Workshop on **Assessment Methods for Prevention and Restoration Actions to Combat Desertification**
& **Second Plenary Coordination Meeting**

CAGLIARI – PULA-PIXINAMANNA, SARDINIA
4th-6th October 2010

Project: PRACTICE
Prevention and Restoration Actions to Combat Desertification.
An Integrated Assessment
Coordinator: V.R. Ramón Vallejo.
CEAM Foundation, Spain
Grant Agreement no.: 226818

Workshop on **Assessment Methods for Prevention and Restoration Actions to Combat Desertification**
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SARDEGNA RICERCHE CENTER – PULA-PIXINAMANNA, CAGLIARI, SARDINIA
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AGENDA

Oct-4	**Workshop on Assessment Methods for Prevention and Restoration Actions to Combat Desertification.**
9:00	Welcome; Logistics. *Claudio Zucca* (NRD) Meeting agenda and overview on PRACTICE Progress. *V. Ramón Vallejo* (CEAM)
9:30	WP2-WP3: PRACTICE Integrated and Participatory Protocol for Evaluation of Actions - General Structure and Key Steps. *Susana Bautista* (UA)
	Expert-based common indicators and methods
10:00	Ecosystem Services and Human-Environment Indicators: A Framework for the Assessment of Dryland Restoration *Stephen Whitfield* (ABDN)
10:30	RS-based Indicators and Methods for the Assessment of Restoration/Mitigation Actions *Achim Röder* (UTrier)
11:00	***Coffee break***
11:30	Ground-based Biophysical Indicators and Methods for the Assessment of Restoration/Mitigation Actions *Susana Bautista* (UA)
12:00	Socio-Economic Indicators for the Assessment of Actions to Combat Desertification *Laura Onofri* (CMCC)
12:30	Common Indicators – General Discussion
13:00	***Lunch***
	Participatory assessment
14:30	Tools for Stakeholder Identification and Engagement and Participatory Baseline Evaluation of Actions. *Barron Orr* (UAriz & CEAM-UA)
16: 00	Participatory Evaluation Tools – General Discussion.
16: 30	***Conclusions*** on Expert-Based and Participatory Assessment sessions

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Oct-5	**Workshop on Assessment Methods for Prevention and Restoration Actions to Combat Desertification.**
	Participatory assessment (cont)
9: 00	Participatory Baseline Evaluation and Selection of Local Indicators in Spain and Sardinia – First Results *Claudio Zucca*, *Massimo d'Angelo*, and *Laura Congiu* (NRD-EFS) and *Anahí Ocampo* and Anna M. Urgeghe (UA)
10: 00	Participatory Baseline Evaluation and Selection of Local Indicators in South Africa (Kalahari) – First Results *Klaus Kellner*, *Yolandi Els* (NWU) and *Taryn Kong* (NWU-UAriz)
10:30	Integrating and Weighting Indicators – Demonstration and discussion session with Stakeholder-Platform representatives. *Anahí Ocampo* (UA-UAriz)
12:00	***Lunch***
13:30	Field-site visit *R. Scotti & M. D'Angelo* Training session on Ground-based Indicators for Functional Assessment *A.G. Mayor*

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AGENDA

Oct-6	**Second Plenary Coordination Meeting. Sardegna Ricerche center. Pula**
9:00	Synthesis on Indicators and Methods for the Assessment of Actions to Combat Desertification. *Ramón Vallejo* (CEAM)
	Next steps on PRACTICE Integrated and Participatory Evaluation Protocol
9:20	Integrated Evaluation through Multi-Criteria Decision Analysis - An example from Agost site (Spain) *Jordi Cortina* (UA)
9:50	Photo-Voice – A Strategy for Engaging Stakeholders in Evaluation and Dissemination of Actions *Taryn Kong* (NWU-UAriz)
10:20	***Coffee break***
	WP1- PRACTICE Network & WP3 Implementation
11:00	PRACTICE Public Website *Eloi Ribero* (CEAM)
11:30	PRACTICE Databases *Ramón Vallejo* (CEAM)
12:00	WP3 Implementation Coordination. General Discussion *Claudio Zucca* (NRD)
13:00	***Lunch***
14:30	Working-Group Meetings on Implementation Strategies of PRACTICE Protocol : Field Assessment and Participatory Tools
15:00	Plenary discussion about the selection of Common Indicators and associated metrics. *Chair: Susana Bautista* (UA)
16:00	Reporting, Administration. Follow-up decisions *Ramón Vallejo* (CEAM)
17:00	***Closing Meeting***

PARTICIPANTS LIST

Name	Institution	Country
Ramon Vallejo	CEAM	Spain
Eloi Ribeiro	CEAM	Spain
Ángeles G. Mayor	CEAM	Spain
Barron Orr	UAriz-CEAM	USA/ Spain
Susana Bautista	UA	Spain
Anna Maria Urgeghe	UA	Spain
Anahí Ocampo-Melgar	UA-UAriz	Spain / USA
Jordi Cortina	UA	Spain
Mchich Derak	UA	Spain
Leopoldo Rojo Serrano	FUERM	Spain
Miriam Martin Vallejo	FUERM	Spain
Claudio Zucca	NRD	Italy
Roberto Scotti	NRD	Italy
Maurizio Mulas	NRD	Italy
Salvatore Madrau	NRD	Italy
Maria Laura Congiu	DIT	Italy
Silvia Musinu	NRD	Italy
Pier Paolo Roggero	NRD	Italy
Laura Onofri	CMCC	Italy
Lia Vasconcelos	LPN	Portugal
Esmeralda Luís	LPN	Portugal
Roeder Achim	UTrier	Germany
Wiebcke Hanke	UHAM	Germany
Papanastasis Vasilios	AUTh	Greece
Dimitris Chouvardas	AUTh	Greece
Stephen Withfield	ABDN	UK
Moshe Shachak	BGU	Israel
Arnon Karnieli	BGU	Israel
Itzhak Moshe	BGU	Israel

Tarin Paz	**BGU**	**Israel**
Marisela Pando Moreno	**UANL**	**Mexico**
Julio R. Gutierrez	**IEB**	**Chile**
Carmen Jorquera	**IEB**	**Chile**
Klaus Kellner	**NWU**	**South Africa**
Yolandi Els	**NWU**	**South Africa**
Taryn Kong	**NWU**	**South Africa**
Advisory Panel and Invited Experts		
Lucio Pires Do Rosario	**Focal Point**	**Portugal**
Richard Escadafal	**CST correspondent**	**France**
Jiri Hlavacek	**Focal Point**	**Czech Republic**
James F. Reynolds	**Aridnet**	**USA**
Janie Rioux	**FAO**	**Italy**
Local Stakeholders (Forest Managers)		
Massimo D'Angelo	**EFS**	**Italy**
Paolo Dui	**EFS**	**Italy**
Valentina Arghittu	**EFS**	**Italy**
Marcello Airi	**EFS**	**Italy**
Mauro Marongiu	**EFS**	**Italy**
Michele Peddes	**EFS**	**Italy**

Minutes

4th October 2010

Ramón Vallejo (CEAM)
Meeting agenda and overview on PRACTICE Progress.

R. Vallejo, PRACTICE coordinator, described the progress achieved during the 1st year of PRACTICE and the tasks to be accomplished during the 2nd and 3rd years. He also showed the updated list of PRACTICE LTEM sites and introduced the meeting agenda.

Susana Bautista (UA)
WP2-WP3: PRACTICE Integrated and Participatory Protocol for Evaluation of Actions - General Structure and Key Steps.

Susana Bautista gave an overall view about the progress achieved during the 1st year relative to the design of the PRACTICE Integrated and Participatory Protocol (IAPro) for the evaluation of actions to combat desertification, which is mostly done. The first task of the process was to define a framework for the evaluation of actions and the selection of indicators. The partners had already agreed that the framework for the selection of indicators had to be consistent with the Ecosystem Services Approach by the Millenium Ecosystem Assessment (MA) and the recommendations from UNCCD, CBD, and UNFCCC. The indicators selected will fall under two categories: common and local or site-specific indicators. Common indicators will be selected only by scientist and applied in all or most of the PRACTICE LTEM sites. Local or site-specific indicators will be proposed and selected in each site by the respective multistakeholder platform (also including scientists) through a participatory approach, and will integrate scientific and local knowledge. One of the main goals of the present meeting is to decide the list of Common indicators to be used for the IAPro, based on the work done by the PRACTICE Expert Assessment Board, which will be presented and discussed during this meeting.

S. Bautista also briefly described the general structure of the participatory protocol for evaluation of actions to be followed in PRACTICE. The structure of the participatory evaluation protocol includes 4 steps that would be discussed during the meeting: (1) identification and engagement of the multistakeholder platform, (2) baseline evaluation of actions and selection of indicators, (3) weighting of indicators, and (4) final evaluation of actions. S. Bautista added that steps 1 and 2 were already designed, and also partly implemented and tested in three PRACTICE LTEM sites (located in Spain, Italy, and South Africa).

Discussion

. Pier Paolo Roggero asked about the number of iterations of the participatory process. S. Bautista answered that for the whole protocol there would be just one iteration.

. Julio Gutiérrez asked whether the participatory process would take place for each team or for the entire PRACTICE team. S. Bautista clarified that the process would take place in each site and that the IAPro would be common, although some aspects like the weighting process mignt be site-specific.

. Some of the participants suggested that the indicators identified by the stakeholder platform might probably differ from those selected by the scientists. S. Bautista agreed and pointed out that this explains the benefits of integrating local and expert knowledge.

. Jiří Hlaváček asked if different levels of government would be involved in the participatory process and how knowledge efficiency could be guaranteed. He outlined the importance of transferring knowledge to managers that could be efficiently used. S. Bautista said that PRACTICE aims to fill this gap engaging the stakeholders in the process since the beginning to guarantee the efficiency of the knowledge transferred. Barron Orr added that the hypothesis was that engaging creates possibility: if stakeholders are engaged from early on, the rate of adoption may go up.

. Richard Escadafal asked what was meant by dissemination, which was mentioned by S. Bautista as a next step after the final evaluation of the actions. S. Bautista numbered different actions to be used as dissemination tools for PRACTICE, and added that some of them would be used by the stakeholders. For instance, the project website (just created and to be presented during the meeting) will be a collaborative site (all stakeholders will be able to upload videos, pictures, comments and experiences related to actions to combat desertification).

. Leopoldo Rojo suggested that the weighing of the indicators should better be called harmonization or combination as one key indicator might not be ranked with a high value. Susana agreed that labeling the process as rating, ranking or weighing may not be very appropriate as it is an integration process and not just a rating or weighing process. However, it is also true that we need to weigh the indicators for the Multi Criteria Analysis.

Expert-based common indicators and methods

Stephen Withfield (University of Aberdeen)

Ecosystem Services and Human-Environment Indicators: A Framework for the Assessment of Dryland Restoration

Stephen Withfield presented the framework for the selection of socio-ecological indicators, and the correspondent indicators selected by his team. The framework is based in the Ecosystem Services Approach provided by the Millennium Ecosystem Assessment (MA), which draws links between ecosystem services (provisioning, regulating, cultural, and supporting) and human well-being. Defining the aims of dryland restoration within this framework might allow to use a common language to be applied across multiple stakeholders and to enable a quantitative comparative analysis. The socio-ecological indicators selected were: (1) provision of food, fiber and forage, (2) provision of fuel wood, (3) carbon sequestration, and (4) cultural landscapes and heritage values.

Discussion

. Ramón Vallejo and Jordi Cortina pointed that fuel wood is not relevant in all PRACTICE sites. It was suggested that the fuel wood indicator was grouped with the provision of food, fiber, and forage**.**

Achim Röder (UTrier)

RS-based Indicators and Methods for the Assessment of Restoration and Mitigation Actions

Achim Röder gave an overview about the different sources of remote sensing-based data that could be used for the evaluation of restoration actions to fight desertification. RS-data would be mainly related to the analysis of changes in land use/land cover categories. Due to the broad variety of RS-methods, with contrasted spatial and temporal resolutions, time-series availability, etc., A. Röder outlined the importance of the knowledge about the actions applied, the background conditions, and the goals pursued to chose the appropriate set of methods. For PRACTICE, he proposed (i) local scale imagery (back until 1984; 1972 if Landsat MSS is included) as the baseline observation scale, (ii) land use/land cover category and vegetation cover across time as the key mapping variables, (iii) change vectors and trends as secondary variables, and (iv) integrated assessment concepts based on the former data (e.g., productivity) as a third level, where possible. He also stressed that field data could dramatically improve insight in ecosystem dynamics and that, wherever feasible, such data should be incorporated in the analysis.

Discussion

. During his talk, Achim Röder outlined that atmospherical issues would be part of the image correction when Landsat is used. Relative to this comment, Jim Reynolds asked about land surface issues (e.g., topography) and A. Röder clarified that they are also included in the correction of the RS-images.

. Several participants showed their concern about the reliability of indicators based on NDVI due to its different drawbacks (e.g., an increase in NDVI is possible without an increase in vegetation). A. Röder agreed that NDVI was not a perfect indicator but it is easy to obtain, broadly used, and disaggregating the time components of the signal can improve the effectiveness of the index.

. Achim Röder stressed that model calibration and data validation is always needed for RS-data classification and gave as an example the use of vegetation transects. S. Bautista said that this would only validate vegetation cover and asked about the validation of other proxies such as productivity. A. Röder answered that generally they can be confident about the image correction if they validate the reliability of some key proxies such as vegetation cover. He added that a corrected RS-image could be used to validate another image.

. Ramón Vallejo asked if rainfall efficiency estimated from RS-images could be obtained for all PRACTICE sites. A. Röder said that interpolating rainfall data is difficult. Susana Bautista commented that there might be no need for rainfall interpolation as many PRACTICE sites are small enough and rainfall data from few raingages could be assigned to the whole restored area (with corrections if needed), and this would be sufficient to capture the variation in time that we are interested in. S. Bautista stressed that in order to assess the effect of the actions on plant cover status and productivity, we need to consider rainfall in the analyses (e.g., comparing temporal trends in pixels within the different actions (taken from LANDSAT) as a function of the temporal trends in rainfall). S. Bautista also suggested that the secondary variables proposed by Achim should be of higher priority as they cannot be easily addressed from the ground. A. Röder clarified that the order he proposed was related to the sequence of the work needed to get the variables and not to the importance of the variables.

Susana Bautista (UA-CEAM team)

Ground-based Biophysical Indicators and Methods for the Assessment of Restoration/Mitigation Actions

Susana Bautista suggested a group of ground-based (GB) indicators consistent with the framework described in her former presentation. She stressed that the GB-indicators selected should be few, have a high scientific support, and be relatively easy-to-measure-and-communicate proxies. The general indicators proposed were: (1) water and soil conservation, (2) C sequestration and (3) biodiversity.

Discussion

. Jim Reynolds asked if only diversity of vascular plants was going to be evaluated or if other elements such as biological crust could be also considered. S. Bautista answered that the cover of biological crusts is also included in the evaluation of soil surface condition. She added that different aspects of plant diversity that could be important in some of the sites (e.g., invasive species) could also be evaluated. Furthermore, other important components of biodiversity would probably be suggested as site-specific indicators by the multistakeholder platforms.

. Some of the participants shared their concern about the effort required to obtain the common indicators proposed. S. Bautista commented that PRACTICE is a supported action and not a scientific project and therefore the idea is to use available data in the different sites. However, she reminded that during the kick-off meeting the partners agreed on collecting new selected data to help to evaluate the IAPro. S. Bautista and R. Vallejo also stressed that the methods proposed to obtain the selected common indicators were simple and, if some were not available in the different sites, the effort to measure them would be small. Jim Reynolds outlined the great opportunity that PRACTICE offers to test the possibility of coming up with a group of indicators broadly applicable that are effective, and a method that integrates perspectives from both stakeholders and scientists to evaluate actions to combat desertification in different countries.

Laura Onofri (**FEEM)**

Socio-economic Indicators for the Assessment of Actions to Combat Desertification

Laura Onofri gave some methodological background for the economic valuation of actions to combat desertification, pointing that it should focus on (i) comparing different situations before and after the implementation of the actions and (ii) valuating costs and benefits of those actions. She proposed several socio-economic indicators for PRACTICE such as land productivity, domestic prices of selected crops, labour, water and land costs/prices, employment data, population income, productivity of land, and cost-effective indicator.

Discussion

. Klaus Kellner (NWU) pointed out the challenge that some stakeholders could be sensitive to provide financial information. Laura Onofri answered that this information could be inferred using proxies such as the condition of a house, car, etc. Richard Escadafal gave an example of socio-economists using the number of people wearing shoes and the type of metal roof that people had as proxies for local measurement of socio-economic effects in Madagascar.

. Jim Reynolds pointed out that in remote communities of developing countries exchanges are not monetary. Laura Onofri answered that exchanges could be considered with relative values.

. Susana Bautista asked how would the indicators account for the differences in prices as they are often fixed by global markets. L. Onofri answered that the indicators depend on certain assumptions being made. Ramon Vallejo pointed out that the price may change but the core metric should not depend on the price, using "productivity" as an example.

. Several participants were concerned about the dependency of socio-economic indicators on market fluctuations.

. Susana Bautista stressed that the idea was to evaluate the economic impacts of actions over a wide range of metrics and not to evaluate the economic value of the impacts of the actions.

Participatory assessment

Barron Orr (UArizona)

Tools for Stakeholder Identification and Engagement and Participatory Baseline Evaluation of Actions

First of all, Barron Orr commented that since the draft protocol of the participatory evaluation had already been e-mailed to the partners, his presentation was meant to mainly be an open discussion on the protocol. He described the first 2 steps of the participatory process for the evaluation of actions: (1) identification and engagement of the multistakeholder platform, and (2) baseline evaluation of actions and indicator selection. He mentioned that these steps had been already initiated in three of the PRACTICE sites, in Spain (Ventós), Italy (Pixinamanna), and SouthAfrica (Kalahari), and that the 2nd day of the meeting there would be three presentations on the preliminary results obtained.

Barron Orr highlighted the importance of the quality of the interviews and stressed that each partner should have a social scientist involved in the process. He also mentioned the tools provided to facilitate the implementation of the participatory evaluation: guidelines; protocol templates (with main information to be captured and examples of questions that can be used); data-log spreadsheets in order to organize and compile the information in an harmonized way.

Barron Orr then described the key elements of step 2: the stakeholder evaluation of actions (positive and negative results/impacts/consequences of each action), and the stakeholder-based signs (indicators) used for this evaluation (which particular issues/variables are they taking into account in order to assess how well, or not, the actions are working.

Barron Orr said that the questions on signs/indicators are the hardest because lay people do not normally think in terms of signs. Our goal is to think of what are the signs as best as we can.

Discussion

. Yolandi Els stressed that during the interview the interviewer had to focus on the objective of the question before asking.

. Vasilios Papanastasis asked about the need of interpreters. Barron answered that in some sites, the interviewers don't speak the stakeholders' language (e.g., Kalahari) and interpreters may be needed. He also asked about the time an interview might take. Anahi Ocampo and Laura Congiu answered one hour, and Taryn Kong answered one and a half hour.

. Yolandi Els raised the point that in the Kalahari they had used recording as part of the note-taking tools during the interview. B. Orr emphasized the importance to keep in mind that this was not a transcription type of data-capture for the data log. The data should be very concise and focused on the objectives of the specific questions. Taryn Kong (NWU, interview team in the Kalahari LTEM site) pointed that audio-recording was a very important back-up, particularly when there was a need for translation. B. Orr pointed out that it is important to keep it only as a back up and that manual note-taking should be the primary tool.

5th October 2010

Participatory assessment (cont.)

Laura Congiu (NRD)

Participatory Baseline Evaluation and Selection of Local Indicators in Sardinia (Pixinamanna)-First Results

Laura Congiu described the progress done in the implementation of the protocol of the participatory evaluation in *Pixinamanna* (Sardinia, Italy). She had interviewed 18 stakeholders (SH) to date and shared with the participants some details about different aspects of this process. For instance, that most of the people interviewed rated themselves quite high about their knowledge of the actions they were asked for, or that the same indicator might have a positive or negative connotation depending on the stakeholder (e.g. an increase of wildlife habitat was considered to be negative by a goat shepherd).

Discussion

. Barron Orr outlined the importance of the selection of the social scientist who is going to help with the implementation of the protocol in the different PRACTICE sites. It is key that he/she has a clear interest in participatory approaches.

. Barron Orr also reminded the importance of having a baseline evaluation at this point and that, in consequence, the interviewer should not give alternatives to the stakeholders about possible outcomes of the actions. Susana Bautista pointed that the interviewer could ask "why" to the stakeholder to prompt more discussion. Yolandi Els pointed to p.24 in the protocol draft and explained that they approached it in the Kalahari by asking the stakeholders how they think that they can improve an action. B. Orr said that though this is a different question in the protocol, it can also be used to indirectly capture stakeholders' views on positive and negative results of the actions. The interviewer should have always in mind the two main objectives of this step 2: to know about stakeholder perceptions on (1) the results of the actions, and (2) the indicators/criteria that should be considered when evaluating the actions.

Anahi Ocampo (UA)
Participatory Baseline Evaluation and Selection of Local Indicators in Spain (El Ventós)-First Results

Anahí Ocampo briefly described the main characteristics of *El Ventós* site (Agost, Spain). The actions being evaluated are: Alpha-grass steppe (no action), old Aleppo pine plantations on north-facing slopes (50-60s), Aleppo pine plantation (70-90s) on south-facing slopes, recharge dams, and check dams. A. Ocampo presented some preliminary results related to the interview process such as that, in coincidence with *Pixinamanna*, most of the stakeholders interviewed thought that they had a very good knowledge about the actions and were willing to participate in the evaluation process. A. Ocampo also showed a list of potential indicators of the success of the actions suggested by the people interviewed so far. Some of these indicators were raised at the end of the interview when the SHs were asked about any other criteria they would like to suggest (e.g., cost, local involvement on the decision).

Discussion

. Vasilios Papanastasis asked if, in the case of associations, the people interviewed were the director or other members. Barron Orr answered that the first contact is the head of the organization, but afterwards the head may recommend other members of the organization to be interviewed.

. Pier Paolo Roggero outlined the interest of interviewing old people that could give an idea about the conditions at the beginning of the actions. Richard Escadafal added that the initial conditions should be considered because it has consequences for future recommendations.

Taryn Kong & Yolandi Els (Uarizona & NWU)
Participatory Baseline Evaluation and Selection of Local Indicators in South Africa (Kalahari)-First Results

Taryn Kong and Yolandi Els shared with the participants their experience implementing the first steps of the PRACTICE Protocol in one of the South African sites, Kalahari. This LTEM site has several challenges such as interviewing people speaking a language that was unknown by one of the interviewers and the vast site area, around 1.2 million ha, with lack of telecommunication, which made indispensable the assistance of local guides. Local guides helped to arrange meetings, added credibility to the process, and facilitated farmers to talk openly.

The site has two main vegetation communities, dunes and bush, and the main land use is agricultural. Data collection was done in August 2010. In April 2010, the team conducted a first meeting with potential SHs to introduce PRACTICE. A leaflet written in Afrikaans was designed to give to SHs basic facts, contact information and what kind of participation was asked for, but without information about the action so they were not influenced. The potential SHs had received training from the National Extension Department from the local and national governments.

The main actions to be evaluated in Kalahari are brush packing (for dune stabilization), sowing seed or transplanting, surface modification (ripping, crapping), control of encroaching species, and grazing management. Ripping and sowing were the actions less known by the SHs, probably because they are recent actions and therefore the participants were not familiar with them. The list of indicators proposed by the SHs was also showed.

Discussion

. Taryn Kong commented that the interviewed SHs received PRACTICE promotional materials (t-shirts and bags) as a gratitude sing for their collaboration and as a mean to advertise the project. She outlined the importance of giving these items at the end of the interviews and not at the beginning.

Anahi Ocampo (UA)

Integrating and Weighting Indicators – Demonstration and Discussion Session with Stakeholder-Platform Representatives

The purpose of this practical session was to demonstrate to the project partners the method suggested for weighing the indicators suggested by the stakeholder platform (3rd Step of Protocol for Participatory Evaluation): ***"Pack of cards" revised SIMOS method***. Ten attendees were invited to be the participants of the demonstration. The participants were guided by A. Ocampo throughout the three simple steps of the exercise: (1) order a set of cards, that had indicators written on them, from the least to the most important criterion according to their opinion (from left to right); (2) separate those cards with "blank" cards according to the relative distance in importance between two successive criteria (or group of criteria), and (3) give a number indicating the relative difference in the importance between the lowest and the highest ranked indicators. The indicators written on the cards were suggested from the stakeholder platform of *El Ventós* site (Spain).

The output data of this exercise are the ranking of the indicators (represented by a letter code), the number of "blank" cards inserted between the indicators, and the number indicating the relative difference in the importance between the lowest and the highest ranked indicators. These data are introduced in a simple spreadsheet that calculates the weight for each indicator from each participant.

Discussion

. One of the participants pointed out that the indicators may not be clear to all stakeholders. Susana Bautista answered that the facilitator has to explain the meaning of the indicators at the beginning of the exercise. In this case, this step was skipped because it was an exercise for the project members.

. Pier Paolo Roggero (NRD) commented that the relative difference in the importance between the lowest and the highest ranked indicator could be very different from individual to individual. S. Bautista explained that the reason for this metric is to capture these differences in relative importance among the different individuals.

Field visit to Pixinamanna Forest (and demonstration of ground-based functional assessment of ecosystems)

Prior to the field visit, A.G. Mayor presented a summary of the method proposed for ground-based data collection, and L. Congiu and M. D'Angelo presented the main characteristics of the field site and the actions to be evaluated.

Angeles G. Mayor (CEAM)

Landscape Functional Analysis Modified for the PRACTICE Project: A Proposed Ground-based Data Collection Method

Ángeles G. Mayor gave a brief description of the method proposed for ground-based data collection. The method is a simplified version of the *Landscape Functional Analysis* (LFA) methodology developed by a group of CSIRO researchers (Tongway and Hindley 1995, 2004), which has been (or is being) applied in drylands of all continents including most of the PRACTICE partner countries. The methodology proposed has two main types of metrics: structural and functional. The main structural metrics are vegetation patch cover, vegetation patch pattern, and diversity of vascular plants. These metrics are measured from linear transects installed parallel to the main direction of resources flow (e.g., maximum slope in the case of runoff-transported resources). The functional metrics are indicators of soil surface condition and are obtained from seven soil surface features related to soil infiltration and nutrient cycling processes evaluated from 50x50-cm^2 sampling quadrats. In principle, these features would only be evaluated in spaces between vegetation patches to minimize the field-work effort without loosing key information. According to the experience of the UA-CEAM team, the functional status of these interpatch areas is generally very well correlated with the overall status of the landscape.

Further explanation on how to measure those metrics in the field would be given during a demonstration in the visit to the Pixinamanna Forest. A.G. Mayor showed an estimation of the sample size and the evaluation time per action needed. At minimum, three 50-m transects and five quadrats should be evaluated per action. If actions are greater than 10 ha, these numbers should be increased. The estimated evaluation time of these numbers of transects and quadrats was about five hours (per action).

Field visit to Pixinamanna Forest

A field-visit guide was distributed among the partners by the NRD and EFS colleagues. There were two main stops. In the first stop, by one recently reforested area that was burnt several years ago, Roberto Scotti and Massimo D’Angelo gave the basic background information about the site and the restoration actions applied in the area. The main discussion was about the plant species selected for the plantations and about the potential reduction in the fire hazard due to the treatments applied. The main types of actions that will be evaluated by PRACTICE are:

- Reforestation actions during the 50s, 60s, and 70s, using pines (*Pinus pinea*, *Pinus halepensis*) and cork oak (*Quercus suber*) trees, mainly aimed at reducing flood risk.

- Selective thinning on conifer stands during the last three decades to facilitate the native late-succesional hardwood species in order to improve the structural complexity of the ecosystem.

The second stop was to visit the “no-action” area, where no restoration action has been applied and which is still used as an actively grazed area. In this area, A.G. Mayor performed a demonstration of the modified LFA methodology. The demonstration was done along one linear transect that was installed parallel to the maximum slope and in one 50x50-cm quadrat. Vasilios Papanastasis volunteered to write down the collected data on a data sheet. Several specific questions were discuss during the measurements, mainly concerning the criteria to consistently identify vegetation patches and interpatches.

A.G. Mayor and S. Bautista stressed that only the long-lasting vegetation patches that have the potential of acting as resource (soil, water) sinks in the long-term are considered to be true patches (“sinks”) by the method. Therefore, patches of annual plants or patches just made of litter are not measured as patches but as part of the interpatches. This fact is also consistent with PRACTICE approach of focusing on slow variables. Surface rocks are not considered to be sinks, though they may act as bridges connecting plant patches and this way enlarging the total patch width. There were some questions on how to deal with the potential intra- and inter-annual variability in plant cover/pattern, on the need of repeating in time this assessment, and on best time in the year to implement it. S. Bautista reminded to the partners that the main goal of this assessment is to compare between actions, and therefore the most important issue is to assess the different actions in a comparable time window. If the results and impacts of the actions applied are relatively consolidated, a single assessment in time (during the second PRACTICE year) would be enough, and the best time in the year would be right before the main redistribution of resources happen in the area (e.g., before the main rainy season in the area) or during the peak in the growing season, in order to capture the maximum cover. If the impacts of the action are still very dynamic, it is advisable to repeat the assessment several times and compare the trends between actions.

6th October 2010

Second Plenary PRACTICE Coordination Meeting

Anahi Ocampo (UA-UAriz)

Prelimimary Results from the Integrating and Weighting Indicator Demonstration

Anahí Ocampo showed some results from the demonstration of the method for weighing indicators (revised "Pack of cards") performed the previous day. She also described the strengths of the method for the PRACTICE purpose such as: (i) it is simple and visual, allowing the interaction with the person to capture different perceptions and interests in a short period of time, (ii) it is useful in contexts that are not familiar with numbers, iii) it avoids trade-offs between criteria, and (iii) it does not require a special software.

The method is an "ordering of relative importance" type of questionnaire, used to elicit the criteria importance for outranking analysis. The outranking analysis is a technique that is base in the perception that no trade-offs should be done in environmental analysis. The method can work with indicators that are related to each other, and it deals with quantitative and qualitative data.

Discussion

. Klaus Kellner commented that, due to the magnitude of the area evaluated in South Africa, the sites can only be visited once during the participatory evaluation process. Susana Bautista said that some of the steps of the evaluation can be combined and that would allow flexibility for sites with specific constraints. However, the process needs, at least, two interaction events with the stakeholders during the whole PRACTICE period.

. It was pointed out by one of the participants that this type of method might not be suitable for being used with policy-makers because it seems to be a game. Barron Orr answered that the way in which the activity is conducted has great influence on how it is perceived, and that, of course, this method is meant to be a serious activity and so it has to be put in practice. He added that, in any case, according to his experience with this type of methods, academics and resource managers do appreciate these approaches.

Jordi Cortina (UA)

An evaluation of restoration actions using ecosystem services in a semiarid landscape

Jordi Cortina presented the implementation in *El Ventós* LTEM site (Agost, Spain) of a Multicriteria Decision Analyses method (modified Analytic Hierarchy Process, AHP model) to evaluate restoration actions combining data on ecosystem services and local stakeholder's perceptions as metrics. The excercise was the subject of the Master of

Science Thesis of Mchich Derak (UA) and was presented as an example of Multicriteria Decision Analysis that could be applied to PRACTICE data. The results given by the method are meant to provide assistance for the decisión-making process and not as an absolute value of goodness of the action. Some quality indices (e.g., consistency index) suggested that the final product was consistent.

Discussion

. Several participants were surprised by the result of the rainfed fields being one of the actions with the lower scores. J. Cortina commented that it might be related to people not seeing El Ventós site as a productive area.

Taryn Kong

PhotoVoice-A Strategy for Engaging Stakeholders in Evaluation and Dissemination of Actions

Taryn Kong introduced to the audience a tool for engaging SHs named Photovoice that the team tested in the Kalahari site. Photovoice consist in puting basic photographic cameras in the hands of SHs and ask them to capture what they consider to be land degradation, good land management, and signs for evaluation management effects. The main goals of using this tool in PRACTICE are to (i) engage stakeholders to participate in the translation of the emic knowledge about restoration and mitigation practices, effects and signs, (ii) produce materials that can facilitate critical thinking, open discussions and social learning, and (iii) create material (i.e., photo-narratives) for knowledge dissemination.

Photovoice was introduced to the SHs at the end of the interviews for not biasing the baseline evaluation of the actions. At present, 17 SHs in Kalahari used Photovoice who took 1066 valid pictures (non-personal shots). Some examples were showed. Photovoice showed some other powerful outcomes such as that (1) pictures showed things that were not raised during the interview, and (2) it facilitated the participation of women in the evaluation.

Discussion

. Barron Orr outlined the usefulness of this method to be participatory in the disemination of PRACTICE outcomes and to increase the stakeholder motivation.

. Achim Röder asked how long the camera was left to the people. T. Kong answere 2-3 days. He suggested adding a georeference logger as a potentially useful, cheap complement.

Eloi Ribero (CEAM)

PRACTICE Public Website

Eloi Ribero presented the PRACTICE NetWeb (www.ceam.es/practice). He described the website objectives, the free software that has been used to create it, the users, roles and permissions defined, and finally, he made a demonstration of the website going trough all the different options it offers.

Discussion

. Achim Röder asked if the PRACTICE Intranet, which is only for internal use (project partners) and the PRACTICE NetWeb, which is a public website, could be combined. E. Ribero said that they NetWeb will include an Intranet that will gradually substitute our current GoogleSite Intranet. A. Röder suggested including the PRACTICE contract number in the website and was accepted.

. Some of the partners asked if all the contents of the netweb would be in english. Ramon Vallejo said that of course common information and documents should be in English, but there is room for posting information in other partners' languages depending on our capability to make translations.

. Richard Escadafal asked whether the website could be kept as an open site without need for password to access, at least to part of the contents. E. Ribero said that he would change the website so that it would not require to register as an user in order to access.

. Ramón Vallejo added that the PRACTICE NetWeb would have the link to the common and site-specific indicators database of PRACTICE LTEM sites, and more detailed information of selected sites such as specific site description, downloading of files, and site contacts.

. Susana Bautista added that the idea is to have a shared monitoring tool. The data related to common and site-specific indicators should be uploaded from a site as soon as it is available so that all can consult it at the same time. She added that PRACTICE coordination team will provide a log to help with the harmonization process, and that stakeholders could also upload data.

Ramón Vallejo (CEAM)
PRACTICE Databases

Ramón Vallejo described the general structure of the PRACTICE databases. Selected synthetic information from the final databases (i.e., list of common and site-specific indicators for all LTEM sites) will be open to public in the NetWeb. Specific site description, download files, and contacts for every site will also be included in the PRACTICE NetWeb. At this stage, the information (complete information on the LTEM sites, database for IAPro, GB- and RS-assessments, etc.) will be shared between the PRACTICE partners through the PRACTICE Intranet. R. Vallejo stressed this information should be uploaded as soon as possible.

Claudio Zucca
WP3 Implementation Coordination. General Discussion

Claudio Zucca reminded that WP3 objective is to apply the evaluation protocols (WP2) in the LTEM sites, and that Task 3.1 starts now (13th month of the project). In view of favoring a parallel, harmonized PA work in each site, in agreement with the other partners in charge for the definition of the PA protocol, he proposed the following schedule for the different PA subtasks:

- *As soon as possible*: each partner should communicate the contact person for the participatory approach (Steps 1 and 2 of IAPro).

- (end) October 2010: first round of contact (the WP coordination contacts each Site partner) to discuss possible doubts and problems.

- *(mid) November 2010*: suggested deadline (in each site) for having internal team discussion, starting the preparation of interview material and the definition of initial categories/potential stakeholders.

- *(mid) December 2010*: second round of contact to share results, possibly after the first (5) interviews.

- *(mid) March 2011*: all partners should upload the preliminary version (as complete as possible) of steps 1 and 2 to share monitoring progress.

- *(end) March 2011*: first round of contact on step 3

- *May 2011*: all partners upload final version of the PA database and report during the Portugal meeting in Castro Verde. Some of the partners might have also implemented step 3 of IAPro.

C. Zucca adds that it will be possible to propose specific implementation and monitoring milestones related to the other Protocols as soon as they will be available.

C. Zucca also proposed that in one month all partners with LTEM sites report about the site-specific relevance, the type of available data, and the data that would need to be gathered for the proposed common indicators for each of the actions. That would be aimed to obtain an early, rough idea about their practical feasibility in the different sites. C. Zucca and R. Vallejo stressed they were not asking for the detailed data but for rough information about the type of data available in order to have a sense of the situation.

Discussion

. Dimitris Chouvardas asked why step 3 needs to be done in March. Claudio said that some teams might be advanced enough to start step 3 before March. Susana said that for partner such as the South African one, the steps 3 and 4 may be grouped together.

Working-Group Meetings on Implementation Strategies of PRACTICE Protocol

. Barron Orr stressed that consent from the stakeholders to participate in the process is indispensable.

. Dimitris Chouvardas asked about the approach to consent and start interviewing. Laura Congiu gave an example of how she introduced herself and asked the participants for a talk rather than an interview, survey or questionnaire.

. Dimitris Chouvardas asked about the note-taking approach during the interview. Anahi Ocampo said that she was a note-taker and the social scientist in her team advised her to ask no questions during the interviews. Carmen Jorquera recommended two people for the interviewing team: one to interview and the other to take notes. She added that sometimes recording is better because then you have the raw data. B. Orr warned not to shift this into a transcript type of data collection. The recording should only be a backup. He added that there is a huge debate over note-taking vs.

recording (as main source of data). C. Jorquera agreed. L. Congiu said that recording could not be used for interviews with employees of the Forest Service in Pixinamanna, while the policy-makers welcomed recording. B. Orr said that if anyone needed information on recorders and supplies could ask Taryn Kong. T. Kong said that she had tested two recorders and researched on a bunch of them and that she would be happy to share this information.

. Dimitris Chouvardas asked about the tools that could be used for note-taking. B. Orr answered that there were 3 alternatives: (1) transcript-like format, (1) discussion outline format, and (3) table format. Taryn Kong explained how the table format was used in South Africa. Yolandi Els added that the interviewer has to learn the discussion outline very well, and that she used her own outline for the interview. L. Vasconcelos said that one needs to be as neutral as possible during the interview. Y. Els said that interviews in South Africa could get very political and agreed on the importance of remaining neutral. Someone ask how to react if a stakeholder asked about the position of the interviewer. B. Orr said that the interviewers could tell them that they are interested in their opinions, and try to bring the attention back to them by asking a question.

. Barron Orr asked the participants to share an example of a difficult question. T. Kong gave the example of stakeholders in Mier had difficulties with abstraction and the use of numbers to rate an action. Some photographs and different size square boxes were used as props to help with the rating process. Y. Els warned that photographs might bias stakeholders' opinion and gave example of stakeholders who ranked actions that they didn't know based on the photographs. L. Congiu agreed that the photographs had to be chosen very carefully.

. Dimitris Chouvardas asked about the post-interview data management. B. Orr said that first the interviewer had to talk with the note-taker to confer the understanding and to extract the data for the data log. C. Jorquera added that there were two kinds of checking if interview was done in the proper way: (1) information processing, and (2) quality analysis of the interview.

Ramón Vallejo (CEAM)
Reporting, Administration. Follow-up decisions

Ramón Vallejo announced that all the meeting presentations had already been uploaded in PRACTICE Intranet are were fully accessible to the partners, the Advisory Panel members, and the invited experts to this meeting, and that during the coming weeks, the different templates and documents needed for progressing with the protocol implementation will be also uploaded in the Intranet. He then informed the partners about reporting and administration issues, and closed the meeting.