almaty, Kazakhstan, May 18-21, 2009.

2) The project on 'protection from sand drift of the Senek village in Mangistau oblas (Western Kazakhstan) was realized with good results. On the basis of the development of this project the geoecological station 'Tuiyesu' was established. The experiences will be documented with new QT's and QA's.

3) Within the frame of CAMP-consulting and PF partnership with the UNDP office in KZ on the regional project 'Mobilization of communities on sustainable land use management' best examples of community based SLM could be demonstrated in at least two villages.

In 2007 during the Conference of young scientists in the National AgroUniversity in Almaty a presentation of the WOCAT and NCCR Program was organized.

Work plan 2010

- Contribution to the WOCAT databases on SLM technologies and approaches by finalizing QT's and QA's.
- Dissemination of SLM technologies and approaches among farmers and other stakeholders
- Continuation and testing of strategy on sustainable pasture management at local level
- Studying of new methods and approaches on mapping of land degradation and conservation by participating in a WOCAT-LADA mapping training

2.2.12. Serbia

Report sent by Miodrag Zlatic

- The conference on Land Conservation 'Global Change – Challenges for Soil Management' was held at Tara Mountain, in Serbia, from May 26th – 30th, 2009. 123 participants from various countries participated in the conference. A presentation of WOCAT was given on 'Implementation of WOCAT the WOCAT programme in Serbia'.
- Event though contact with national donors and institutions was continued in 2009 not much funding was available for WOCAT in 2009, therefore not all envisaged activities could be conduced in the last year.
- WOCAT material was further promoted through student's education and the continuation of the student's forum.
- Continuation of QM work in the Borski District.

Work plan for 2010

- Continue contact with national donors
- Training of new students and continuation of students forum
- Conference of 90 years faculty of Forestry in September 2010

- Updating QM in 5 districts and collecting in one new district
- Quality control of documented data in a feedback meeting
- Preliminary overview book.

2.2.13. South Africa

Report by Lehman Lindeque

- WOCAT meetings and conferences attended: 2 meetings in South Africa
- Presentation of WOCAT programme and philosophy at appropriate meetings and conferences
- Further development of digital products: QT and QA database, mapping database and mapviewer
- Funding: finalise contract for ARC-ISCW for continuation of WOCAT in SA for next three years (2010 – 2012) → Contract not approved due to a lack of research funds.
- Compilation of a first draft of the Best Practice Manual for South Africa (Summary of QT's and QA's)
- Summary of land degradation and conservation in the grasslands and savanna of the North West Province

South Africa still lacks a formal agreement and champion to take the WOCAT programme forward. At the moment most of our resources is spend on completing the LADA National Assessment using QM matrix as basis.

Without dedicated champion for WOCAT in SA and limited resources, South Afirca have not been able to monitor the impact of WOCAT

2.2.14. Senegal

Report by Rokhaya Daba Fall, Ndeye Sokhna Fall, Babacar Ngom (Sénégal WOCAT.ppt)

WOCAT team at sub regional level

- Former WOCATeers in Senegal were contacted → contact with many institutions from Mali, Burkina Faso, Benin, Togo and Mauritania.
- Different topics were discussed with the visited institutions/ organizations: exchange of activities and techniques useful, discussion of possible fields of collaboration in the field of pedology, exchange WOCAT ideas and discuss the implementation of WOCAT
- With BUNASOL a partnership is formulated and exchanges are being continued

WOCAT team at the national level

- SLM meetings in Senegal: INP as group leader organised a bimonthly SLM meeting in Senegal
- 2 study site visits were made, the first with the world bank and the second with the executive group
- Establishment of a working group for defined and adopted approaches through the WWSM: Executive group (20 institutions: INP, DEFCCS, CEPS, DEEC,DGBRLA, DAT,UAEL, DGPRE,DMG, DPCA, CSE, DCL, DA, CONGAD, CNCR, DE, DGP, ESST, CRDT, DCEF, Experts WOCAT). A national framework for Strategic Investment for SLM is already formulated and validated at national level.

Plans for 2010

A national training is foreseen for January/ February 2010, conducted by INP and SLM team and including also representatives of the WOCAT global management team.

A regional workshop is planned for March/ April. The workshop should bring together West African countries (and Morocco), representatives from the WOCTA management team, UN conventions, FAO representatives, etc.

Collaboration with INP and CSE and LADA/ WOCAT: Fundraising for WOCAT/ LADA joint training sessions, meetings between CSE and INP's general directors.

2.2.15. Niger

Report by Soumaila Abdoulaye Sambo (Niger presentationWWSM.ppt)

Niger was very much involved in WOCAT until 2002. From 2003 to 2008 WOCAT activities in Niger have stopped due to institution failures. Since 2009 WOCAT activities in Niger have been restarted again.

The WOCAT database contains 7 technologies and 4 approaches from Niger since 2002. But, during data collection in the period from 1999 – 2002 about 29 technologies and 9 approaches were filled. However, just 7 technologies and 2 approaches were validated at a WOCAT Workshop in Niger in 2002. The validation groups in 2002 recommended that some corrections must be carried out before introducing the others case studies into the WOCAT database. The 'Groupe de Recherche, d'Etude et d'Action pour le Développement' (GREAD) has started with the updating of these case studies in March-April 2009.

Activities in 2009

1. Updating list of development and research programmes and institutions related to soil and water conservation (SWC) and related to soil protection and restoration. So far a list of 97 institutions has been established. A national survey is conducted for the identification of information of the different projects regarding their intervention area, the strategies and approaches, the activities, financial partners, etc. All information is collected in a database. The Ministry of Environment and 'combat against desertification' in Niger are partners of this database. To ensure funding an answer is attended from the 'Direction d'Appui au Programme' (DAP), 'Programme National pour un Environnement et un Développement Durable' (PNEDD) and 'Programme des Nations Unies pour le Développement' (PNUD).
2. Updating of documented SLM technologies and approaches. It was decided to update 29 technologies and 9 approaches which were presented at the workshop 2002 in Niger. However, there are some constraints: 1) the majority of projects or organizations which had filled in the questionnaires during the period 1999-2002 stopped their activities; only two (SOS Sahel International and ABC Ecologie) still exist. 2) projects or institutions which abandoned SWC activities or stopped definitively their activities.

   14 projects have been contacted since June 2009 to contribute and out of this 15 technologies and 4 approaches are very well advanced.
3. Organization of validation workshop: In 2010 it is foreseen to conduct a validation workshop in June. A huge range of different technologies and approaches should be discussed during the workshop and integrated in the land use maps of ROSELT - Réseau des Observatoires de Suivi Ecologique à Long Terme (Network of Long Run Ecological Monitoring Observatories). Furthermore, in February 2010 a round table is planned to discuss latest climate related forecast for the Sahel-region after the UN-climate conference held in December 2009 in Copenhagen.
4. Distribution and awareness raising of WOCAT database: Since January 2009 several conferences have been conducted for spreading information about the vision of WOCAT. The conference involved the ministry of environment, Ministry of community development, the ministry of the interior and decentralization, etc. and aimed to raise awareness about the necessity for a better land management and the communal systems for the local development.

Research

In 2009 GREAD has started with the following research project:

'Evaluation of socio-economic impacts and environment of SWC/DRC actions in the area of Tillabéry Nord and Tahoua Nord'. The study has been realized with support of a team consisting of ROSELT and OSS. Data on on socio-economic and environmental impacts of PDRT and PASP/GTZ is been collected. GREAD receive an agreement with ROSELT and PASP for using their data for communications and publications.

ROSELT works also on a "carte d'occupation des terres" càd (map of land use systems). Their objectives are to realize 23 maps for 23 communes. This is 10% of the number of rural communes in Niger. After some meetings, we have decided to develop this map for all communes in Niger, since local development process results from identification of land use system.

ROSELT whishes to establish a partnership with GREAD also regarding the use of WOCAT tools and methods.

The collaboration between GREAD and ROSELT is at two levels:

- First, ROSELT gives to GREAD all information available in its database for to make studies on socio-economic and ecological impacts of development projects in Tahoua and Tillabéry regions

- Second, ROSELT will give technical assistance to GREAD in LUS maps in Niger.

Plan for 2010

The vision of GREAD for 2010 is contained in our draft program of sustainable agropastoral development in Niger. During 2009 and past years since the installation of WOCAT in Niger, the difficulties of GREAD in the implementation of partnerships with different institutions resulted from the fact that GREAD has nothing to offer to these partners another than capitalization products of their experiences. However, these structures expected much more from the GREAD team as the promotion of water and soil conservation approaches and technologies through development activities. That's why 2010 will be a crucial year based on the achievements of research and development. The first need is to strengthen our capacity for training and technical support of target groups (agropastoral producers, students, technicians, development projects), and the further promotion of other WOCAT / LADA tools within partners structures.

2.2.16. Morocco

Report by Miloud Chaker and Abdellah Laouina (Moroccan report.ppt)

Since the first workshop was conducted with local stakeholders, the Moroccan team has fixed the objective to apply the WOCAT methodologies and tools with the Sehoul's farmers' community.

In order to reach the largest number of stakeholders, our team has organized an intermediate workshop in October 2008 with university researchers, agriculture technicians, and executives from "INRA", "ENFI", Regional Direction of Forests "DREF", Provincial Direction of Agriculture "DPA" and other institutions. The goal of this intermediate workshop was to discuss promising technologies to be eventually selected and implemented in the Sehoul area. However, even though the discussion was interesting, we were not able to reach consensus on the technologies to be selected as no argument has been convincing enough to either party.

Therefore, in December 2008, the team organized a second workshop with local stakeholders, researchers, local politicians and NGOs, based on the decision support methodology developed within the DESIRE-project. In the decision support process the technology involving grass strips was selected as the number one, due to the importance of breeding in farmers' economy. However, in general, farmers seek to produce increasing amounts of forage without reducing the space reserved for plantations.

Following this scoring decision, our team started with the planning of the implementation and experimentation process of the selected technologies. We contacted the farmers several times in order to locate a favourable experimentation site. The Hannanat site has been retained for many reasons including the agreement made with an important land owner which allowed us to conduct the experiment. The agreement consisted of planting Atriplex in an area of 1 hectare to show an SLM example to farmers, and as a means to assess and monitor results and socioeconomic impacts of the technology. The two other technologies, mulching and minimum tillage, are currently also being tested. However, grass strips, the first technology which has been selected in the decision support process, has not been implemented yet.

The mapping of the land use types show that the Hannanat area is mixed area of forest, cropland, breeding and fruits plantations.

Work plan 2010

The following activities are foreseen for the next year:

- Case studies: Last Revision of the QT and QA already in the database, base on recommendation by the DESIRE team
- WOCAT mapping: Edition of maps and introduction of attributes in the data base.
- Establishment of a hydrology and rainfall database
- Documentation of new case studies: 1) gullies mitigation, by atriplex plantation; 2) mulch and minimum tillage; 3) assessment of crop rotation

2.2.17. SWALIM – Somalia

Report by Njeru Jeremiah (SWALIM Report 2009-Somalia.ppt)

The objective of SWALIM is 'water and food security for Somalia through informed decisions. 4 aspects are used to achieve this:

- Water and land monitoring
- Water and land assessments/ studies
- Information systems
- Training and capacity building

In Somalia there is currently no clear government, which enhances the risk of land degradation and the risk of overuse of soil and water resources.

Land degradation assessment in Somalia – testing of QM

1) Tested 1st Version of QM – 2007
2) LADA WOCAT backstopping – 2008
3) LUS map developed (Land cover, Land use, Livestock density, Livelihood) – 2008
4) Participatory Expert Assessment (PEA) conducted in Somaliland, Puntland and South/Central - 08/09
5) QM dataset compiled for each unit and LDI and SLMI computed and mapped – 2009
6) Initial dissemination workshops – 2009

Next steps

- Dissemination workshop and engagement of key stakeholders using the QM dataset for Somalia
- Training on WOCAT dataset and Qt and Qa
- Explore possibility to undertake LADA local for selected areas with other partners – UN, NGO, Communities
- Use dissemination workshops to promote other WOCAT / LADA services / tools and datasets

2.2.18. Ethiopia

Report sent by Daniel Danano

- A new web based knowledge management system is under development. EthiOCAT/ WOCAT are adopted as a tool.
- Analyzing data and compiling report of the study on the "Strategy for scaling up best land management practices in the highly populated regions of Ethiopia"
- Write up of the document.
- Documenting of two new technologies:
  - →Vetiver system for land management in west Ethiopia
  - → Agroforestry in south Ethiopia

Next steps

EthiOCAT training on the use basic tools is planned to take place from May 10-16 2010 where about 42 participants from SLM program regions and woredas will be trained.

2.2.19. Madagascar - DERAD

Report by Josoa Randriamalala (Madagascar-wocat.ppt)

Introduction of DERAD

DERAD (Diagnostic Environnemental et Recherches Appliquées pour le Développement) is an association which has been formed by a group of interdisciplinary young researches e.g. geographer, biologists, foresters, agronomist, etc. DERAD's objective is the promotion of sustainable use of natural resources and rural development in Madagascar. To achieve this DERAD makes punctual analysis such as the analysis of the impacts from a pastoral system on the availability of fodder and the impacts of shrub coverage on pasture land on flora diversity in the semi-arid areas.

DERAD is in collaboration with various national and internationals institutions such as: Ministry of Environment and Forests (MEF), School of advanced Agronomic Science of Antananarivo, Water and Forest department, l'ESAPP-CDE et le WOCAT-CDE.

WOCAT related activities in 2008-2009

So far 2 Questionnaires on SLM technologies have been filled, consisting of: 1) Plantations of fodder shrubs in pasture land in the South of Madagascar, 2) Rotation and extension of pasture land in the

South of Madagascar. These technologies have been suggested based on a study regarding the relation of pastoral practices and the diversity of fodder of a pasture area with shrub cover.

The project with the fodder shrubs was submitted to GEF-PNUD by a student association, but the extension of this practice has not yet started.

Work plan for 2010

It is foreseen to make an inventory of practices preserving fodder availability and preventing from soil degradation by using the WOCAT questionnaires on SLM technologies and approaches.

A new project proposal will be submitted to ESAPP about the socio-economic and ecological consequences of sand dune encroachment in the extreme South of Madagascar. One of the objectives of this proposal will be to make an inventory and evaluation about the existing techniques of sand dune fixation by using QT and QA. DERAD hopes for support from WOCAT for achieving the financial support from ESAPP for the next period.

Furthermore, it is foreseen to establish an applied research programme with the objective to identify the most efficient techniques for sand dune fixation in the South of Madagascar. It should result in: 1) a database on technologies and approaches presenting sand dune fixation techniques, 2) profound analysis of the most efficient techniques, 3) experimentations with new techniques. DERAD hopes that WOCAT can facilitate the search for suitable funding for at least one part of the programme. This programme shall be further elaborated in the second half of 2010 with a duration of 2-3 years. 1-2 publications are foreseen as products of this programme.

2.2.20. Erosion-GCES network - France

Report by Eric Roose (E-GCES_EricRoose.ppt)

In 1983 IRD (Institut de Recherche pour le Développement) in collaboration with the 'Coopération Francaise', OSS and GTZ established a multidisciplinary network including researchers, education and development specialists. The network aimed to enhance the information exchange on problems and solutions related to sustainable management of water, biomass & soil fertility.

The heritage of this network was taken up by AUF (Agence Universitaire de la Francophonie) to establish the GCES (erosion – Gestion conservatoire Eau + Fertilité des sols) network. The objectives of the network are to enhance the knowledge sharing between francophone organisation and institutions. The network E-GCES tries to link scientific with traditional knowledge.

The main topics of the network are:

- Soil productivity restoration
- Water management from field to watershed
- Socio-economic aspects of erosion/SWC
- Methodology of evaluation: indicators
- Estimation of erosion risks

The network organises scientific meetings each year in one continent and publishes also proceedings: in Madagascar 2005 on efficiency of GCES in the tropics; Morocco 2006 on efficiency of GCES in semi-arid areas, Vietnam (Hanoi) 2008 on integrated management of soil & water, and Haïti 2010 on efficiency of SWC on tropical soils production and hurricane protection. The WWSM participants are invited to participate in the next meeting in Haiti.

For more information see also www.egces.auf.org (or contact Eric Roose)

Activities in Morocco

From 1998 – 2008 a cooperative research project was established in Morocco by IRD (E. Roose), ENFI (M. Sabir) and the Faculty of Rabat (FLSH), department of Geography (A. Laouina) about traditional systems of GCES, existing in different areas of Morocco. Out of this work a book has been published containing the following sections: general information on soil erosion, 30 technical description & evaluation of groups of techniques in seven ecological areas, and improvements proposed for cropland, grazing land, forests and urban areas.

Discussion:

The suggestion came up, that the data of the Moroccan study/ book could be integrated into the WOCAT database. For achieving this, the case studies would need to be updated. This could be easily done by a student with support from Sabir and Laouina.

2.2.21. IC Pakistan

Report sent by Arjumand Nizami and Munawar Khan Khattak (IC Pakistan.ppt)

- Orientation on WOCAT has been conducted to various stakeholders and within IC in Pakistan
- 1 week training of 20 professional from 10 different organizations in documenting SLM technologies & approaches on standard format (in collaboration with ICIMOD Nepal).
- Documenting of 2 technologies are in process: Check dams and Flood water depth application
- 1 approach under documentation: Participatory approach in soil & water conservation.
- Soil & water conservation related interventions are being implemented in Livelihood Programme - IC areas.

IC interventions on soil & water conservation under its livelihoods programme are:

Promoting construction of gated structure at critical points in up streams areas to improve water conveyance system (diversion structure) - thus increased availability of flood water for irrigation in Rudh Kohi areas.

Low cost field inlets for improved control of flood water (field inlet) in Rudh Kohi area. This means that flood water becomes a resource in dry areas rather than a hazard.

It is generally felt that the ground water level is fast depleting in dry areas such as district Karak due to excessive/unsystematic pumping of water in excess of natural recharge. Therefore IC promotes the construction of small water reservoirs to collect surface water. One such reservoir having a live storage capacity of 246 cubic meters has been constructed to store seepage water and use it for irrigating about 600 kanals of rain-fed land benefiting 60 HH.

IC is promoting containerized nurseries of fruit and forest plants production at HH level with female farmer for increasing tree cover at local level.

IC is promoting planting of fruits and forest trees through dry afforestation techniques such as artificial slope development (roaded catchments) and pitcher irrigation techniques.

Tree production through pitcher irrigation techniques in court yards (arid region).

Homestead vegetable production and tree plantation through Pitcher irrigation techniques (arid and semi arid regions).

Rainwater harvesting for tree production: Promoting creation of artificial slope for rain water harvesting to grow trees in dry plain area like in districts Karak & DIKhan.

Rainwater harvesting for tree production: Roaded catchments techniques are being encouraged in arid areas to promote vegetation in dry areas particularly using those species which have high fodder value.

Construction of bio-engineering spurs to control channel bank & erosion (100 Kanals)

Construction of spur along channel & gabions to retard velocity of stream/flood water and protect soil erosion and human loses (1000 Kanals & 150 HHs)

Water conservation reducing disaster risks for villagers: Kohawar village remained subject to regular flash flood over years with substantial human and material losses. Earthen flood protection bund, together with stone and wire mesh gabions and three spurs of earthen filled gunny bags were constructed. A heavy flood was experienced during end of June 09, in which the village remained completely safe and no damages occurred due to the structure.

Upcoming

- Continue with soil and water conservation in dry areas as well as in hilly areas (e.g. Chitral and Swat)
- Link water (and soil) conservation with disaster risk reduction
- Establish local metrological stations in Chitral and DI Khan for providing data to scientists for technology development
- Develop early warning systems on drought and floods with the help of local knowledge
- Document good practices on soil and water conservation

Presentations of Aboulaye Soumaila, Eric Roose and Richard Fulss (Photos: HP. Liniger).

2.2.22. Discussion & comments

A remark was made by SDC that the presentations of the national and regional reports were badly structured and did not clearly show the progress nor the plans for the next year. The suggestion made was to standardise the presentations of the countries/ regions.

The WOCAT secretariat agreed partly, but also clarified that at this year's WWSM many new people participated, who could not yet show progress and were not familiar with the procedure. Furthermore, for this WWSM, as compared to previous WWSMs, it was decided to include special topics in the national reporting session and to omit the session on special presentations, as it was done before.

A general agreement was made that for next year's progress report session the WOCAT management and secretariat should give clearer instructions about the presentations, including the following aspects:

- The national progress reports should show the progress of the last year and the work plan in 1-2 slides
- The countries should show some highlights of the last year and/or draw attention to highlights of the coming year.
- Presentation of new participants should show clear links to WOCAT and a work plan for the next year should be included, emphasizing major developments/ objectives, etc.
- Financial contributions of the last year and planned/ expected for the next year should be provided at the workshop (not necessarily shown in the presentation)
- The presentations need some common structure (maybe a template for 2-3 slides can be provided) but they should not be standardized.
- The documents (progress reports, monitoring sheet) should be ready before the workshop!

General Discussion

- The WOCAT management and the organisers of the WWSM should clearly define the objectives of the workshop and what is expected from the presentations (MOR)
- If the country presentations on progress are too focused and standardised there is no need to expose or meet. The idea is to facilitate the exchange for sharing of experiences and new ideas/ developments.
- During UNCCD-COP in Argentina there was recognition by many countries for a wider use of LADA/WOCAT tools. Align these tools to needs of countries for national reporting.
- It was not obvious how the workplans of the different partners fit into the WOCAT global workplan. Furthermore it was mentioned that probably it needs a framework or structure at a higher level for coordination and implementation.
- Information and transparency is needed on what WOCAT is doing in terms of distribution and synthesis of information for wider uptake

Presentations of Jamal Al Karkouri, Kanysh Nurymgereyev and Hubert George (Photos: HP. Liniger).

3 STEERING MEETING

Rapporteur: Gudrun Schwilch

3.1. Global activity plan 2010

3.1.1. CDE

1. Knowledge about SWC and SLM

- Finalize TerrAfrica publication on best SLM practices in the first half of 2010.
- State of the World Land and Water Resources (SOLAW): compilation of chapter 5.1 on halting land degradation for food security.
- DSD (UNCCD): finalizing White Paper for working group II and publish article in 'Land Degradation and Development' journal.
- Support and review the best practices documentation in the 6 LADA countries.
- World Atlas of Desertification (and improvements) (WAD): initiate proposal for selected countries e.g. Mongolia, Argentina, Iceland, Senegal?, China?, etc.
- Pursue global map of SLM: for WAD and BIP2010 (for UNCBD in collaboration with FAO)
- Up-date the database case studies and further populate the databases with good quality data.

2. Tools and method development

- Finalize the new WOCAT homepage and Internet platform, including an interactive communication forum as well as an image database and documentation database.
- Finalizing tools development: on-line QT/QM databases, continue work on off-line version
- Develop training kit for QM, QT, QA: manuals, presentations, videos, etc.
- Test workshop for interactive map data entry/ editing tool.
- Finalize and testing of watershed management module
- Further develop local Decision Support Tool (improve DESIRE tool)

3. Information sharing and networking

- Support implementation of country and TF workplans with official WOCAT letter to partner institutions
- WOCAT Management meeting (CDE, ISRIC, FAO) and monthly Skype conferences
- Development of funding strategy and business plan
- Participation in the preparation and training of regional training centres for LADA/WOCAT tools
- Further enhance the WOCAT network and provide active support, backstopping and e-mail communication with a special focus on further promoting WOCAT in Central Asia.

4. Research, training and education

- Meetings/conferences in 2010:
  - LANDCON, 11-15 October 2010, Xi'an City, China
  - WAD meetings
  - launch SahelCAT
  - ISCO Chile, 8-11 November 2010.
  - Haiti, 1-5 March 2010

- Training:
  - Conduct training for trainers on QT/QA, QM, QW? (after the tools + databases are finalised)
  - WOCAT training workshop Mongolia, May/ June 2010
  - National training Senegal (January/ February 2010) and regional workshop March/ April 2010

  - Kagera Training-Workshop: Rwanda, Burundi, Tanzania, Uganda (River Basin) on LADA-WOCAT tools
  - Participation in the preparation and training of regional training centres for LADA/WOCAT tools

- Education:
  - 3 day field course for MSc students about SLM in April 2010
  - Supervision of various MSc and BSc studies related to SLM

5. Basic enabling activities at the global level

- Facilitate taskforces on mapping, decision support, watershed module (and impact monitoring)
- Secure new and continued funding through the development of a financial strategy.
- Support implementation of country and TF workplans with official WOCAT letter to partner institutions

Challenges for 2010

It is essential that the WOCAT tools and methods are consolidated and the new webpage running. The next year will be crucial for the future of WOCAT. The collaborations with FAO-LADA, UNCCD, GEF and other global players must be further strengthened and more efforts have to be made in promotion and funding of WOCAT.

For more information see also Annex 5.

3.1.2. FAO

Report by Sally Bunning

Develop strategy and business and operational plans to help mobilise resources for scaling up of LADA-WOCAT–DESIRE methods, tools and enhanced networking. A WOCAT management meeting shall be held in Rome in January 2010, also to introduce WOCAT to other FAO divisions.

LADA country teams trained in i) LADA Local toolbox with attention to degradation and improvement and ii) LADA-WOCAT tools for assessing and mapping LD and SLM at sub-national level. A further contract between LADA and WOCAT shall be established to provide assistance for the LADA pilot countries in the local and national assessment.

Peer reviewed LADA publications on local and national assessments.

Best SLM practices reviewed nationally and published by LADA countries based on the WOCAT standards.

Raise awareness of and potential use of LADA-WOCAT-DESIRE tools by development partners and projects: through 1) symposium/ WWSM 2010 in Central Asia including major donors, global key players, etc. 2) development of policy briefs on the use of LADA-WOCAT-DESIRE tools, 3) distribution of tools, etc.

Publication on SLM in Sub-Saharan Africa for TerrAfrica/SIP: Review of draft sections and fact sheets, etc.

Global assessment of the indicator "extent of areas of agroecosystems under sustainable management", in support of UN-CBD and UNCCD

Report by Hubert George (H_George2010BIP.pdf)

A brief introduction was made on FAO's participation in the 2010BIP-project (GEF supported) in the development of several indicators identified by CBD. FAO will facilitate/ coordinate the delivery of indicators and analyses by various organizations.

One of the indicators within BIP2010 will be the 'area of agricultural ecosystems under sustainable management'.

WOCAT was approached in 2009 to contribute to the indicator about the 'area under SLM'. As discussed during the workshop in Morocco and earlier at the LADA workshop in Kenya, this would be based on the LADA/ WOCAT national mapping questionnaire with appropriate modifications; the on-line tool currently being developed by WOCAT could be adapted to meet these needs. Regional networks (with national

focal points) (DRYNET, WOCAT, AGRHYMET, etc.) could contribute expert knowledge to compile the map.

The foreseen steps within this project are:

1) Development of a prototype on/off line SLM data-entry and mapping information system specifically adapted to the assessment of the CBD indicator "extent of agroecosystems under sustainable management

2) Training workshop and 'field' testing of the data-entry system in a number of select WOCAT countries where there is high interest (e.g. SAHELCAT?). It would be ideally if the training can be linked to the LADA regional training centres.

Funding for these activities will be accommodated mainly under the regular programme of FAO, the budget for which is under discussion (approx US$ 50,000 could be made available to cover the above activities). Of course additional funding related to the outcomes of CBD-COP10 in Japan next year (e.g. possible extension of the BP2010 project) is still an open question at this time.

Discussion

WOCAT is very interested in contributing to the BIP2010 global map of SLM. One of the major objectives of WOCAT was (and is) to produce a global map showing the extent of SLM. But due to the difficulty of this task and limited human as well as financial resources this could never be realised so far. Now, with the BIP2010-project but also with the involvement in the World Atlas of Desertification (and Improvements) this would be a unique chance for WOCAT.

The question came up what will be happening after the end of the LADA-project in 2010. → LADA should still be ongoing and the tools and methods used in other countries. Regional trainings will be conducted in 2010 in order to approach more countries around the LADA pilot countries.

→ Long term vision of LADA is to have regional capacity building centers that will train trainers how to use the developed methods and tools to show impact of SLM

3.1.3. ISRIC

Report by Godert van Lynden

Tasks in coming year

- Continue in WOCAT Management Team (to be decided by the Steering meeting!);
- New collaboration agreement / MoU with CDE;
- Cont'd WO-co-co-ordination, mailing list, newsletter; PR activities and funding issues;
- Enhance and encourage use WOCAT QM in DESIRE and (G)LADA projects (e.g. WB project Turkey);
- Enhance use of (and : "internalise") WOCAT in Green Water Credit project;
- Explore linkages between WOCAT mapping (QM) results and GLADA in LADA partner countries;
- Contribute to training and backstopping where required, esp. in mapping;
- Investigate Use of WOCAT? (Involve students?).

NB: realisation of these tasks is strongly depending on available funding in the coming year. So far part of the DESIRE funds could be allocated for (DESIRE-related) WOCAT activities but as DESIRE activities by ISRIC will decrease this year, significantly less funds can be allocated from this source.

3.2. Funding

Secure new and continued funding: new and old donors (UNCCD, GEF, UNEP, SDC, FAO-LADA, etc.) shall be approached. Ideally a part of newly funded projects should be budgeted/ assigned for Knowledge Management and for global WOCAT and the secretariat.

A new WOCAT funding strategy shall be developed by the WOCAT management team and submitted to SDC. The strategy should also include how new donors should be approached in order to diversify the donor support to WOCAT.

A clear proposal shall be submitted to FAO, SDC and/or other donors to support specific products or ideas. It is often easier to 'sell' a certain product than to search for funds for the whole programme.

For 2010 it is important that the WOCAT core funding can be enhanced since the WOCAT management and secretariat has more and more activities and tasks to handle and fulfil. Therefore, WOCAT envisages enhancing the number of people working at CDE in Bern to at least on more full-time position.

Funds foreseen in 2010

A new letter of agreement is foreseen with FAO for the compilation of a chapter of the next State of the World Land and Water Resources (SOLAW). A contract with a financial contribution of USD 32'000 shall be signed in January 2010.

Within the TerrAfrica contract the second and the third payment can be expected in 2010. However, the main part of the TerrAfrica budget has already been used in 2009, and has lead to an negative balance in 2009.

Estimated core funds 2010

Donors	**Funds promised**		**Targeted funds**
	in CHF	**in USD**	**in USD**
SDC*	432'000	401'000	
FAO - LADA		16'000	???
FAO - SOLAW		32'000	
SDC Mongolia		25'000	???
TerrAfrica		75'000	
Climate change proposal			???
GEF-Proposal			???
Others?			
Estimated budget required for 2010			
	~600'000	~550'000	
* Contract 1.1.2008 - 31.12.2011: Funds/year = CHF432'000			

3.3. Donor Contribution

Report by Yves Guinand, SDC

WOCAT is part of the global programme on food security of SDC. Due to the reorganisation of SDC in 2009, SDC could not be very active in supporting WOCAT in fundraising. All visions and aims with respect to fundraising still remain, as they are compiled in the last workshop and symposium proceedings.

For SDC a major concern is still the diversification of WOCAT funding. For achieving this WOCAT needs to elaborate a business plan. WOCAT is at a very crucial point providing excellent tools but which need to

be further spread and promoted. The question is how to scale up the WOCAT tools. It needs further lobbying for getting the right institutions involved to get the big partners on board such as the World Bank and UN.

SDC received very positive feedback from the COP9 in Buenos Aires and has noticed that WOCAT is integrated in UNCCD, but there are also other UN-conventions, e.g. UNFCCC, UNCBD, etc. which should be approached by WOCAT.

How to go on? SDC offers and would be willing to help finding other donors.

Discussion

The remark was made that the topic donors and funding is always difficult. However, now WOCAT is in another position and may be able to contact other big donors, but only with help. Also bottom-up requests to donors from countries are a solution to get more funds.

→ concerns about bottom-up funding were raised since WOCAT is not enough known to start at the local level, a top-down approach is needed like the current involvement with UNCCD. WOCAT should strike roots in the structures of big donors. Furthermore, WOCAT needs to be institutionalized at national level and streamlined into projects.

→ WOCAT/LADA methodology should become more visible and known, a kind of reference/ standard tool in the domain of SLM and knowledge management.

WOCAT should seek new funding opportunities also within FAO, e.g. emergency programme of the FAO for post-emergency activities.

The suggestion was made to employ a further person at CDE for management and fundraising tasks of WOCAT.
→ general agreement, but problem of funding additional person (chicken/egg!)

Involve SDC in fundraising activities and invite also Hans Hurni (CDE), Coen Ritsema (Alterra/ DESIRE) and the new ISRIC director (Prem Bindraban) to a coordination meeting.

The question came up 'who is a real customer of WOCAT' and if there is a survey on the use of WOCAT.
→ There are several tools available which could be used (or are already used) to survey the use of WOCAT such as the website statistics, monitoring sheets, etc. However, a real monitoring has not been made so far and the question remains how to thoroughly monitor the use of WOCAT exactly.

3.4. Organisational issues

3.4.1. Election of global management, assignment of secretariat

Global Management

- CDE: Hanspeter Liniger (global coordination; secretariat)
- ISRIC: Godert van Lynden
- FAO: Freddy Nachtergaele, Sally Bunning

Secretariat: CDE as the institution to continue hosting the secretariat

Discussion

It was suggested that the WOCAT core group should be more open to involve young people and more institutions.
→ A small group is needed, and often institutions from the national/ regional level are not able to offer enough time for global management duties.

The question about FAO's contribution was raised
→ FAO's contribution has improved in the last 1.5 years especially also through the LADA project. It would be important to build up a core team of people at FAO and ISRIC involved in WOCAT, like it is maintained at CDE.

3.4.2. Next WWSM

The suggestion was made by Hanspeter Liniger that the next WOCAT meeting and workshop should become a special event e.g. a symposium on experiences and opportunities for mainstreaming /scaling up of LD/SLM assessment at international, regional and national levels. More major programmes and donors should be invited and attracted to get them considering the role of WOCAT tools for their programme (GEF, UN, Development banks, DANIDA, GTZ; etc.)

Central Asia (CACILM), Niger and Mongolia offered to host the next WWSM and/or Symposium in 2010. It has been decided not to make an election and to leave the decision this year to the global management.

The WOCAT Management Team has meanwhile decided to accept the offer from Kyrgyzstan for the following reasons: strategic regional interest, very new SLM environment, and the opportunity to further promote and establish WOCAT in Central Asia, should help to create synergies, strengthen collaboration and harmonize activities between different players. Furthermore, Central Asia has already offered to host the WWSM in previous years. Mongolia and Niger are highly welcome to make their offer again for the workshop in 2011.

An offer was made by FAO to host a management meeting early next year in FAO Rome to discuss the process of up-scaling LADA/WOCAT tools and methods, funding, and to discuss and further about the next WOCAT workshop. Furthermore the meeting would give the opportunity to present WOCAT/LADA/DESIRE tools also to other FAO divisions.

For the coming WOCAT workshop it was originally foreseen to start with an open symposium (similar as it was done in Switzerland) in order to bring together various international donors, organisations and institutions and to actively involve participants in developing the way forward. However, during the meeting in WOCAT management meeting in Rome it was decided that there would be a better chance of involving such parties during a major on-going event like the UNCCD CRIC meeting (Bonn, June 2010) rather than expecting them to travel to Central Asia. The WWSM would still take place in Kyrgyzstan and it is still foreseen to invite local representatives of major donors and other interested institutions active in Central Asia. The dates for the WWSM were tentatively set at 27 September – 2 October 2010, but the WOCAT management team has decided to postpone the next WOCAT workshop and steering meeting to the first half of 2011. The reasons for this decision are limited WOCAT budget, time constraints, ambiguity about the host and more time to prepare for new funding proposals, etc.

Host: not yet definitively decided, Bishkek, Kyrgyzstan

When: Mai/ June, 2011, date not yet know.

Next WWSM/ symposium will be announced on the WOCAT website as soon as the location and date has been fixed.

3.4.3. Feedback from participants

A short questionnaire was distributed to compile feedback from the participants. Here a short list of remarks made by the participants.

Database and Tools

- Tools to be used on modular basis by countries and platform
- Systematic tool to record analyse and share info on NRM
- Continue to add to databases on QT and QA (PR) and QM
- E-network is best instrument, can make better use of this tool
- Toolkit for standardisation certification and training in country
- On-line discussion forum

Management and Public relations

- Collect SLM and post and link with SLM programmes
- Do more in promotion of WOCAT methods and tools
- Mainstream WOCAT in country ministries: PR information, impacts of SLM and show that it pays to invest
- Better share responsibilities and tasks among management team
- Expand management team - split responsibilities of MGMT and Secretariat
- More permanent network in countries. Create a regional SahelCAT

- Core activities less ad hoc (define deadlines, budgets, responsibilities)
- Discuss country year plans
- Cooperation with ROSELT
- Share technologies for fact sheets, meetings, workshops
- Rethink WWSM to make it more interesting to partners Invite donors
- Emphasis on TF was useful- summarise results allow participants to come in more easily
- Sponsorship for WWSM should depend on individuals inputs commitments to WOCAT activities
- Policy briefs by management on use of LADA/WOCAT products
- Use of survey monkey for feedback

Funding

- More core funds for PR and more professional management
- Funds for digital tools
- Person for developing WOCAT in Switzerland
- Annual funding for countries (not project based)

Training

- Integrate in universities and technical schools
- Training on QM practical mapping
- Involve country expertise in trainings

3.4.4. Any other business (AoB)

ISCO Conference

The 16th Congress of the International Soil Conservation Organization will be held from 8-13 September in Santiago, Chile. For more information refer to ISCO-Chile.

LANDCON 1010 Conference

The First Plenary Meeting of World Association of Soil and Water Conservation and the International Conference on Combating Land Degradation in Agricultural Areas (LANDCON 1010). The conference will be held in Xi'an City, Shaanxi Province, China from October 11th to 15th, 2010.

Themes of the meeting will be:

- Situation and evolution of land degradation
- Mechanism and driving factors of land degradation
- Control measures of land degradation
- Evaluation of land degradation and land management on environment
- Land degradation and regional social-economic sustainable development
- Effect of global change on land degradation

Impressions from an excursion to the medina of Fes (Photos: HP. Liniger).

WOCAT – DESIRE SYMPOSIUM

Assessing benefits of SLM – Key for success
L'Évaluation, clé de réussite d'une politique de gestion durable des terres

Moderator: Gudrun Schwilch

Editor symposium proceedings: Simone Verzandvoort

Welcome and opening statements

Prof. Abderrahim Benhadda, Dean of the Faculty, Université Mohammed V-Agdal, Rabat, Morocco

Representative of the University, the Agriculture Department, the Forest Department, Morocco

M. Benhadda welcomes the representatives of the university Mohammed V, and the DESIRE and WOCAT networks. He is honoured to be able to open this symposium of relevance to national politics concerning the management of natural resources. Geographical research is a core activity of this university and more widely in Morocco, being at the basis of sustainable land management. The UNESCO-GN Chair has played a catalyst role for the spread of information and research on sustainable land management (SLM) in Morocco. This symposium offers the possibility to connect the work of the WOCAT and DESIRE networks in Morocco, in correspondence with the work of the national forestry school. At the same time it is an encounter of the human and environmental sciences. M. Benhadda thanks all institutions and persons who have contributed to the symposium.

The permanent Secretary of the Academy of Hassan II of Sciences and Technologies

The permanent Secretary of the Academy of Hassan II expresses pleasure to participate in the symposium. The theme chosen is of great interest, because of the importance of agriculture and the mobilization of researchers and experts at the international level, to discuss questions on sustainable land management, political routes for natural resource management, particularly with regard to agricultural land, with the final aim to improve agricultural productivity while safeguarding natural resources. This is an excellent opportunity to handle political questions on sustainable land management.

Science and research have an important role to play in addressing problems with the management and fertility of agricultural land, with land degradation and desertification. This has to do with the management of soils, agricultural land and water. The implementation of SLM strategies can support these efforts. The approaches presented should also address the difficult components of the systems, and appropriate techniques for the settings concerned.

Scientific knowledge is essential in this respect for two reasons: firstly to design and implement measures, which take account of economic and social aspects of the societies concerned, and secondly to address environmental consequences for ecosystems. Social acceptation should also be assessed in economic cost-benefit analyses.

Research can help to quantify the results of integral political choices for the exploitation of the land. Environmental technologies function as an engine for land management in general. However, social aspects must be considered, including the social feasibility of implementing new technologies, in consultation with actors involved.

Current problems with land management and water resources cannot be solved by research alone. A system of rules and directives is required, following axes of research and themes. The effects of climate change selected by the Academy, which refer to terrestrial ecosystems, will guide this development. The Academy will consider the results of this symposium for further action with great interest.

The Representative of the Haut Commissariat des Eaux et des Forêts

Degradation in dryland areas is experienced to a large extent in Morocco, with longer periods of drought, poor soils, and increasing needs of the population. Morocco has performed actions to combat these phenomena for a long time, also with respect to conservation of forest areas. There is a lot of experience and results, but the conclusion is that degradation continues. This is illustrated by the extending area of degrading land in the Atlas and Rif mountains, eroding terrains and the siltation of reservoirs. This symposium is a perfect occasion to discuss these problems and to find solutions.

Morocco ratified the UNCCD in 1996. The country has programs to protect forests, and a strategy for integrated basin management. About 60.000 ha is annually treated per year in the national program. The Haut Commissariat develops programs to model and quantify soil erosion, to develop indicators, and to develop methods to mitigate land degradation. Apart from that, there is international cooperation, which again strengthens human capability, the scientific potential of the country. The Commissariat has partnerships with research institutes. In 2007, a platform for institutional collaboration on sustainable land management was opened.

Dr. Hanspeter Liniger, WOCAT Coordinator, Centre for Development and Environment (Switzerland)

Dr. Liniger thanks the organizers of the symposium for the invitation. He considers the main aim of the symposium to join forces, to advance SLM, to collect information and to improve our understanding of degradation and conservation. SLM practices are there to learn from them, and to make them available to potential users.

WOCAT is a network of soil and water conservation specialists, started in 1992, with the mission to join forces that different people work together. WOCAT provides a methodology to exchange knowledge and experience, and to use experience for better decision making. The recent annual meeting of the WOCAT network took place in Ifrane last week. The focus was on developing tools usable by different types of professionals. WOCAT's mission is to define a common activity and to share and exchange information on SLM, as an alternative for the wide range of separate projects and programs running on land degradation and sustainable land management. SLM is central not only to people living on the land, but to all human beings. The importance of SLM was successfully conveyed in the recent meeting of the UNCCD.

Prof. Coen Ritsema, Coordinator of the DESIRE Integrated Project, Alterra (The Netherlands)

Prof. Ritsema thanks the dean and the organizing institutions for inviting the DESIRE consortium in Morocco. The DESIRE project was submitted by a large number of partners from all over the world. It is a scientific project, funded by the DG Research of the European Commission. One of its aims is scientific innovation, but at the same time the project is oriented towards solutions.

The DESIRE plenary meeting in Morocco will give the consortium the opportunity to learn this week from the Moroccan colleagues about the problems and solutions to land degradation and desertification in Morocco. Prof. Ritsema expects that the symposium will join forces between WOCAT and DESIRE, thus benefiting many others. WOCAT is a long lasting initiative, DESIRE a new comer. The WOCAT network, tools and methodologies are embedded in the DESIRE consortium.

Prof. Ritsema thanks the organizers for the effort to organize these two meetings, thanks the authorities for their support, and wishes a fruitful meeting to all participants.

Opening statements and welcome speeches (Photo: Ch. Hauert).

3.4.5. Key note lecture

Sustainable Agriculture in Morocco and the Mediterranean area

Guillaume Benoit, General Council of Agriculture, Morocco (GBenoit.ppt)

The lecture of M. Benoit addresses sustainable agriculture in Morocco in relation to the Mediterranean. The agricultural sector concerns more than the producers alone. It forms the link between the civil society and the environment. The vision of the General Council of Agriculture is to move from conventional agriculture to sustainable agriculture.

Recent developments in agriculture include the development of new knowledge in the encounter of agriculture and environmental issues, a new focus on cities situated in agricultural areas, and short circuits between cities and peri-urban agriculture. Finally there is the upcoming of a green economy versus the conventional economy.

The reasons for change include the reconsideration of biophysical and economical resources, the rising costs of energy, new demands from societies, technological innovation, and the political focus on sustainability.

The Mediterranean

The Mediterranean is an area with a traditional backlog due to its mountainous character. It has known a demographic rupture, with an enormous population growth since 1600, mainly in the southeastern part. It nowadays suffers from a problematic explosion of urban areas.

Agriculture is an important sector in the southeastern part. It uses a large part of the available freshwater resources (83%), with heavy impacts on the environment. Agricultural systems are characterized by the limited use of irrigation, a large variety of production systems, and the importance of pastoralism.

Problems of the Mediterranean include marginalization and overexploitation of the hinterland. Other problems include the overexploitation of water resources, decrease of groundwater levels, desertification, fires, and droughts. In the period from 1950 till 2050 30% of the freshwater resources is estimated to be lost for societal use. In the plains along the coasts and rivers there is competition for land, urbanisation, salinization, inundations, and a retreat of agriculture. There is a tendency to a rental economy. At the same time the Mediterranean is characterized by a large natural, cultural and agricultural diversity.

Morocco

Morocco has 5 large ecosystems: the mountains, the Saharan oasis, the semi arid region, the favorable 'bour' (rainfed agricultural areas), and the large irrigated agricultural areas. 80% of the population, 66% of the agricultural area and 70% of the agricultural enterprises is located in the first three zones, with difficult environmental conditions for economic activities.

The plan 'Maroc vert' (Green Morocco) aims at providing irrigation over a million acres for a million agricultural enterprises, and professionalizing smallholder agriculture, by initiating a new agricultural policy. Morocco has 1.5 million exploitations in 3 main categories: 'circuits marchands', 'bancables/PMEA' and micro-exploitations.

Vision on sustainable agriculture

The vision on sustainable agriculture of the General Council of Agriculture includes:

1. The professionalization and structuring of the smallholder agriculture in the southern and eastern part of the country
2. Adaptation to climate change and water shortage
3. A new peri-urban agriculture, with valorization and protection of agricultural land, development of a system of agro-chains
4. A sustainable form of agroforestry and pastoralism, not only aiming for production, but also for environmental services and public goods. This requires plans for progress, contracts, the settling of use rights and obligations, the integration of land use functions, and multifunctional performance of agricultural enterprises.
5. Enhancing the dynamics of agricultural areas ('terroir'), by valuing specific new markets, quality products and services, tourism, crafts, and local communal relationships.

Conclusion

The Mediterranean and Morocco in particular are vulnerable environments, demanding for new contracts between the agricultural sector and societies, founded on innovations.

Questions

Abdellah Laouina: smallholder agriculture received much attention in your lecture. How can the large scale agriculture become sustainable? Response: the large scale agriculture can bring innovation to the smallholder agriculture.

Rachida Nafaa: will there be a social arrangement for the strategy presented? Response: M. Benoit recognizes that there are obstacles to the implementation of the new policy, but mentions several examples of international strategies in the Euro-Mediterranean zone, directed towards social stability and food security and safety.

3.4.6. Assessing Benefits of SLM within WOCAT and DESIRE

WOCAT - Network and tools for assessing the benefits of SLM

Dr. Hanspeter Liniger, Coordinator WOCAT, CDE Bern, Switzerland (HPLiniger_WOCAT.ppt)

The adagium of WOCAT is to move from degradation to SLM: away from researching degradation, towards sustainable land management (SLM). Land by definition includes soil, water, vegetation, animals and people. SLM (according to the UNCCD definition) is land management in such a way to maintain and improve ecosystem services for human well being, as negotiated by all stakeholders.

There is much experience in SLM that is not being used. The mission of WOCAT is to use and share this experience. The focus of research and actions in SLM thus far has been on soil erosion. We must think much more about biological degradation and water degradation.

1. Why assessing benefits?

Hanspeter Liniger shows SLM examples from the WOCAT book 'Where the land is greener' and from the DESIRE Integrated Project. WOCAT has many examples on crop land, but less on grazing land. We should build on this knowledge, not only that coming from research or projects, but also directly from land managers. Furthermore we should not repeat mistakes, recognize complexity, understand local fine tuning, and use assessment for spreading SLM. But the knowledge so far is still fragmented, not systematic, and there is no mapping of the spread of SLM practices. There are a lot of reports coming out on success. But how can we access this knowledge, and compare between the different systems that are presented? Therefore we need standard methods and tools.

2. Standard methods and tools

WOCAT provides standard methods and tools at 2 levels: SLM technologies and approaches and mapping. The standardized documentation for SLM strategies provides a standard format for categories of information on SLM strategies, e.g. environmental setting, impacts, strengths and weaknesses.

SLM approaches embody what was needed and is behind the technology to implement it. Examples are training, initiation by the government, or spontaneous spread from farmer to farmer. Or an incentive based catchment treatment.

A lot of examples of documentation are coming up from China, from Nepal, ICIMOD, Bangladesh Ethiopia, S Africa, and Mongolia, but we need more examples. Apart from national books, WOCAT provides information through the internet. The people providing the information are the owners of that information.

Mapping is necessary to document spatial relationships in the landscape affecting SLM strategies. Upstream situations have impacts on downstream settings. Mapping of degradation and conservation may help to design catchment approaches to SLM, to estimate off-site impacts, and to decide on where to invest in SLM.

3. Use of monitoring and assessment for decision support

Providing decision support on SLM falls back on the questions: which SLM technology and approach to choose, where, at which costs, which are the impacts? Will they alleviate poverty? The first question is: when to intervene? To maintain a productive situation means prevention of land degradation. Intervention in the next stage comes to mitigation or cure, and at the final stage rehabilitation. Inputs needed to reduce degradation increase with the stage of declining productivity and increasing degradation.
The WOCAT database of technologies and approaches is easily accessible in Google Earth: there are 51 countries with case studies on 241 technologies and 137 approaches.

Decision support for selecting SLM practices using the WOCAT-DESIRE methodology consists of three stages: identification (this uses a participatory learning approach), assessment (this uses the standardized questionnaires for technologies and approaches) and selection (in a participatory setting).

The standardized tools provided by WOCAT are well tested and introduced in numerous countries and contexts, for example within the LADA and DESIRE projects. The tools are freely available in different languages.

4. Research challenges

There are several challenges to research on SLM. Firstly there is little information on the areal extent of land degradation and improvement. Therefore satellite images and ground truthing are needed. Likewise, we know little about where SLM practices have been applied, and what their impacts are. A current example is: can we assess effects from mulching on water loss in dry areas? Continued monitoring and modeling of time sequences of phenomena of land degradation and improvement is required to provide scientific evidence of these phenomena, e.g. by recording water stages and tracing influences of land use. Also, improved knowledge on costs and benefits of SLM is needed. With regard to adaptation and innovation processes, we should know more about how people take up information on SLM strategies. In any effort to implement SLM strategies, we should try to connect implementing agencies, and always look for combinations of ministries, universities and projects. Finally, students can play a vital role in research on SLM.

5. Global issues

Global issues of concern nowadays are poverty, land productivity, and carbon and climate change. The necessity to adapt to climate change in many parts of the world provides a key topic to learn from experiences in SLM: how tolerant are SLM practices to increased temperature, heavy rainfall events, prolonged droughts?

6. Conclusion

There is a wealth of knowledge on SLM. There are existing and proven methods and tools. We need good data but are lacking resources to get these. The way forward entails WOCAT to become a platform, to join forces for the benefit of SLM, like the collaboration between DESIRE, LADA and WOCAT, and mainstreaming in ongoing programs.

Questions

Is there information on the period of investment to wait for benefits? Response: in dry areas the possibility to increase water use efficiency and fertility immediately shows results in crop yields. In wet areas, where you are already at maximum productivity which is declining, it may be more difficult to prove return on investment.

DESIRE – A methodology for selecting and assessing land management strategies to remediate degradation and desertification

Prof. Coen Ritsema, Coordinator DESIRE, Alterra, Wageningen University and Research Centre, The Netherlands (CRitsema_DESIRE.ppt)

DESIRE is a large integrated project funded by the European Union (Directorate General Research) within the 6th Framework Program (FP6), and co-funded by national governments. DESIRE is a scientific project and therefore different from projects through EuropeAid, which are more development driven.

What has been done in the past to remediate desertification? In the past 10-15 years at least 40 large international research projects have been executed related to land degradation, desertification and SLM in the EU and in Northern Africa. Relatively few projects were devoted to remediation and prevention of land degradation and desertification, and to information exchange. DESIRE was initiated in response to this deficiency. 26 partners are involved, from 16 countries in the world. The partners have different backgrounds (universities, research institutes, governmental departments, NGOs), expertise (e.g. earth science, geography, eco-engineering, economy, communication science), facilities (GIS, remote sensing, experimental farms, laboratories, knowledge and database platforms) and approaches (technical, social, political, economic).

The main aims of DESIRE are to develop and test promising land use and management strategies to prevent and remediate desertification and land degradation in 16 hot spots in the world, in close collaboration with stakeholders, and to disseminate results through a harmonized information system.

DESIRE intends to achieve scientific innovation, and to have impact and outreach at different levels of society. There are 16 different sites with different problems, ranging from water erosion, salinization, forest fires to overgrazing. DESIRE is built on 6 working blocks: 1. context setting, 2. estimating risks of desertification, 3. identifying, documenting and selecting most promising strategies, 4. testing strategies in the field, 5. regional assessment of strategies, and 6.disseminating project results.

The scientific innovation in working block (WB) 1 consists of mapping all study sites using an updated and improved LADA-WOCAT mapping procedure. The work results in maps of the current state of degradation and conservation, which can be compared between sites. The scientific innovation in WB2 is the development of an extended indicator-based risk analysis tool to be applied in each of the study sites, developed in a previous EU funded project. The tool has been expanded to address the desertification problems in areas outside the Mediterranean. The scientific innovation of WB3 is the development and application of a participatory process for the identification, sharing and negotiation of sustainable land management strategies. The methodology builds a.o. on the WOCAT framework of SLM technologies and approaches. The scientific innovation of WB4 consists in the execution of field trials to test the biophysical and socio economic effects of technologies and approaches selected by the stakeholders in the study sites. This will hopefully lead to success to combat desertification with benefit for local livelihoods. WB5 is innovative in coupling a multi-scale biophysical model to an economic model to evaluate effects of technologies and approaches regarding degradation and desertification, and to perform costs benefit analyses. This results in a tool to assess the potential of technologies and approaches on a wider scale. In WB6 results are already being disseminated using a harmonized webbased information system. Messages to stakeholders are presented at three levels of complexity.

Apart from the local and regional levels, DESIRE intends to address the national level by linking results from WB4 and 5 to UNCCD National Action Plans, and to advise national focal points how to adapt and improve NAPs according to stakeholder needs. DESIRE will initiate proposals with national focal points and governments for wide scale implementation (GEF, IFAD, UNEP). At the international level DESIRE actively promotes the LADA-WOCAT-DESIRE method as a tool to contribute to achieving aims of the UNCCD 10-y strategic plan.

Questions

- What is the importance and the representativeness of the sites chosen in the project? They are small and vary widely between them.

  Response: selection of sites has been done by partners in the joining countries based on their experience. Indeed we are working in small areas, however some are larger, and we realize that it is only a selection, not aiming to represent all forms of land degradation existing in the world. Still, we are trying to grasp parts of these in different places in the world.

3.4.7. Making use of SLM assessments at the local level

The cork oak assisted regeneration versus other forest techniques

Abdellah Laouina, Miloud Chaker, Mohammed Aderghal, Rachida Nafaa, Jamal Al Karkouri, Mostafa Antari, Issam Machmachi, Yousra Laghazi, et Nadia Machouri - the Moroccan DESIRE team, Chaire UNESCO-GN, Rabat (ALaouina_MoroccoDESIRE.ppt)

The presentation gives examples of assessed SLM technologies and approaches trialed in the Moroccan study site in the DESIRE project. The problem of land degradation is that a rapid retreat of the cork oak forest occurs, with a reduction of the vegetation cover, non-regeneration of cork oak, and the increase of poor species. There are several techniques to reduce forest degradation. An example is forest protection and management to reduce the pressure on the forest, and to plan the use and exploitation of forest resources. This could be done by dividing the area in squares. Still, the cork oak appears not easily to regenerate. Another technique used is the plantation of exotic fast growing species like pine and eucalyptus, to improve the wood yield. But this can have negative impacts, like runoff generation. Another option is to regenerate cork oak assisted plantations in degraded areas. The benefits include assured regeneration and improved yield, and reduced land degradation, by the decrease of runoff. The plantation was a success, but after 10 years, the growth of the trees was hampered due to the competition with cistus shrubs. After 5 years, the cover with grass species becomes important.

Assessment of the techniques was made by comparison of various covers and degrees of grazing, and no intervention, using different degrees of vegetation density. As indicators were used the density of trees, shrubs, herbs and litter. In the rainy year of comparison, herbaceous, perennial and annuals are

better represented. Biomass and diversity of species were also used as indicators. In the regenerated plots the herbs and shrubs are important. Opening the plots to grazing leads to the decrease of the density of herbs. The trials with pine and eucalypt were the poorest in producing fodder. Opening to grazing lead to an increase of unpalatable herbs. The density of shrubs and herbs increased in the natural forest with the number of trees. Also penetration resistance was measured as a function of the degree of pasture. The penetration resistance increased with the level of grazing. Soil humidity after rain was lower in the plot open to grazing, partly due to less infiltration, also due to a larger use of water by shrubs. The infiltration curves are lower in grazed plots, and comparable to infiltration characteristics of bare soil. The grazed plot produced more runoff than the protected soil during rainfall simulations. Overall, it could be concluded that the pressure on the forest by grazing leads to less density cover, a lower quality of the cover in terms of producing wood and fodder, and a larger sensitivity to rain intensity, more runoff and less infiltration. The regeneration of cork oak appeared to be a more interesting technique compared to the planting of pine and eucalypt.

Socio-economic assessment

A constraint to the implementation of SLM strategies in the cork oak forest is that the forest belongs to the state, and that the inhabitants are considered as users with limited rights. For the population the most efficient management is the assisted regeneration, but its implementation is limited due to the costs and the need to open grazing areas elsewhere. The results of the assessment were not sufficient to orient a solution.

Conclusion

In the region, the main constraint to livelihoods is the availability of fodder for livestock. The forest provides an important part of the needs as long as it is well managed. Degradation of the vegetation cover leads to less income (cork, fire wood, fodder) and at the same time to less stability of the land.

Questions

- What is the economic rentability of cork oak? And is eucalypt usable in catchments as an SLM strategy, knowing that it is water consuming?

  Response: cork oak is a high income production in this area, at the same time it provides wood. Cork can be harvested every 7 years. For wood a longer period is required, but the wood is of good quality for using as fuel. In a small watershed to choose between plantation between eucalypt or cork oak, one should realize that eucalypt can be planted in small patches, but not on a large scale, without impacting water availability.

- Have you tested the opportunity of the local community to benefit from the cork oak, as an alternative to grazing?

  Response: the forest is owned by the state, but income from the forest goes to the population through the municipality, which can give it to the local community to invest in projects. But often money goes into mechanistic projects, and it is not sure if it always reaches the population. The Forest Community is now discussing the larger participation of the community in income generation from the forest.

A participatory approach towards sustainable land management in the Guadalentin basin (Spain)

Joris de Vente, Albert Solé, Jorge López, Carolina Boix - Estación Experimental de Zonas Áridas (EEZA-CSIC), Spain

The motivation to apply the participatory approach in the DESIRE study site in Spain comes from the experience with top-down approaches, without concern of addressing land users. The aim of the approach is to look for collaboration between stakeholder groups in sustainable land management. The objectives were to 1. combine local knowledge and science to select feasible effective and socially accepted land management options, 2. facilitate mutual learning, and 3. implement, monitor and select strategies to strengthen social acceptance. The methodology consists of three steps: 1. identify SLM strategies in a stakeholder workshop, 2. Assess and document strategies, and 3. select options for SLM, and implement SLM strategies in the field.

The Guadelentin Basin comprises 3300 km2, and receives 300-500 mm rain per year. It has been subject to human influence for centuries. It consists of 15 municipalities and 2 autonomous regions.

The 1st stakeholder workshop of step 1 gathered farmers, government officials and scientists. A series of exercises was used to guide the learning and interaction process. These included the identification of problems, using photos, cycles, external factors, evaluation of options, and synthesis towards SLM

strategy. 19 SLM options were identified. These were evaluated in the group. Thereafter each individual voted.,which resulted in a short list of options. Farmers and non-farmers appeared to vote differently. The main objectives for SLM were formulated, indicating how to implement measures, with which approach, and who should do it. This was used as input to the 2nd workshop as the main objective for SLM.

In step 2, the SLM options evaluated with the WOCAT questionnaires on SLM technologies and approaches were: reduced contour tillage, vegetated earthen-terraces, ecological agriculture, organic mulch and traditional water harvesting ('Boquera').

In step 3 multi-criteria decision making for SLM was realized in a 2nd stakeholder workshop. The exercises used were: 1. Identifying objectives, 2. Pre-selecting options, 3. Defining criteria (ecological, economic and socio cultural), 4. Scoring of options, and 5. Decision making. The group used 20 criteria, which were grouped into 3 groups of top 4 criteria. Examples: reduce production costs and effort. The number of votes on a criterion determined the weight of the criterion in the decision making. Participants evaluated the pre-selected options against these criteria in stakeholder groups (farmers and non-farmers). This resulted in a scoring matrix. Generally the two groups scored similarly on the options. The scores were put in a multi- criteria decision support system. The ranges of acceptability were displayed for each option in economic, ecological and socio cultural respect, and in a final ranking. The vegetated earthen terrace scored highest, with water harvesting and reduced tillage. Then the result was taken back into the group for discussion. Participants found it difficult to choose between options because they felt that combinations of options would be more effective. A final selection of strategies was made. The next step included the field implementation and monitoring the SLM measures. Stakeholder involvement is maintained during this process. On the site, demonstration and dissemination of experimental results is taking place.

Conclusions and lessons learned for SLM

Participants seemed convinced about the need to maintain soil as a valuable resource. Most farmers were willing to apply conservation measures, but expressed the need for support for implementation. A regional strategy and implementation approach is therefore crucial. There was disagreement between stakeholder groups on which measures would be feasible. Farmer organizations should play a key role for training and support for SLM implementation. Furthermore it was found that a combination of measures is preferred over the selection of single measures. Stakeholders were suspicious on the use of the software for decision support, and therefore these tools should be transparent. The tool however stimulated an effective discussion. Finally, it was found crucial to have a diverse group of stakeholders.

Question raised by Prof. Abdellah Laouina (Photo: HP. Liniger).

3.4.8. Linking science with development

How can we base monitoring and assessment of degradation and SLM on both local and scientific knowledge?

Dr. Mark Reed, DSD Consortium WGIII, DESIRE project, University of Aberdeen, UK (MarkReed.ppt)

Introduction

Can we base monitoring and assessment of land degradation and SLM on both local and scientific knowledge? We should not overlook the knowledge of local communities, accumulated over generations. The text of the UNCCD is unique in the way it values local knowledge. But how actually can we incorporate local knowledge to enforce decision making? Some argue that local knowledge is not reliable enough. We need to critically assess knowledge available to us, and draw on the most relevant.

Where does the science stand?

We are at an important point in the history of science (including social and political science). The research community is well connected internationally, through internet, and research is increasingly weaving together interdisciplinary work on complex and dynamic systems. Enormous amounts of money are pumped into this sort of research. The natural sciences are providing means to assess land degradation and SLM. We have also learned to work more effectively with communities on the ground. However, there has been disillusion on participatory work, and at the same time there is new consensus on best practices.

Where are the gaps?

Why are we monitoring and assessing, and for whom? M&A can also be shared through the use of indicators and M&A frameworks. The international community wants minimum sets of indicators, but if this information should help people on the ground, then it must be supplemented with local indicators that land managers can monitor and act on themselves.

The framework for the DESIRE method comprises 4 key elements: first establishing contexts, next identify, evaluate and select SLM strategies, subsequently identify, evaluate and select indicators, and finally apply SLM options and monitor them. DESIRE is one way in which this framework is put into practice. In the last meeting of the UNCCD parties (COP 9) two indicators have been adopted to monitor progress towards the implementation of the 10 year strategic plan in countries. We have the ability to supplement the international set with local indicator sets. Modelling is not always required; there are examples from national systems in Namibia and Australia, where data are collected at regional or federal levels with a nation-wide coverage.

Getting the right policy and socio cultural environments is just as important as creating the technology environment. We need to build on and document existing work and explore new mechanisms that can enable land managers to do monitoring and assessment. One way to do this is to supplement international sets of indicators with sets of locally relevant indicators.

Presentations of Joris de Vente, Mark Reed and Issam Machmachi (Photos: HP. Liniger).

Pilot Basins for Green Water Credits and the linkage to WOCAT

Sjef Kauffman, ISRIC World Soil Information and Samir Rgaouti, Agence du Bassin Hydraulique du Sebou (SiefKauffman_GWC.ppt)

The Green Water Credits project receives funding by IFAD, the Swiss Development Cooperation, and the Stockholm Environment Institute. Demonstration basins are the Tana basin in Kenya and the Sebou basin in Morocco.

Why do we use the term 'green water'? Blue water is the liquid water that is pumpable. Green water is the rain water which enters the soils, and returns to the atmosphere in vapor form (evapotranspiration). The term was introduced in 1994, and directly accepted by a large audience as a term to attract attention from policy makers. The attention to improved soil water management in rainfed agriculture is core to the Green Water Credits. The second key aspect is facilitating farmers to do this.

Starting points in the Green Water Credits philosophy are that the key resource for green water is rain water. The farmer can improve the local water balance. Upstream land management is linked to downstream water availability. A lot of policy makers do not realize this. Farmers are key and need support to make investments. How can we support them?

The main steps include: if upstream land uses cover >25% of the basin area, then there is scope for the improvement of green water use. A downstream water use analysis (urban, industrial, agricultural, hydropower) includes the current water use and trends. Green Water Credits looks at 4 domains: soil and water management, livelihoods, institutions and regulations and financial mechanisms. How and where do we have water scarcity? There are different types: physical, economic. It is high time to do something. Who are the key players? Water suppliers or regulators, farmers of rainfed agricultural land and forest users. Users are urban areas and others. Farmers are the ones to realize GWC and need support. There is much scope for improvement.

Global flows of blue and green water indicate that of 100% rainwater, 30% is going to blue water, and all the rest to green water, the largest part by grassland. More water cannot be created, but green water resources can be better managed. The only win situation is to reduce evaporation. This can be done by better soil and water management. GWC bridges the incentive gap by regular compensation from water users towards water providers for specified water management services. The benefits are more water, and less sediments.

GWC is a financial facility to support farmers to make initial investments for proper green water management and to maintain these. The GWC financial mechanism is based on the benefits for downstream users. Targets are more blue water downstream, improved water quality, arresting siltation, and regulated water downstream. The economic benefits for Kenya amount to 33 million $ annually, against implementation costs of $ 10 million, and annual maintenance costs of $ 2 million.

The Sebu basin in Morocco has the largest irrigation schemes of Morocco. Hydro electric power is important, dry areas occur. Large towns use blue water from the river (e.g. Casablanca). The green water balance accounts for 77% of the rain water. Rainfed land use is 35% of the area, and forest 30%.

Conclusions

GWC creates a market in water management services that supports rural livelihoods. The first aim is to get science and knowledge implemented, and the second aim is to support farmers to do so.

Assessing soil erosion and conservation with various methodologies at different scales

Issam Machmachi, on behalf of the Moroccan DESIRE team (IssamMachmachi_MoroccoDESIRE.ppt)

The Sehoul community is part of the Central Moroccan Plateau. There is marginal land with high poverty and land degradation. It is characterized by variability and chronic shortage of natural resources.

The SLM technologies and approaches assessed included: olive groves with annual cultivation, crop rotation cereal/leguminous, fodder cultivation and regeneration of cork oak. Various measurement techniques were used for vegetation, soil surface state measurements, soil fertility and water balance components. The cereal/leguminous rotation increased soil protection by providing better cover, also better organic matter, and N rates. The soil structure (measured by penetration resistance and soil cohesion) was improved. In the olive groves with annual cultivation the herbaceous cover increased, and soil moisture and organic matter content increased. For the fodder cultivation technique, lupine appeared to offer the best cover.

Soil erosion was assessed by 137 Cs measurements in three transects on different rotations. The highest erosion rates were found in barley wheat rotations. Soil loss and the runoff coefficient under different land uses were highest on bare, very stony soils, and pasture land.

The Hannanat catchment was used for trial catchment experiments to follow up effects of vegetation growth on runoff. Vegetation cover is highest in spring in cereals. The hydrological behavior is characterized by quick flood responses in autumn, with peak discharges around several hundreds of l/s and runoff coefficients RC up to 54%. In winter, rainfall-runoff events are of longer duration, and runoff coefficients smaller. Surface runoff and soil erosion will be modeled using the LISEM model. This will enable to imagine scenarios of functioning of the catchment.

The plot and catchment experiments lead to the conclusion that the crop rotation cereal/leguminous is a good strategy for SLM, but needs to provide fodder.

LADA local: a local level assessment toolbox for assessing impacts and monitoring and decision making

Sally Bunning, FAO -Land and Water Division, (drawing on experiences of Senegal, Tunisia and South Africa) (SallyBunning_LADA local.ppt)

The objectives of the local assessment method of LADA are to provide a toolbox for assessing and analyzing land degradation and improvement at local level, to provide an integrated understanding of

causes and impacts of land degradation and the effectiveness of SLM, of constraints to adoption of SLM measures, to provide a baseline for monitoring land degradation and SLM, and to use findings for decision making. The focus is on drylands. The method is developed with 6 pilot countries.

LADA-Local is a participatory, integrated approach. There is a biophysical and socio-economic assessment, and a joint analysis with local experts.

Selection of assessment and study areas: example of Senegal. A land use systems map and land degradation map are prepared through an expert process, leading to the identification of sites for further investigation. Steps include training local experts, collecting available data, forming a team with district stakeholders, then to characterize communities on the ground. This refers to the problems of LDD in the area, the actual and potential SLM and community strategies, the perspectives of the community, institutional policy factors and trends. The characterization is done by carrying out transects, to understand which degradation types and processes and which measures on which land would be suitable. These depend on the aims to do either prevention, mitigation (stop or slow negative effects) or rehabilitation of land degradation and desertification. WOCAT tools are used for assessment. Other tools include transect exercises, vegetation surveys, focus group discussions, and technical expertise. The socio economic study is an important part of the local assessment, leading to recommendations for land users and policy makers. An analysis of actual responses to land degradation in the study area is part of the socio economic study. The effectiveness of different techniques is valued. The extent of the adoption by land users and constraints are listed for different SLM strategies.

The DPSIR framework is used in LADA-Local to analyze causes and driving forces of land degradation and SLM. A key issue is population pressure. An analysis of impacts on livelihoods is part of the framework. Land user groups are visualized in terms of their different assets (e.g. human capital, natural capital, financial capital). Impacts on ecosystem services are also analyzed. These include productive, ecological and socio economic services. Upscaling from land unit to the landscape level is done to analyze effects of land degradation and SLM on wider ecosystem functions in the watershed or landscape. An example from urban sprawl in Tunisia is shown. Effects include climate change, water cycle effects, and effects on organic matter and nutrients.

A key issue in the LADA-Local method is reporting back to communities and discussing findings with them. It is important to bring results up to policy makers, among national institutions in an interactive multi-disciplinary review process.

Conclusion

A set of LADA-WOCAT tools is available to support local to national decision making. This includes the LADA Local Assessment Toolbox, the WOCAT questionnaires on technologies and approaches, the land use systems mapping, the sub-national land degradation and SLM assessment using the WOCAT mapping questionnaire, and the decision support tools at local and regional level (WOCAT-DESIRE method, FAO dynamic maps). These tools are intended to improve knowledge, to assist countries in monitoring progress in the implementation of their UNCCD NAPs, and to target investments in SLM. There is a need to convince policy makers that investing more in SLM is useful.

Questions

- How is the local scale assessment upscaled to the national level assessment?

  Response: this is done through the land use systems map, in a qualitative upscaling procedure. It looks at trends, not measurements.

3.4.9. SLM benefits beyond the local scale

Mapping the Unknown – The extent of Sustainable Land Management

Godert van Lynden – ISRIC World Soil Information, The Netherlands (GvanLynden_WOCAT Map.ppt)

We already know a lot about land degradation, and a lot of money is invested in SLM, but it is not known where. There are no maps on SLM activities other than the ones created in the LADA and DESIRE projects. Information on WOCAT mapping is on the WOCAT website, and locations of WOCAT cases of SLM can viewed in Google Earth, but that only gives you geographical locations.

The questionnaire on SLM mapping is actually the manual on mapping land degradation and SLM jointly developed in WOCAT, LADA and DESIRE. The method has been revised and tested in 6 LADA pilot countries, in Tadjikistan and Switzerland, and current applications in the 16 study sites of the DESIRE project. The mapping units are those of the Land Use System, and the mapped responses are the type and degree of land degradation and SLM, trends in areal extent of the land use system, trends in the intensity of the degradation and conservation phenomena, impacts on ecosystem services, direct and indirect causes and recommendations. The WOCAT mapping is assessing the existing, current practice, not what is recommendable. A new mapping database has recently been developed, which allows to access and edit attribute data and maps through the internet. The (interactive) data viewer is under development.

Mapping the spatial assessment of degradation and conservation

H. Taamallah, M. Ouessar, I. Enneb and M. Chitner - IRA Medenine, Tunisia (Ouessar _EN_IRA.ppt)

The presentation covers experience with the WOCAT mapping in Tunisia in the framework of the DESIRE project. The study site covers 300 km2. The land use system in the area consists of steppes, rangelands in mountain areas, rangelands in plain, saline vegetation, olives, and annual cereals.

Cereal agriculture: The cereal agriculture land use system is kept fallow during dry years. The areal trend is positive, because people try to extend the area of cereals. There are some controls by the government, but the land use is not easy to control. The expert recommendation for mitigation is to reduce vegetation cover degradation through sand fixation and soil and water conservation. For prevention, the recommendation is to use practices to restore the vegetation cover. Information on techniques is stored in the map database with regard to sand stabilization and tabias.

Agriculture behind jessour: The jessour system is an old water harvesting technique adapted to the region. Olives are grown behind water harvesting structures. The main processes are water erosion and drought, and removal of vegetation. The expert recommendation is to intensify water and conservation works for mitigation, and for prevention to ensure maintenance and to safeguard SWC works

Plain rangelands: This land use system is decreasing in area and intensity due to problems with land ownership. Problems include overgrazing, due to the decline of the grazing area, erosion and removal of vegetation. Techniques used are fencing, resting, afforestation, and sand dune fixation.

Dahar rangelands: These are collective lands. The main problem is wind erosion, overgrazing, and the collection of food (e.g. herbs for cooking).

The land use systems ‘agriculture behind tabia’ and ‘halophyte rangelands’ are used for common grazing. This happens in the downstream part. Due to water harvesting in the upstream part the downstream areas are receiving less runoff.

Questions

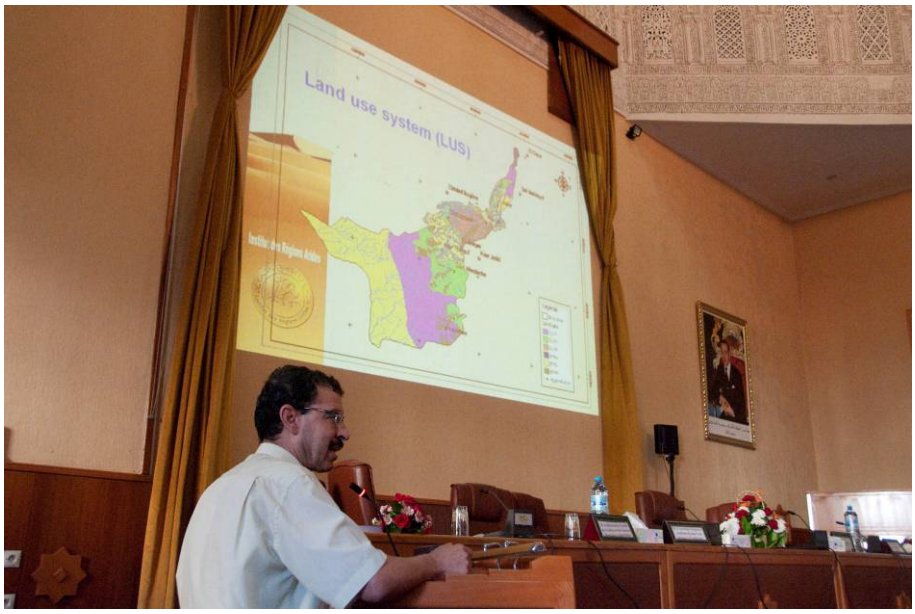
- How does the method deal with the difference in scale between the DESIRE study sites?

  Response: to overcome the problem of scale, units were chosen to correspond to administrative units. The method uses fixed map units, because otherwise it would be necessary to create new units for any mapped layer (e.g. degradation, conservation). If there is only 5% coverage of a land

use system, then perhaps the map units were chosen too big, and should be selected to correspond better to the size of the study site. Generally, between 30-100 units are recommended for an area to be mapped.

- The method does not allow locating the variables mapped within units (e.g. extent of degradation).

  Response: This is true, but the method asks for the type of degradation addressed. If there are terraces against water erosion, it indicates that there was water erosion, which maybe has been relieved due to the technology.



Presentations of Mohammed Ouessar and Lewis Njeru (Photos: HP. Liniger).

Assessing land degradation and conservation in Somalia

The Somalia Water and Land Information Management Project (SWALIM) (LNjeru_SWALIM.ppt)

L. Njeru, R. Vagas and C. Omuto, FAO-SWALIM, Nairobi, Kenya

Ecology & livelihoods

The central and northern parts of Somalia are dry, and receive 100-250 and 300-500 mm/y. There are no regulations against wood cutting. Pastoralism, oasis farming, wood collection, and charcoal production are the major means of existence. The southern region is wetter, receiving 400-600 mm of rain per year. There is pastoralism, agro-pastoralism, rainfed and irrigated farming and wood collection. The challenge to land degradation is that there is no government at the moment, which exacerbates the situation. There is a heavy pressure on the land due to overgrazing and charcoal production. Traditional land management systems are breaking down, and the environment is already a marginal environment by its nature. In the south of Somalia the degradation is worse than in the north, because in the north there is some authority from community elders on natural resources.

Assessments of land degradation are available from remote sensing analysis. The challenge is that communities want a bigger picture of the situation. They want to know the state of the problem, the spread and intensity; causes of the problem, impacts on people and environment, what is being done or can be done. This lead to the use of WOCAT mapping to map land degradation. Supporting data were compiled to create and validate the land use systems map (biophysical characteristics and livelihoods), and the map was verified by field experts. Participatory assessments were conducted in several parts of the country. The whole process resulted in a compiled list with land degradation data, with degradation types, extent and degree of degradation, direct causes, indirect causes and impacts on the ecosystems. The map of land degradation classes, shows areas with strong degradation, also in the wetter parts of the country in the South. This results also from the political situation; the resources are open to anyone. There are few management practices across the country, but there are some successful practices available.

Conclusions

The WOCAT mapping method is a good tool for mapping degradation and conservation. However, good preparation is needed, and a good base map and supporting data. Adequate time is needed for the assessment. The land degradation dataset for Somalia is now available; it may help to arrive at consensus, given that there is so much disagreement on the extent and state of land degradation in the country. People intermediate between the project and the communities are well educated; this ascertains that the products of the tools are well conveyed to the community. Therefore there are good chances that the information will guide land degradation and conservation interventions. At the community level the LADA local assessment and WOCAT database and tools could be used.

3.4.10. Round table discussion

With Dr. Hanspeter Liniger, Prof. Abdellah Laouina, and Prof. Coen Ritsema (RoundTable.ppt)

What are key issues for assessing the benefits of SLM for you?

Hanspeter Liniger: the first thing we must know is about the benefits of SLM. Many times statements are made on that. Then benefits in terms of water, but also in terms of biodiversity. The challenge is that we need to be able to quantify benefits.

Key issues:

1. Any investment related to improved water or fertility must show in terms of productivity
2. Climate change is a key issue, yes we can easily use it: how can SLM contribute towards mitigating climate change by putting more C in the soil. I do not have the answers, for different practices and climates. Adaptation to climate variability: how are people coping with more extreme events. To prepare ourselves for the next decades to come.
3. W must look for win-win solutions.

Coen Ritsema: we must distinguish effects of SLM between effects on environment and effects on people. The former are well listed, also on ecosystem services. Effects on people like the improvement of yields and income, we all know, but how to quantify those impacts?

Abellah Laouina: there is a focus on methodology in this conference. The presentations tried to find complementarity between scientific methods for assessment and the knowledge coming from populations. We cannot say that the local knowledge can replace assessments made in the field. Key issue here is to be able to work with people with a special standard of knowledge. An investment is needed to increase the knowledge among the population. Any action in the field should be preceded by investment in education, poverty alleviation, and increase of knowledge of the population.

Coen Ritsema: if we find suitable strategies for SLM in the world, how do we convince stakeholders that things need to be changed in a certain direction? Beyond the ongoing discussions between scientists, communities, and NGOs, to national governments? Is what we do in our projects sufficient to convince people on the local and national level to change things?

Sjef Kauffman adds to the last point of the danger to remain with a situation with educated people but no follow-up. The challenge is not only to deliver these projects, but to combine forces to formulate implementation programs. Science should accompany this implementation. Also moving from studying the small scale, to assist large scale implementation programs.

Victor Jetten: Land degradation is considered as a rural problem, although the largest part of the population lives in cities, so the pressure on rural areas will be only increasing. Perhaps economic calculations of the value of soil compared to other resources may be more effective than promoting carbon sequestration.

Miloud Chaker: we should validate local knowledge, it is a way of living jointly with the environment.

Recent changes have shaken the local knowledge; choices of local communities are made under pressures by a changing environment, rather than based on their knowledge. In Morocco there are experiences with farmers willing to follow SLM strategies, but abandoned certain choices because of the increased velocity of change of landscapes and socio economic environments.

Stephan Mantel: Perhaps the diversity and complexity of each of the study sites in the DESIRE project is that large that it may perhaps be very difficult to come up with general recommendations which go across different environments. So maybe we must concentrate on the local lessons learned.

How can we join forces to combine programs (such as DESIRE, WOCAT, LADA)?

Coen Ritsema: What we are doing right now is an effective way to combine available knowledge, which we should expose to the world. We are gaining visibility also at the governmental and UNCCD level. Maybe need to somehow brand the combined methods in a professional way to push it into the future. Let's sit down with critical players to draw up a business plan to generate funds to continue the work that we are doing now, in the direction of governments, UNCCD, and link it to the climate change process. The train where we are sitting on should not slow down in the next years.

Abdellah Laouina: There is stratification of progress, as WOCAT was followed by LADA and DESIRE. Also of words used: Water and conservation, then NRM, now SLM. Concepts are extending. At the same time we see that the consortia are in some common countries, like in Tunisia, where is worked with all three methods. The teams are different. The programs are not always owned by the decision makers and the technicians in the country. For example in Morocco we tried to convince decision makers and technicians to adopt the methods, which was very difficult. If we want to make these methodologies adopted by decision makers in our countries, we remain a group of researchers, but the meaning is less if it is not adopted.

Hanspeter Liniger: WOCAT, LADA and DESIRE have shown the way forward. Can make our lives easier. We gained a lot from the combination. It is not only the content that brings the workers together, but also commitment. Much of the efforts are based on personal commitments. How can we join efforts? If that mentality exists in all the countries as well, we can move in the right directions. But we also need to approach the donors, the big guys. They also need to join forces. Why is UNCCD doing things which are almost the same as GEF? We must convince them that joining forces makes the work a lot easier.

Mark Reed: This is an exciting time where communities and agendas are converging. On the DSD 1st scientific conference coming together, the 3 working groups appeared to have worked in isolation, yet came up with similar ideas. So there is a convergence among scientists. In the policy forming community there is a new receptive to working with scientists. And then thirdly in the increasing convergence in the work of NGOs and scientists. There are four tangible ways to do that: 1. Academic, around common proposals, 2. Papers coming out from the conference, 3. Policy: getting involved in the preparation of the next CST, and 4. CSOs: follow up on the Drynet initiative.

Godert van Lynden: Let's not forget that there are a big number of projects behind the research initiatives WOCAT, LADA, and DESIRE. If we would list that consortium and present that to donors and saying, look at this consortium and network of partners working behind the three big programs.

Sally Bunning: In the past we have been addressing land degradation as the aim of soil and water conservation. Now we are moving to addressing land degradation in a multi-sectoral approach, where SLM is addressing productivity and food security, sustainable use and working with the environment, agriculture, livestock and water. That is where the biggest challenge is, not on the ground but at the national level. We can work with different partners to break barriers between sectors.

What is your main conclusion of the day?

Abdellah Laouina: We should improve assessment by re-enforcing the anthropological and socio-economical explanation of the consequences of SLM technologies and approaches and their spatial distribution. For any of the steps in the assessments the biophysical considerations are thorough. But for the socio-economic aspects they remained superficial. There should be more attention to the process of adoption. This could improve assessments of LD and SLM.

Coen Ritsema: let's grab the momentum we have, push the LADA-DESIRE-WOCAT method forward, more than we do now. Questions: we are considering all thinkable and existing technologies and approaches, but we might also think differently, and need to avoid that people tell us in the end of the project that we repeat things that have already been done for years (like contour ploughing, mulching). Do we convince sufficiently national governments to undertake measures on the ground? Do we have sufficient aggregates in our consortium to convince these people to take decisions?

Hanspeter Liniger: Our work, our tools need to help to advance SLM practices in the field. Unless we can show that there is spread of SLM, and that LD is going down, then we fail. The only possibility to convince is by having arguments that land management should change. We have the tools and possibilities at hand that work at all levels to make strong enough arguments to show that these impacts or benefits are there, and that they are useful for anybody. That is where we are still behind.

Technologies versus approaches: both have to work, not one is more important than the other.

The other point is that of change: technology and approach should be constantly adaptable. We must look around what people are already doing, it is just often that we don't recognize this. The way of working that we do should become the day to day approach. This would be a major achievement.

Patrice Burger: We were the CSOs that have pushed a lot to get the science considered in the CST, and the DSD conference was the first step in 30 years of decision making without science. Drynet is a consortium of CSOs; in a next meeting we should try to connect to it. Einstein said: when a problem is persistent, despite all efforts to solve it, there is a need to reconsider our thought. In this exercise imagination is more important than knowledge.

Jan de Graaff: Compliments for the collaboration between the 3 projects, and to keep on inviting donors.

Gudrun Schwilch closes the symposium by thanking the three programs, translators, dean of the faculty for providing the lunch, and Prof. Laouina and his team for the excellent organization of the symposium.

ANNEX 1: FIELD TRIP REPORT

Report by Christine Hauert

The first stop of the field trip was made in a cedar forest close to Ifrane and Azrou in the Middle Atlas. In the forest two presentations were given by Mohammed Benslimane, from the Regional Administration of Forests and by Mohammed Qarro from the National School of Forest Engineers, about the management of the cedar forest in this area. The principles objectives of the forest management are: 1) ecological: assure the survival of the forest with natural and assisted regeneration; 2) economically: optimal exploitation in respect of accessible revenue; 3) social: respect of the social context without harming the user rights. After the cedar forest a short stop was made in the museum of the National Park of Middle Atlas, in Azrou, where also coffee and a small snack was served.

Stop at the fruit farm (Photo: HP. Liniger)

The next stop was made on a fruit farm near Tiddas, in the Moroccan Central Plateau. The farm has more than 1000 employees and produces a variety of different fruits.

One of the DESIRE study sites, located in the Sehoul plateau close to Rabat, was presented late in the evening, by Nadia Machouri and Abdellah Laouina. The Sehoul plateau is located in the more favourable parts of Morocco in terms of climatic conditions. Nevertheless it consists of marginal land with a high poverty rate and severe degradation problems. Our first stop on the plateau was in the cork oak Ain Bendar forest. Apart from the cork exploitation the forest offers many possibilities of use; it is a main pasture land and an important source of fire wood. Overgrazing and irregular cutting of fire wood threatens the forest and leads to land degradation. A measure to remediate further degradation was to replace the cork oak forest with exotic species (e.g. eucalyptus or pine). Recent efforts are more orientated to the management of the degraded cork oak forests by planting or seeding of this species for regeneration, however this concerns only very small areas. It could be shown that the choice of forest management by cork oak regeneration, grazing regulations and protections, represents a promising solution to remediate land degradation.

Nadia Machouri presenting results achieved in the Sehoul Plateau (Photo: Ch.Hauert)

A next stop in the study site gave an overview of a small watershed in the Sehoul plateau. Within this watershed the DESIRE decision support tool was tested and SLM options selected. The implemented technology in this area was the plantation of atriplex for gully rehabilitation, the conservation of crop residues in a small field and seeding barley with minimum tillage. After a long and very interesting day we arrived in Rabat in the evening.

Abdellah Laouina explaining the problems and solutions in the Hannanat watershed (Photo: HP.Liniger)

Reference: Programme and Field Guide

ANNEX 2: WORK PLANS 2009

Asia
ICIMOD (HIMCAT)
Nepal (Kathmandu University)
Bangladesh
Mongolia
China (CAS)
Kazakhstan

Africa
Niger
Senegal
Madagascar
Morocco

Europe
Serbia

ICIMOD WORK PLAN for: November 2009 - October 2010									
Expected outputs	**Activities**	**Input**			**Funding**		**Responsible person(s)**		**Timetable**
		Person x months		Institution	Materials / equipment	Available	Required		Commitment by	
BANCAT fact sheets	Finalisation of BANCAT fact sheets publication	1	0.5	ICIMOD, BANCAT				I. Providoli, M. Dhakal, S. Kisha	S. Kisha	1st quarter 2010
Task force products	Testing of Watershed module, Developing of Impact monitoring tool	2	1	ICIMOD, KU				I. Providoli, M. Dhakal, S. Aryal	I. Providoli	2nd quarter 2010
HIMCAT extranet maintained	Continue HIMCAT extranet	1	1	ICIMOD		1000		I. Providoli	I. Providoli	O
2 HIMCAT newsletters	2 HIMCAT newsletters prepared	1	1	ICIMOD		1000		I. Providoli, M. Dhakal	I. Providoli	2nd and 4th quarter 2010
HIMCAT country networks strengthened (BHUCAT, AFGCAT, MYACAT, etc.)	Provide support to up-coming HIMCAT initiatives	3	1	ICIMOD				I. Providoli, M. Dhakal	National teams	Ongoing
WOCAT session in LCSWC trainings	Integrate WOCAT tools into ICIMOD's LCSWC trainings	2	0.25	ICIMOD		500		I. Providoli, M. Dhakal	I. Providoli	Ongoing
WOCAT trainings in HIMCAT region	Provide WOCAT training in Myanmar, Nepal, India and maybe Afghanistan.	2	3	ICIMOD		30000		I. Providoli, M. Dhakal	I. Providoli	Spread over the year
QT and QA documentation in Nepal	Document QT and QA, e.g. gully control and stream bank management	4	2	Kathmandu Univ. (KU), ICIMOD		500		Shreeju, Perna	Sabita Aryal and Bed Mani Dahal	Dec 09

Prepared by: M. Dhakal and I. Providoli Total: US $ 33,000

Nepal – Kathmandu University WORKPLAN for: 20009 - 2010										
Expected outputs	**Activities**	**Input**				**Funding**		**Responsible person(s)**		**Timetable**
		Person x months/ Institution			Materials / equipment	Available	Required		Commitment by	
Documentation	Technology and Approches for gully control in Sarada Batase VDC, Nepal	2	1	KU	QT, QA, Tapes, etc	ICIMOD		Shreeju	Sabita Aryal	12-09
Documentation	Technology and for strem bank management, Gulmi, Nepal	2	1	KU	QT, QA, Tapes, etc	KU		Perna	Bed Mani Dahal	12-09
Finalising Module	Field Testing for Watershed Module	4	1	KU	QW	Yet to be decided	Yet to be decided		Sabita Aryal	6-10
Documentation (tentative/ need funding)										

Prepared by: Sabita Aryal

Bangladesh WORK PLAN for: November 2009 - October 2010									
Expected outputs	**Activities**	**Input**				**Funding**		**Responsible person(s)**		**Timetable**
		Person x months		Institution	Materials / equipment	Available	Required		Commitment by	
BANCAT Achievements upto October, 2010 reviewed and Work-plan for 2010-2011 prepared	Planned for BANCAT Working Group(WG) Meeting, Preparation of Progress Report and Work-plan	12	1	BANCAT	BANCAT materials	100	0	Sudibya Kanti Khisa, Jalauddin Md.Shoaib	Sudibya Kanti Khisa, Jalauddin Md .Shoaib	October,2009
More Ts and As are documented from different Agroecological zones of Bangladesh	Continuation of documentation of Ts and As from different AEZs subject to the availability of fund	12	9	SRDI, BFRI, IFESCU Techno-Dia	WOCAT tools	0	4000	Sudibya Kanti Khisa,and Jalauddin Md.Shoaib,	Sudibya Kanti Khisa, and Jalauddin Md .Shoaib	November, 2008- April, 2009
Technologies and Aproaches documented presented to wider audience	Seminar cum Lauching of BANCAT Factsheets on documented Ts and As will be organized.	2	1	SRDI, BFRI, IFESCU	BANCAT Factsheets	0	2000	Sudibya Kanti Khisa, Jalauddin Md.Shoaib,	S.K.Khisa and J.U.Shoaib	November to October 2010
Popularization of WOCAT Tools	Participation in different Training Workshops and presentation of BANCAT activities and WOCAT Tools	2	12	SRDI BFRI	WOCAT and BANCAT brochures will be used	0	0	S. Kanti Khisa, J. Md.Shoaib	J.U.Shoaib and S.K.Khisa	Dec 07 to Nov 08
BANCAT website regularly updated	Updating of BANCAT website	2	12	BANCAT	BANCATmaterials will be used	100	0	J.U.Shoaib and S.K.Khisa	J.U.Shoaib and S.K.Khisa	November,2008 to October, 2009
BANCAT Fact sheets published	Printing of BANCAT Fact sheets	2	3	BANCAT	22 Ts and As will be used	1935		S.K.Khisa		

Prepared by: Sudibya Kanti Khisa Total: US $ 2135 US $ 6000

Mongolia WOR KPLAN for: 2010									
Expected outputs	**Activities**	**Input**			**Funding**		**Responsible person(s)**		**Timetable**
		Person x months		Institution	Avail.	Req.		Commitment by	
Knowledge management capacity is strengthened at Desertification Study Centre of Geo-Ecological Institute	Provide DSC with necessary research equipments			CODEP, SCO Mongolia		3.0	C4 officer, CODEP Head of DSC	DSC of GI	
Knowledge management methodology is introduced and support to capacity building is provided	International backstopping service Study international experiences and methodology on land degradation and conservation Mongolia to host an International workshop on "Standard methodology to assess and monitor desertification/land degradation"	1 4-5 50-60	0.5 max 1 -5 days	CODEP, SCO Mongolia DSC of GI, MAS MNET with MAS		54.0	C4 officer of CODEP DSC and C4 officer of CODEP GI and C4 officer of CODEP	MONCAT Secretariat GI, MAS MNET+MAS	March, June Sep-Oct June
Appropriate technologies and approaches identified, documented and entered into database	Data collection in the field, a methodology training and its practice Enter documented technologies and approaches into database	2-3 1-2	2-3 1-2	DSC of GI, MAS DSC of GI, MAS		31.1	MONCAT Sec. MONCAT Sec.	MONCAT Sec MONCAT Secretariat	Jun-Oct Oct-Dec
Technologies and approaches disseminated	Organize a public event for information sharing Publication and distribution of documented technologies and approaches Disseminate and advertise technologies and approaches through website	12	1-2	DSC of GI, MAS DSC of GI, MAS DSC of Gi, MAS		15.0	MONCAT Sec. MONCAT Sec.and Review Panel MONCAT Sec.	MONCAT Secretariat MONCAT Secretari MONCAT Sec.	Jun and Nov Jan-Feb Regular update for whole year
Field testing of technologies and approaches in collaboration with farmers and herders is carried out (UNDP SLMCDM Project will do this in their Project area)	Provide financial and technical support to technology testing Support and mentor local and foreign students and research workers during their practical research work on desertification and land degradation Involve experts in short-term trainings on desertification and land degradation in abroad	3-4 3	each 2-3 3	CODEP, SCO Mongolia CODEP, SCO Mongolia CODEP together with GI, MAS	45.0		DSC of GI C4 and C2 officer of CODEP C4 officer of CODEP	DSC of GI, MAS Country office of CODEP MAS	1 year Feb-Sep Jun-Dec

Prepared by: CODEP

Total: ~US $ 60’000 (~US $ 106’000 total budget of component 4)

China- Institute of soil and water conservation, CAS and MWR (DESIRE) WORKPLAN for: 2009- 2010										
Expected outputs	**Activities**	**Input**				**Funding**		**Responsible person(s)**		**Timetable**
		Person x months/ Institution			Materials / equipment	Available	Required		Commitment by	
Technologies for the database in the Yan River Basin	Field survey, record and documentation	2	3	Institute of soil and water conservation, CAS	Rule, paper, camera, GPS small presents, laser rangefinder and so on.	1200	2300	Wang Fei	Wang Fei	Field survey in March and April; Arrange the documents and database in August
2 or 3 approaches in the basin	Field survey, record and documentation	1	2	Institute of soil and water conservation, CAS	Paper, camera, GPS, small presents and so on	600	1200	Mr. Zhao Wentian	Wang Fei	Field survey in May; Arrange the documents and database in November
WOCAT Mapping in Kelai Watershed	Field survey, compile and mapping	1	3	Institute of soil and water conservation, CAS	Map, GPS, computer and so on	1000	1200	Mr. Li Jinpeng	Wang Fei	Survey in June and mapping in July and August

Prepared by: Wang Fei Total: US $ 2800 US$ 4700

Kazakhstan WORKPLAN FOR 2009 - 2010								
Expected outputs	**Activities**	**Input**			**Funding**		**Responsible person(s)**	**Timetable**
		Months/ Institution		Materials / equipment	Avail.	Req.		Commitment by	
1.Contribution to WOCAT databases	Filling of questionnaires by standard format on suggested on Soil and Water Conservation (SWC) technologies and approaches	4	1. Institute of Geography 2. Institute of Soil and Agrochemistry 3. Kazakh Institute of Arable Farming 4. Kazakh Research Institute of Water Management	Questionnaires by standard format in program Microsoft Access	-	1000	PhD Azhar Yeshanova	1. Dr. F.Zh. Akiyanova 2. Dr. A.Otarov	January – September, 2010
2. Wide dissemination of SWC Ts and As among farmers and other stakeholders	Collection and updating of data on all suitable and simple SWC Ts/As for Kazakhstan condition, Publication, Dissemination among farmers and other stakeholders, Presentations and exhibitions.	3-4	1. CAMP-Consulting PF 2. Institute of Geography			6000	PhD Aigul Zhanserikova	PhD Azhar Yeszhanova	January – November, 2010
3.Continuation of the Strategy on Sustainable Pasture Management at Local Level	Strategy on Sustainable Pasture Management testing at local level		1. CAMP-Consulting PF				PhD Aigul Zhanserikova	PhD Aigul Zhanserikova	November, 2009 – April, 2010
4. To study new methods and approaches on land degradation mapping	Participation in initiative of CDE to conduct of WOCAT/LADA Mapping Training	7	1. Institute of Geography 2. “CAMP Consulting” PF			?	PhD Azhar Yeshanova	PhD A.Zhanserikova	? 2010
5. Rational land using by farmers and villagers; Popularizing technologies and approaches in the villages and farms	Exhibitions on SWC technologies and approaches and active distribution of the best results of SWC technologies using		1. “CAMP Consulting” PF	WOCAT SWC posters, materials, stationary, photo camera		1000		1. PhD A.Zhanserikova 2. PhD A.Yeszhanova	January – November, 2009 – April, 2010

Prepared by: Aigul Zhanserikova, Azhar Yeszhanova Total: US $ 6000 ?

Niger WORKPLAN for: November 2009 - October 2010									
Expected outputs	**Activities**	**Input**				**Funding**		**Responsible person(s)**		**Timetable**
		Person x months		Institution	Materials / equipment	Available	Required		Commit-ment by	
Regional programme for Sahel	Preparation and organization of a workshop	3	2	GREAD		2000	10000	Saley Wonkoye	GREAD	January-February 2010
Reports	Research	5	12	GREAD			52000	Abdoulaye Soumaila Dougbédji Fatondji	GREAD	Continued activities
Updated and newly filled questionnaires (technologies and approaches)	WOCAT database management	3	12	GREAD	WOCAT questionnaires, etc.		17000	Adamou Kalilou	GREAD	Continued activities

Prepared by: Saley Wonkoy Total: US $ 2,000 US $ 79,000?

Senegal WORKPLAN for: 2009 - 2010								
Expected outputs	**Activities**	**Input**			**Funding**		**Responsible person(s)**	**Timetable**
		Person x months		Institution	Materials/ equipment	Available	Required	Commitment by	
National Training				INP and SLM team (53organizations) WOCAT secretariat		INP : local fees DCE FAO			January February 2010 Dakar
Regional Workshop				INP, West African Countries (and Morocco!!!): trough wocaters and UN conventions countries', representatives of WOCAT Sec., FAO?		-WOCAT sec. -FAO? INP (in kind)			March / April 2010 Senegal (Thies / Saint Louis)
Collaboration with INP and CSE: project LADA/ WOCAT COLLABORATION WITH INP AND CSE: PROJECT LADA/WOCAT	-Fundraising for joint training sessions LADA / WOCAT -meeting between CSE and INP's General Director			CSE INP					
	- meeting between CSE and INP's Technical Director (training, exchanges, field work)								November 17, 2009
	- second meeting between CSE and INP's Technical Director								January 06, 2010
	-third meeting between CSE and INP's Technical Director and both General Director								January 28, 2010

Prepared by: Ms Rokhaya Daba FALL US $ 51,000

Madagascar (DERAD) WORKPLAN for: November 2009 - October 2010								
Expected outputs	**Activities**	**Input**				**Funding**	**Funding source**	**Timetable**
		Person x months		Institution	Materials / equipment	Available	Required	
Documentation QT and QA about preserving fodder availability and preventing from soil degradation	Surveys about local population and field observations	3	1	DERAD	-	-	19.500 USD (20.000 CHF)	ESAPP (project proposal in development)	1st November 2009 – 1st December 2009
Documentation QT and QA about sand dune fixation in the area of Androy (South of Madagascar)	Surveys about local population and field observations	3	1	DERAD	-	-	36.050 USD (37.000 CHF)	ESAPP (project proposal submitted in November 2009)	January 2010 – June 2010
Database about technologies on sand dune fixation in the South of Madagascar and identification of most efficient technologies and approaches.	Surveys, field observations and field experiments	5	24	DERAD	-	-	Appr. 194.900 USD (200.000 CHF)	To be found	July 2010 –December 2012

Prepared by: RANDRIAMALALA R. Josoa (DERAD)

Morocco (Sehoul region) WORKPLAN for: 2010										
Expected outputs	**Activities**	**Input**				**Funding**		**Responsible person(s)**		**Timetable**
		Person x months/ Institution			Materials / equipment	Available	Required		Commit-ment by	
Last Revision of QT and QA files already in the data base, according to the Desire recommendations (contest)	Updating 3 QT and 3 QA	4	1/4	Moroccan Desire team	-	Desire		Laouina Abdellah		Jannuary 2010
Wocat mapping, Edition of maps, introduction of attributes in the data base	Edition of 3 maps Preparation of the data base	2	2	Moroccan Desire team		Desire		Al Karkouri Jamal Naïmi Kacem		January-February 2010
Data base on rain and Hydrology	Monitoring	1	5	Moroccan Desire team	Rain gauge Limnigraph	Desire		Laghazi Yousra		January-Dec 2010
Technology Assessment: Gullies mitigation, by atriplex plantation	Monitoring	1	5	Moroccan Desire team	Topographic micro-measurement	Desire		Laghazi Yousra		January-Dec 2010
Technology Assessment: Mulch and minimum tillage	Monitoring	2	5	Moroccan Desire team CDE	Soil moisture sensors Top soil measurement	Desire		Laghazi Yousra Gudrun Schwilch		January-Dec 2010
Technology Assessment: Crop Rotation	Monitoring	4	5	Moroccan Desire team	Top soil measurement Soil moisture	Desire		Laouina Abdellah Master students		January-May 2010

Prepared by: Abdellah Laouina

Serbia WORKPLAN for: 2009 - 2010									
Expected outputs	**Activities**	**Input**				**Funding**		**Responsible person(s)**		**Timetable**
		Person x months		Institution	Materials / equipment	Available	Required		Commitment by	
Further activities	Contacts with national donors	1	2	Dept. for Ecological Engin. (Fac of Forestry)			500	Miodrag Zlatic, Nada Dragovic	Dept. for Ecological Engin. (Fac of Forestry)	Dec. '09 - Feb. '10
WOCAT promotion	- Training of new students (Student's Forum of WASWC); - Conf. regarding 90 years of Faculty of Forestry in September '10	10	2	Dept. for Ecological Engin. (Fac of Forestry)			3500	M. Zlatic, N. Dragovic, S. Kostadinov	Dept. for Ecological Engin. (Fac of Forestry)	Nov. '09 - Oct. '10
Further action on QM	Updating QM for 5 districts and collecting data for 1 more	5	4	Dept. for Ecological Engin. (Fac of Forestry), - Stud. Forum			13000	M. Zlatic, N. Dragovic, M. Todosijevic J. Tomicevic	Dept. for Ecological Engin. (Fac of Forestry)	Jan '10 - July '10
Further action on QT, QA	Continuing work in Serbia	5	3	Dept. for Ecological Engin. (Fac of Forestry)			10000	M. Zlatic, N. Dragovic, M. Todosijevic, J. Tomicevic	Dept. for Ecological Engin. (Fac of Forestry)	April '10 - July '10
Quality control	Feedback meeting	5	1	Dept. for Ecological Engin. (Fac of Forestry)			1000	M. Zlatic, S. Kostadinov R.Kadovic, N. Dragovic	Dept. for Ecological Engin. (Fac of Forestry)	Sept. '10
Overview book	Preliminary Overview book	4	2	Dept. for Ecological Engin. (Fac of Forestry)			3000	M. Zlatic, N. Dragovic, M. Todosijevic J. Tomicevic	Dept. for Ecological Engin. (Fac of Forestry	Aug '10 - Oct. '10

Prepared by: Miodrag Zlatic

Total: US $ --- US $ 31000

ANNEX 3: WOCAT ACTIVITIES OCTOBER 2008 – OCTOBER 2009

Objectives / Expected results	Activities	Planning 2009: Major global activities planned for November 2008 – October 2009	Review 2009: Achievements January 2009 - June 2009
1) Knowledge about SWC and SLM Support (backstopping) for the production of outputs at national and regional level. Analysis and synthesis regarding emerging global issues.	• support the production of national overviews • produce dissemination materials: Use of WOCAT (posters, pamphlets, videos) • develop a world map on the major SLM measures • enlarge the number of documented and evaluated SLM technologies and approaches in the global database • assess / analyse SLM knowledge gained through WOCAT and show their contribution to global issues • promote and support the establishment and operation of national peer review panels to ensure and enhance the quality of the information	• Produce and finalize TerrAfrica guidelines for best bet SLM technologies and approaches in SSA. • Joint UNCCD/ WOCAT report for CSD 17 (May 2009, New York) on best practices and their effectiveness to reduce land degradation through sustainable agriculture. √√ • Follow-up updating the database case studies with additional information gained through the new and revised questions in the questionnaire on SLM technologies and approaches addressing global issues and ecosystem services. • Encourage the population of the database with good quality data: set-up and ensure funding of review panel. √ • Further support the production of national overview books. √ • Joint publications: DSS Gudrun Schwilch, Mapping Lehman Lindeque, ILEISA journal, etc.	• 'Benefits of Sustainable Land Management', publication on request of the UNCCD for the CSD, May 2009. • Proceedings WWSM13 Switzerland October 2008 • Consultancy report on developing a strategy for the assessment and dissemination of best practices on implementation of the UNCCD • Guidelines of best SLM practices for Sub-Saharan Africa – a first set of SLM groups have been prepared • Report for GEF KM:Land initiative for project level indicators. First draft version finished by the beginning of June • Backstopping of publications and overview books in Mongolia and Bangladesh • Database was expanded with new Ts and As from Botswana, Cape Verde, Morocco, China and Tunisia • Contribution to DSD 'white papers' of working group 2 and 3 • Contribution to 'New World Atlas on Desertification of Land Degradation and Drought'.
	• compile an inventory of global prototype technologies (covering the spectrum according to WOCAT SLM categorization system) • produce prototypes of conservation maps at different scales, for different AEZ/continents. • analyse successful technologies on their applicability for different natural and human environments • develop WOCAT label and standards		
2) Tools (and methods) development Additional and enhanced tools for exchange of	• elaborate questionnaire modules on issues like watershed management, poverty alleviation, carbon sequestration and other upcoming important issues	• Promote the WOCAT technology inventory table to be used for a quick survey of technologies that are already being used in a region. Further promote the use of the WOCAT technology inventory table to	• Development of new WOCAT website based on a CMS • Revised WOCAT mapping database • Use of new online database on SLM approaches

Objectives / Expected results	Activities	Planning 2009: Major global activities planned for November 2008 – October 2009	Review 2009: Achievements January 2009 - June 2009
knowledge and decision support developed	• further develop and adapt the SLM categorization system to include newly integrated issues of the revised questionnaires • make available prototype of overview books (guidelines, templates) • develop tools to assess SLM technologies / approaches / and their spread with regard to global conventions and MDGs • develop enhanced data analysis and evaluation tool -> decision support tool (validation/evaluation of SLM, planning of SLM)	enhance the collected data for a global overview map on SLM technologies. • Digital product development: Special effort and investment!!! On-line database, map viewer and website development. √ • Coordinating and Supporting Taskforce activities √	• Finalize of new watershed module • Further development of WOCAT 'impact monitoring tool' • Contribution to the finalization of LADA-local manual • Adaptation of the WOCAT inventory table to be used for the BIP2010 Global Map Approach
	• adapt database to new questionnaire developments (in new on-line software) • advance mapping system (new software/mapping tool in cooperation with FAO/UNEP to incorporate GIS/RS as well as expert knowledge on spatial distribution of degradation and conservation) • develop new database system (new software), including feedback mechanism for quality assurance • build an interactive data entry, viewing and updating system • develop holistic methodology including (a) SLM identification through stakeholder workshops, (b) SLM documentation and evaluation with questionnaires and (c) comparative analysis of SLM options with the help of a decision support tool • develop method and identify indicators for local level assessment (jointly with University of East Anglia, FAO/ UNEP/		

Objectives / Expected results	Activities	Planning 2009: Major global activities planned for November 2008 – October 2009	Review 2009: Achievements January 2009 - June 2009
	UNU/ GEF/ UNDP)develop guidelines for documentation, evaluation and use of SLM knowledge (also for global and national review panels) • set up training modules on SLM knowledge management using WOCAT tools		
3) Information sharing and networking WOCAT Network enhanced and consolidated	• strengthen partner in the use of WOCAT • add new partners and consortium members in SDC priority regions where WOCAT is not yet well established. • sponsor participation of WOCAT partners at WWSMs to enhance exchange, contacts and cooperation between different countries • participate in International Conferences and meetings to promote WOCAT (eg at events of UNCCD, IUSS and ISCO; LADA) • integrate WOCAT in environmental and development processes at the global (UNCCD, UNCBD, UNFCCC, LADA) and at the national / regional level (government, NGO and bilateral projects). Give special attention to SDC priority countries • continue and enhance the WOCAT e-mail list and newsletter • establish and maintain links to other networks • regional / international exchange visits	• Seek further collaboration with UNCCD: Participate in CRIC7 (Committee for the Review of the Implementation of the Convention) meeting November 2008 in Istanbul, COP9 Sept 09 and IATF (Interagency Taskforce). Contribute to the discussions and offering the WOCAT tools as means to 'improving the UNCCD procedures for communication of information, as well as the quality and format of reports. √ • Establish WOCAT in UN- Organisations and programmes √ - Further develop WOCAT-LADA collaboration including national and local level: - TerrAfrica - SWALIM (Somalia) - CACILM - GEF-KM Land, Indicators • PR and link to commercial companies • Participation in Conferences: √ - PRC-GEF 6/7 Nov 08, China with WB, GEF - UNCCD-CRIC Istanbul 3-14 Nov 08 - 4th Conservation Agriculture Congress Delhi 4-7 Feb 09 - Climate Change: Copenhagen March 09	• New initiative in Bhutan • Support given for development of Mongolian website and database system • Cooperation with international organizations and programmes; • Links to institutions and networks dealing with SLM – UNCCD, GEF, FAO, etc. • link with Mongolia further strengthened • Participation at the international meeting of the LADA-project, 7-9 April, Nairobi, Kenya • Participation at the international Workshop on 'Sustainable Land Management in the Highlands of Asia at Present and in Future under the Impact of Global Changes', 17-23 May 2009, Shangerila, China • Participation in UNCCD second interagency taskforce meeting, 14-15 June 2009, Bonn • WOCAT in EU-DESIRE project • Collaboration with CACILM enhanced • DSD conference for the preparation of the white paper, 20-22 July, 2009, Ispra, Italy • 2nd World Congress on Agroforestry, 23-28 August 2009, Nairobi, Kenya • Side Event and stand at COP9-meeting, 21 September – 3 October, Buenos Aires, Argentina • Presentation/ key note on DSD conference 22-

Objectives / Expected results	Activities	Planning 2009: Major global activities planned for November 2008 – October 2009	Review 2009: Achievements January 2009 - June 2009
		- WASWC world conference Serbia 27-30 May 2009 (WOCAT in topic 7) - Tibet workshop June 09 - 2nd World Congress on Agroforestry 23-28 Aug 09, Nairobi - ISCO: Chile (23-27 Nov.), preceded by DESIRE meeting (19-22 Nov 09) - WWSM 14: see below • Encourage new initiatives such as in Cuba, Myanmar, Madagascar, Ghana, Tibet, etc. to further enhance the WOCAT network and to provide active support and backstopping of new initiatives. • Promoting WOCAT in Switzerland • Follow up on contacts with other networks and interest groups, such as Sustainet (GTZ), Conservation Agriculture, CC networks, etc	24 September 2009, Buenos Aires, Argentina
	• improve platforms for communication to facilitate contacts and knowledge sharing between WOCAT partners • add new partners and consortium members in regions where WOCAT is not yet well established.		
4) Research, training and education Partners trained to run WOCAT programme in their countries and regions. Use of research to support WOCAT's mission and develop tools and outputs	• conduct additional international 'Training for National Trainers / Facilitators' workshops • provide support and expertise for additional national and regional initiation and training workshops, upon request from national / regional institutions • facilitate / assist in links to research (eg DESIRE, COST, NCCR) • publish in appropriate journals	• WOCAT in education and research (DESIRE, COST, NCCR, ICARDA…..): tool development, filling gaps √ • Training: √ - LADA Local Argentina (Jan 09) - Orissa (Feb 09) - Mongolia (April 09) - Senegal: LADA and regional (West Africa) (Jan 09?) - Argentina: LADA (?)	• Participation on the LADA-local workshop January 2009, Mendoza, Argentina • Mapping training workshop Mongolia 2-11 September 2009, Ulaan Baatar • MSc-studies carried out in Iceland, Argentina using the new WOCAT-LADA mapping methodology • Supervision of PhD-study on 'Mapping land degradation and natural resource conservation in South Africa' • Supervision of BSc-studies related to SLM and

Objectives / Expected results	Activities	Planning 2009: Major global activities planned for November 2008 – October 2009	Review 2009: Achievements January 2009 - June 2009
	• promote and provide supervision for MSc, PhD thesis addressing knowledge gaps • develop training modules, manuals and teaching material for universities and extension services	• Decision support training in Montpellier (F) (May 09) √√	climate change, biodiversity, etc.
5) Basic enabling activities at the global level Keep the WOCAT programme and network running at a basic level	• maintain and update global DB • organize one international WOCAT Workshop and Steering Meeting (WWMS) per year followed by proceedings • produce newsletter (half-yearly, with active participation of national/regional initiatives) • enhance e-mail communication and mailing list (WOCAT-L) • keep website up-to-date • build up a pool of trainers and trained specialists • coordinate programme, and maintain good relations to donors • update brochures, flyers, etc. (promotion of WOCAT)	• Translation of 'where the land is greener' into Spanish and French. The translated version shall be made available in pdf-format on the WOCAT-website. Correct major bugs in 'where the land is greener' and make available as new pdf on website. √ • Secure new and continued funding. √	• Co-organisation of the 14th Annual WOCAT Workshop and Steering Meeting in Morocco, October 2009. • Co-organisation of the WOCAT-DESIRE symposium on 19 October in Morocco. • WOCAT newsletter published by the end of June 2009 • Translation of 'where the land is greener' into Spanish and French finished. Adaptation of layout ongoing • Current up-dating of WOCAT website • Intense email communication and backstopping of many different WOCAT partners throughout the year • Secure new and continued funding
	• update WOCAT CD-ROM (every 3-4 years) • invest in finding new donors		

[1] **Activities** → first group describes activities done with NRE-CDE contributions (grey shaded), second group depicts activities that are/ could be done using other sources of financial contribution

ANNEX 4: PLANNING TABLE 2010

In the following table the objectives and the specific activities (as listed in the project document* and based on the 4 dimensions of knowledge**) are listed and in a 3rd column the planned activities for 2010 are described (priorities in bold font).

Objectives / Expected results **	Activities*	Plan 2010
1. Knowledge about SWC and SLM *Support (backstopping) for the production of outputs at national and regional level. Analysis and synthesis regarding emerging global issues.*	• Support the production of national overviews • Produce dissemination materials: use of WOCAT (posters, pamphlets, videos) • Develop a world map on the major SWC measures • Enlarge the number of documented and evaluated technologies and approaches in the global database • Assess / analyse SLM knowledge gained through WOCAT and show their contribution to global issues • Promote and support the establishment and operation of national peer review panels to ensure and enhance the quality of the information • Compile an inventory of global prototype technologies (covering the spectrum according to WOCAT SWC categorization system) • Produce prototypes of conservation maps at different scales, for different AEZ/continents. • Analyse successful technologies on their applicability for different natural and human environments • Develop WOCAT label and standards	• Finalize TerrAfrica publication on best SLM practices • SOLAW: compilation of chapter 5.1 on halting land degradation for food security. • DSD White Paper for working group II and publish article in 'Land Degradation and Development' journal. • Support and review the best practices documentation in the 6 LADA countries. • World Atlas of Desertification (and improvements) (WAD): proposal for selected countries e.g. Mongolia, Argentina, Iceland, Senegal?, China?, etc. • Pursue global map of SLM: for WAD and BIP2010 (for UNCBD in collaboration with FAO) • Up-date the database case studies and further populate the databases with good quality data.
2. Tool (and method) development *Additional and enhanced tools for exchange of knowledge and decision support developed*	• Elaborate questionnaire modules on issues like watershed management, poverty alleviation, carbon sequestration and other upcoming important issues • Further develop and adapt the SWC categorization system to include newly integrated issues of the revised questionnaires • Make available prototype of overview books (guidelines, templates) • Develop analysis tools to assess the impact of technologies / approaches / and their spread with regard to global conventions and MDG's • Develop enhanced data analysis and evaluation tool -> decision support tool (validation/evaluation of SLM, planning of SLM)	• Finalize new WOCAT homepage and internet platform, incl. an interactive forum, an image database, documentation database. • Finalizing tools development: on-line QT/QM databases, continue work on off-line version • Development of training kit for QM, QT, QA: manuals, presentations, videos, etc. • Test Workshop for interactive map data entry / editing tool. • Finalize and testing of watershed management module • Further develop local DST (improve DESIRE tool)

Objectives / Expected results **	Activities*	Plan 2010
	• Adapt database to new questionnaire developments (in new on-line software) • Advance mapping system (new software/mapping tool in cooperation with FAO/UNEP to incorporate GIS/RS as well as expert knowledge on spatial distribution of degradation and conservation) • Develop new database system (new software), including feedback mechanism for quality assurance • Build an interactive data entry, viewing and updating system • Develop holistic methodology including (a) SLM identification through stakeholder workshops, (b) SWC documentation and evaluation with questionnaires and (c) comparative analysis of SWC options with the help of a decision support tool • Develop method and identify indicators for local level assessment (jointly with university of East Anglia, FAO/ UNEP/ UNU/ GEF/ UNDP) • Develop guidelines for documentation, evaluation and use of SLM knowledge (also for global and national review panels) • Set up training modules on SLM knowledge management using WOCAT tools	
3. Information sharing and networking *WOCAT Network enhanced and consolidated*	• Strengthen partner in the use of WOCAT • Add new partners and consortium members in SDC priority regions where WOCAT is not yet well established. • Sponsor participation of WOCAT partners at WWSMs to enhance exchange, contacts and cooperation between different countries • Participate in International Conferences and meetings to promote WOCAT (e.g. at events of UNCCD, IUSS and ISCO; LADA) • Integrate WOCAT in environmental and development processes at the global (UNCCD, UNCBD, UNFCCC, LADA) and at the national / regional level (government, NGO and bilateral projects). Give special attention to SDC priority countries • Continue and enhance the WOCAT e-mail list and newsletter • Establish and maintain links to other networks • Regional / international exchange visits • Improve platforms for communication to facilitate contacts and knowledge sharing between WOCAT partners • Add new partners and consortium members in regions where WOCAT is not yet well established.	• Support implementation of country and TF workplans with official WOCAT letter to partner institutions • WOCAT Management meeting (CDE, ISRIC, FAO) and monthly Skype conferences • Development of funding strategy and business plan • Participation in the preparation and training of regional training centres for LADA/WOCAT tools • Further enhance the WOCAT network and provide active support, backstopping and e-mail communication with a special focus on further promoting WOCAT in Central Asia.
4. Research, training and	• Conduct additional international 'Training for National Trainers /	• Meetings/conferences in 2010:

Objectives / Expected results **	Activities*	Plan 2010
education *Partners trained to run WOCAT programme in their countries and regions. Use of research to support WOCAT's mission and develop tools and outputs*	Facilitators' workshops • Provide support and expertise for additional national and regional initiation and training workshops, upon request from national / regional institutions • Facilitate / assist in links to research (e.g. DESIRE, COST, NCCR) • Publish in appropriate journals • Promote and provide supervision for MSc, PhD thesis addressing knowledge gaps • Develop training modules, manuals and teaching material for universities and extension services	– LANDCON, 11-15 October 2010 Xian Shaagxi, China – WAD meetings – launch SAhelCAT – ISCO Chile, 8-11 November 2010. – Haiti, 1-5 March 2010 • Training: – Conduct training for trainers on QT/QA, QM, QW? (after the tools + databases are finalised) – WOCAT training workshop Mongolia, May/ June 2010 – National training Senegal (January/ February 2010) and regional workshop March/ April 2010 – Kagera Training-Workshop: Rwanda, Burundi, Tanzania, Uganda (River Basin) on LADA-WOCAT tools – Participation in the preparation and training of regional training centres for LADA/WOCAT tools • Education: – 3 day field course for MSc students about SLM in April 2010 – Supervision of various MSc and BSc studies related to SLM
5. Basic enabling activities at the global level *Keep the WOCAT programme and network running at a basic level*	• Maintain and update global DB • Organize one international WOCAT Workshop and Steering Meeting (WWSM) per year followed by proceedings • Produce newsletter (half-yearly, with active participation of national/regional initiatives) • Enhance e-mail communication and mailing list (WOCAT-L) • Keep website up-to-date • Build up a pool of trainers and trained specialists • Coordinate programme, and maintain good relations to donors • Update brochures, flyers, etc. (promotion of WOCAT) • Update WOCAT CD-ROM (every 3-4 years) • Invest in finding new donors	• Facilitate taskforces on mapping, decision support, watershed module (and impact monitoring) • Secure new and continued funding • Support implementation of country and TF workplans with official WOCAT letter to partner institutions

• Objectives / Expected results as stated in the funding proposal and activities listed.

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ANNEX 6: CONTENT CD-ROM

1. Proceedings: ProceedingsWWSM09.pdf

2. Photo selection

3. Presentations (see below)

Taskforce group work

- Taskforces
  - WWSM Introduction TF.ppt
  - DST-DESIREshort.ppt
  - Regional DSS Oct 2009_Lehman_RSA
  - TF-DSS
  - TF-DSS-summary&workplan
  - Taskforce_IM
  - TF Mapping2009.doc
  - Watershed WWSM09c.ppt

Progress reports and work plans

- Activities at the global level
  - CDE_SteeringMeeting.ppt
  - H_George2010BIP.pdf
  - ISRIC activities 2008-2009
- Activities at the national/ regional level
  - BANCAT Achivements-work-plan.ppt
  - CACILM.ppg
  - E-GCES_EricRoose.ppt
  - IC Pakistan.ppt
  - ICIMOD progress.ppt
  - Kathmanud University.ppt
  - Kazakhstan WOCAT 2009.ppt
  - Madagascar-wocat.ppt
  - Mongolia_WWSM2009.ppt
  - Moroccan report.ppt
  - Nepal SSMP_2009
  - Niger presentationWWSM.ppt
  - Sénégal WOCAT.ppt
  - SWALIM Report 2009-Somalia.ppt
  - WOCAT-China.ppt

WOCAT-DESIRE symposium

- Morning presentations
  - ALaouina_MoroccoDESIRE.ppt
  - CRitsema_DESIRE.ppt
  - GBenoit.ppt
  - HPLliniger_WOCAT.ppt
  - MarkReed.ppt
- Afternoon presentations
  - GvanLynden_WOCAT Map.ppt
  - IssamMachmachi_MoroccoDESIRE.ppt
  - LNjeru_SWALIM.ppt
  - Ouessar_EN_IRA
  - RoundTable.ppt
  - SallyBunning_LADA local.ppt
  - SiefKauffman_GWC.ppt