



KM:Land Initiative

***Medium Sized Project:
Ensuring Impacts from SLM – Development of a Global Indicator System***

2nd Expert Advisory Group Meeting
21-23 January 2008, Bonn, Germany

Meeting Report

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1. Introduction

The GEF Medium-sized Project (MSP) KM:Land was designed to address the lack of knowledge management for mitigating land degradation in the Land Degradation (LD) Focal Area (FA) of the Global Environment Facility (GEF), as highlighted by the Project Development Facility (PDF). Knowledge management includes information management and dissemination, as well as knowledge enhancement and capacity building for adaptive management. The KM:Land initiative will develop indicators to demonstrate the impact derived from actions in the LD FA, will establish a learning network to strengthen knowledge exchange across the GEF LD portfolio, and will lay the foundations for a harmonized interagency monitoring system for adaptive management.

The United Nations University – Institute on Water, Environment and Health (UNU-INWEH) is the executing agency for the KM:Land initiative, and is supported by an Inter-Agency Working Group (IAWG) and an Expert Advisory Group (EAG). The IAWG consists of members of the LD Task Force (LD TF) and has the primary responsibility to review progress of the MSP and enhance interagency cooperation. The EAG consists of a group of experts selected by the KM:Land Project Team and the IAWG, and was set up to provide scientific guidance and advice to the project.

UNU-INWEH convened the second meeting of the EAG from 21-23 January 2008, which was hosted by the United Nations University – Institute for Environment and Human Security (UNU-EHS) in Bonn, Germany. The first two days of the EAG meeting were attended by members of the EAG and the UNU project team, who were joined on the third day by the IAWG. The main purpose of the EAG meeting was to follow up on discussions that took place during the First Expert Workshop held in Selfoss from 28-30 August 2007, and to pursue the creation of an indicator system to track progress across the GEF LD FA and its portfolio of projects.

Since its inception, the KM:Land initiative made progress on a number of components, particularly on the selection of global-level indicator categories, as per discussions at the First Expert Workshop; a review of methodologies and data availability for these global-level indicators, as provided by the Centre for International Earth Science Information Network (CIESIN); and, on the Learning Network through a first exchange of lessons learned with existing learning networks at the First Expert Workshop.

Accordingly, the specific objectives of the EAG meeting were set out as follows:

- To finalize the selection of global-level indicators and refine measurement methodologies;
- To review the approach to project-level indicators and finalize indicator selection;
- To assess technical and institutional capacity needs related to indicator use;
- To plan for the regional training workshops, including development of guidance materials;
- To plan the way forward for pilot testing of indicators in selected projects;
- To outline the functionality and next steps of the Learning Network;
- To outline the structure of the report to the GEF Council and allocate tasks to the EAG members.

The first two days of the EAG meeting (21-22 January) were dedicated to discussions on the final selection of global-level indicators and defining measurement methodologies; the reports to the GEF Council; the development of guidance materials and regional training workshops; and, key elements for establishing a Learning Network. The third day of the meeting (23 January) focused on deciding on an approach to the development of project-level indicators, identifying a set of project-level indicators, and

initiating a preliminary assessment of capacity needs related to indicator use. The full agenda to the EAG meeting can be found in Annex 2 to this report.

2. Outcomes of the EAG meeting

2.1. General Results

The discussions and presentations that took place during the EAG meeting (see Annex 1) were critical in proceeding with a number of components of the KM:Land initiative. By the end of the meeting, EAG members arrived at a consensus on:

1. A final set of global-level indicators, for immediate application in the GEF LD portfolio, and a wish list of indicators to be developed over the next 2-10 years;
2. The need to respond to the changing requirements within GEF by identifying both impact and outcome indicators at the project-level and developing a scorecard or tracking tool system as a basis for adaptive management at this level;
3. Next steps to proceed with the KM:Land Learning Network, including the establishment of an online portal on the KM:Land website;
4. The preliminary structure and content for the reports to GEF Council and allocation of tasks.

2.2. Specific Results and Next Steps

The following section outlines the specific outcomes for each session that took place during the EAG meeting, including recommendations and decisions that emerged from the discussions. It also describes the next steps that need to be taken, as agreed upon during the meeting.

2.2.1. Global-level Indicators

This session was guided by a presentation of Alex de Sherbinin (CIESIN) on measurement methodologies for the global-level indicator categories selected at the First Expert Workshop.

This session resulted in a consensus among EAG members that the application of global-level indicators developed by the KM:Land initiative should be used for the purpose of **prioritising GEF resource allocation**; while monitoring of the impact of GEF investments should be informed by measurements at the project-level, possibly through a different set of indicators (see 2.2.2., below). This was acknowledged to be a shift in the purpose of global-level indicators that were initially supposed to measure global impacts derived from GEF-funded initiatives to mitigate land degradation. Emphasis was placed on ensuring consistent global measurements of global-level indicators in order to provide reliable and useful tools that support GEF decision-making regarding resource allocation.

The EAG identified the following set of global-level indicators for which data and methodologies are readily available, for immediate use:

Land Cover

- Land cover: measured as fractions of cropland, forests, rangeland, urban areas etc. This information will provide the context required for the interpretation of the other selected indicators.

Land Productivity

- Greenness Measure: in order to reflect land productivity trends and calculated using the decadal trend in annually accumulated Normalized Difference Vegetation Index (NDVI), interpreted in conjunction with trends in rainfall and temperature.

Water Availability

- Water availability per capita (surface and groundwater): derived from a combination of supply (river flow, groundwater stock, run off), abstraction and amount per head, for both surface and groundwater.

Rural Income

- Fraction of population below \$1/day: as a measure that is globally used and accepted.
- Income per capita distribution.

As a follow-up to the meeting, and with the input of the EAG, CIESIN will prepare a status report that provides structured information about measurement methodologies for the selected global-level indicators (please see Next Steps, below).

The EAG further recommended that a list of additional indicators be developed in the mid-term range, over the next 2-10 years. These include:

State Indicator

- Total soil carbon: currently being developed and will be available hopefully within the next 2 years.

Impact on Ecosystem Services: Land Productivity for Three Land Cover Classes

- Total factor crop productivity (or crop yield): interpreted in conjunction with climatic and soil conditions, inputs (fertilisers and irrigation) and potential yields.
- Forest productivity: currently there is no globally consistent approach available.
- Rangeland productivity: is equivalent to NPP-based measure proposed above, to be used for expressing land productivity trends.

Human Well-being

- Development of a new index based on the number of people affected by inadequate ecosystem service supply. The measure would be calculated as a function of ecosystem services (water, food, fuel etc.) juxtaposed with available income, and interpreted in conjunction with vulnerability of the exposed population (see Figure 1). EAG members recognised the strategic significance of such an indicator and its potential to monitor impacts across and beyond GEF Focal Areas. It was therefore recommended that the methodology be further developed and refined under the lead of the EAG.

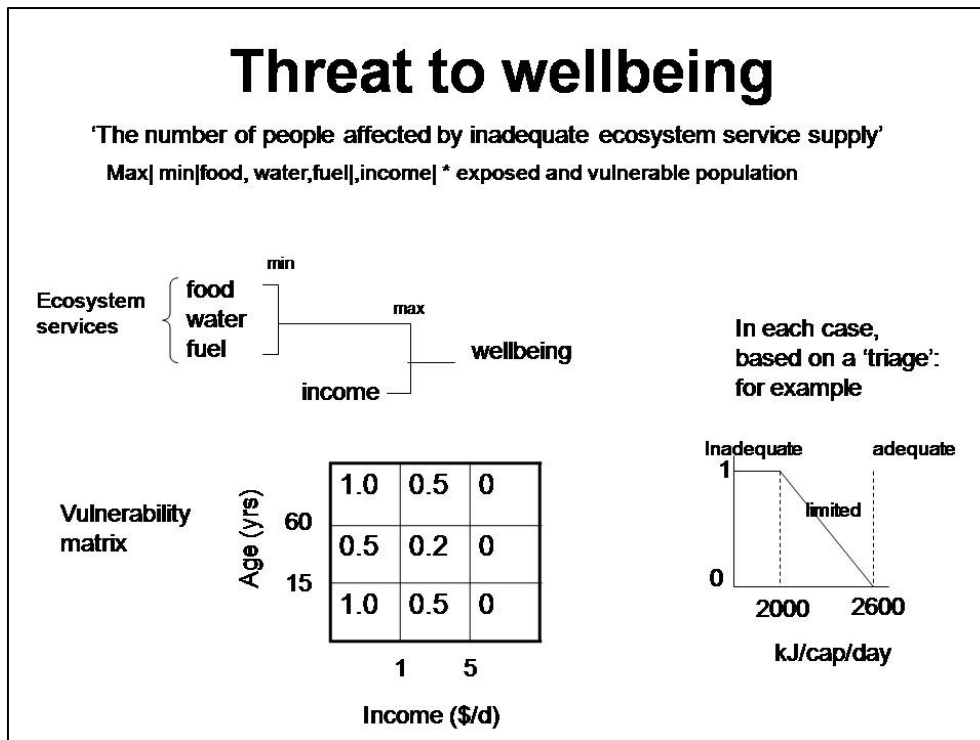


Figure 1: Human Well-being Index, based on number of people affected by inadequate ecosystem service supply.

Experts emphasized that measurements of any global-level indicator will allow for the detection of signals that will require, however, further interpretation and analysis of the local situation. Keeping this in mind will ensure that factors beyond the control of GEF projects, such as conflicts or changes in global trade schemes, are taken into account when interpreting environmental and livelihood trends in various regions.

EAG members also agreed that once the indicators are selected, they will need to be further categorized by establishing them within benchmarks. This will further enhance the usefulness of the indicator system for decision-making. For example, it was suggested to develop an early warning system for land degradation with "red-yellow-green" categories.

Furthermore, it was decided that the indicators related to soil vulnerability should not be measured at the global level, as land productivity will be measured indirectly through the methodologies proposed above. However, it was proposed that soil-related indicators be included in the toolboxes for project managers.

Finally, the Experts highlighted that data collection and analysis for the global-level indicators would be the responsibility of the GEF Sec, together with the GEF Monitoring & Evaluation (M&E) unit.

Next Steps

The following next steps were agreed upon during the session on global-level indicators:

1. Bob Scholes (CSIR) and David Dent (ISRIC) will provide a write-up outlining methodologies proposed for the Greenness Measure.
2. Under the guidance of the EAG, CIESIN will adjust and complete profiles for the selected global-level indicators including, *inter alia*, description of methodologies, confirmation of data availability, sensitivity analyses based on time series, indication of cost implications and production of global maps. The final draft report will be sent to the EAG for comments and inputs.
3. In the medium-term, EAG will take the lead for developing the proposed Human Well-being Index, with funding possibilities through the GEF Sec to be explored.

2.2.2. Project-level Indicators

Presentations by David Niemeijer (KM:Land Project Team) on a proposed approach to developing project-level indicators, and by Caroline King (KM:Land Project Team) on the current use of global-level indicators in projects provided stimuli for the discussions of this session.

The major recommendation that emerged from the discussions on project-level indicators emphasized the need to distinguish between two different types of project-level indicators:

- 1) **Impact indicators** measured at the project-level in order to track the impact of GEF projects accumulated at the portfolio level. The information derived from these indicators will be rolled up to the portfolio level in order to provide evidence for environmental and livelihood benefits derived from GEF LD FA investments.
- 2) **Outcome indicators** measured at the project-level in order to monitor the performance of GEF projects and progress towards outcomes of GEF LD FA as a basis for adaptive management. This category of indicators would need to be embedded in a fully functional scorecard or tracking tool system. It was recognised that the development of outcome indicators goes beyond the original mandate of the KM:Land initiative, as defined in the MSP logical framework at the project's inception, although this MSP is set to deliver an approach for the development of a tracking tool.

For the **impact indicators**, EAG members proposed the development of an index based on trends in land productivity (defined as the capacity to deliver a list of ecosystem services such as water, wood, crops etc.) combined with changes in the well-being of affected and vulnerable populations (see also Figure 2). This index would be measured for a project's intended impact area (project footprint) in all ecosystem types, including cropland, rangeland, forests and wetlands, at the inception of a project, at project termination and at time x after project termination. This index should be designed in order to include assessment of implications of GEF interventions for future generations, populations outside of a project area, and other GEF Focal Areas.

It was stressed that the methodology to measure the proposed index would need to be developed and that the EAG could play a key role in this task. It is believed that this index will facilitate enhanced collaboration between GEF Focal Areas due to its cross-cutting relevance and has a potential for broad uptake beyond GEF.

Project impact indicators

	Area of each Included ecosystem	Productivity	Wellbeing Index	Stunting index
Start of Project				
End of project				
At time X in the future				Not applicable
Comparison at time X				Not applicable

Area=area of all ecosystems within the project footprint
Productivity=delivery rate (per key service per ecosystem)
Wellbeing=number and proportion of people moved out of most vulnerable class
Stunting index=weight for age-height class, per vulnerability group

Figure 2: Overview of suggested information needed for measuring the proposed index.

For the **outcome indicators**, the priority of the GEF and partner agencies towards the development of a scorecard- or tracking tool-based system, in order to provide project managers with effective tools for adaptive management, needs to be taken into consideration. It was emphasised that the proposed methodology should help project managers to adjust the intervention logic of their projects by assessing whether or not the implicit and explicit assumptions and hypotheses about impact pathways are justified. The tools should therefore be designed in such a way that they provide the basis for learning within projects.

Reviewing and learning from existing scorecards or tracking tools, such as those developed for the International Waters (IW) and Biodiversity (BD) FAs, was proposed as a starting point for developing such a methodology for the LD FA. It was also recommended that lessons from similar tools used outside the GEF be considered.

Regarding the indicators to be used in the scorecards or tracking tools, EAG members proposed that a range of toolboxes be developed, each with a limited number of indicators. This will allow roll up to the GEF portfolio-level, if necessary, and gives project managers the flexibility to choose from a variety of options that will suit their needs. Projects would then collect data and measure indicators only for the toolbox relevant to their particular project.

Two ways of categorising the toolboxes were proposed:

- 1) Toolboxes categorised according to the type of intervention, including policy development/mainstreaming, capacity building and sustainable financing projects, as well as direct interventions; or
- 2) Toolboxes based on the type of barriers or challenges addressed by the intervention, including governance, policy, institutional, knowledge and financial barriers/challenges.

It was further acknowledged that a different group of experts will be needed to identify the most useful set of toolboxes, plus relevant key indicators, and embed them in a scorecard or tracking tool system that facilitates the work of project managers. The following stakeholder groups were proposed as having the relevant expertise to be considered for this:

- Project managers
- Agency task managers
- Agency M&E units

In recognition of the added dimensions to the project-level indicator selection, there was a consensus among EAG members that the capacity needs assessment related to the use of project-level indicators as a downstream activity should be put on hold, until further agreement on a way forward is reached.

Next steps

First and foremost, the KM:Land Project Team will seek guidance from the IAWG on how to proceed with the project-level indicators. In the meantime, while a common understanding is being sought, the following activities were proposed as the necessary next steps in order to move forward with the development of project-level indicators (subject to modification):

1. EAG will provide a brief summary of the methodology for the proposed project-level impact index. The preferred platform for discussions related to this index (amongst others) was an online portal (“wiki”), to be set up on the KM:Land website by UNU-INWEH.
2. UNU-INWEH will initiate online consultations with project and agency task managers through the same online portal to identify useful tools for measuring performance and assisting with adaptive management.
3. UNU-INWEH will conduct a review and analysis of existing scorecard and tracking tool systems and will synthesize the findings, including lessons learnt and recommendations, for the development of a similar tool for the LD FA.
4. An entire session at the Second Expert Workshop will be dedicated to assessing capacity needs of project managers with regards to the use of the selected project-level (impact and outcome) indicators.

2.2.3. Capacity Building: Development of Guidance Materials and Regional Training Workshops

Following a presentation by Brigitte Schuster (UNU-INWEH), which provided an overview of the development of guidance materials and regional training workshops, EAG members provided their input and ideas.

With regards to the publication of the guidance materials, EAG members agreed that the materials should take the form of a hard-copy (paper product) and electronic/web-based version. EAG members also suggested that the guidance materials be translated into various languages, such as the official UN languages, or the languages of the regions targeted for the regional training workshops. Resources for such an endeavour would be a limiting factor; however, translation may be possible with the help of the regional Development Banks, partners to this project and members of the IAWG.

Dissemination of the guidance materials would mainly be through the Regional Training Workshops and the KM:Land website (currently under construction). It was noted that dissemination of the guidance materials should extend beyond GEF initiatives in order to have a wide-reaching impact, and this could be done through linkages with other major events, such as the COP of the UNCCD and other similar events. Through these avenues, it is hoped that the indicators would acquire a more widespread diffusion and use, and would be adopted outside the GEF. It was also noted that the GEF Evaluation Office should be included as early as possible in the development of the guidance and training materials.

In addition to the UNU sister institutes in Africa, Latin America, Asia, and Europe, it was suggested that the regional Development Banks should be approached as potential hosts for the regional workshops. Where possible, linkages with any larger events, such as those of the UNCCD for example, should be made, as noted above. It was suggested that the training take on the form of hands-on learning, in order to facilitate the learning for project managers and engage them more actively in the training.

Next steps

It was decided that the guidance materials should be developed only after the Second Expert Workshop has taken place, and once the selection of project-level indicators has been finalized. It was suggested that other examples of training and guidance materials be consulted for their content and presentation, such as the IPCC guidelines for greenhouse gas emissions, or UNEP and GEF training material and materials available on the OSS platform.

2.2.4. Case studies and pilot testing

Caroline King (KM:Land Project Team) presented an overview of the pilot testing of the indicator system through the selected case study of the Marsabit Mountain project (see Presentation Summary, Annex 1).

EAG members agreed that the Marsabit Mountain project was a good case study for the pilot testing of indicators, as it possesses a wealth of information, and reports on most of the global-level indicators already selected by the KM:Land initiative. However, EAG members cautioned not to solely rely upon high-performance projects like the Marsabit Mountain project for pilot testing, but should also consider a case study from the opposite end of the spectrum in order to test the feasibility and effects of integrated use of selected indicators in a variety of projects.

Next Steps

No immediate steps are to be taken. The pilot testing of the project-level indicators has been put on hold until the methodology for project-level indicators has been determined.

2.2.5. Learning Network

Following the presentation of Zafar Adeel (UNU-INWEH) on the KM:Land Learning Network, the EAG members made a few key recommendations and suggestions on how to proceed with the Learning Network.

EAG members emphasized the importance of focusing on active support and management of the Learning Network in order to ensure continuous dialogue and stimulated discussions. Use of a wiki was suggested as a possible tool for active participation of various user groups, although it was noted that synthesis of scientific findings must extend beyond a wiki dialogue.

EAG members also emphasised the need to learn from other existing learning networks. While the KM:Land Learning Network is first and foremost linked to the GEF and its Land Degradation Focal Area, it has the potential to expand beyond the GEF. However, in order for this to occur, it will be important for the KM:Land Learning Network to become actively engaged with other networks such as those that already exist through the UNCCD, UNFF or WOCAT. It was suggested that the KM:Land Learning Network should act as a link between networks (a 'network of networks').

Next steps

In order to proceed with the Learning Network, the following activities will be undertaken:

1. UNU-INWEH will compile an inventory of existing networks on SLM and initiate linkages with network coordinators.
2. UNU-INWEH will establish a wiki on the KM:Land website to provide a platform for online surveys and/or online discussions for a wide range of user groups.

2.2.6. GEF reporting

As presented by Andrea Kutter (GEF Sec) the KM:Land project will be required to prepare 2 reports for the GEF Council during the course of 2008.

The first report is a **brief** (1-2 page) **status report** to be included in the GEF Annual Monitoring Report (AMR), which will be presented to GEF Council in early April. The purpose of the report is to provide an overview of the status of the indicator selection, data availability and definition of methodology, and to indicate the next steps to be taken for moving the project forward.

The Status Report will be jointly prepared by UNU-INWEH and GEF Sec, with information from the discussions held during the EAG meeting in Bonn feeding into the report. The Status Report is to be finalized by the end of February 2008.

The second report is an **information paper** to be presented to the GEF Council in November 2008. The purpose of this information paper is to provide a full report on the global- and project-level indicator system, and their purpose, application and use for the GEF LD FA and beyond. The report will also include information on learning opportunities created within the KM:Land initiative, such as the

Learning Network. The information paper will be used within the GEF Sec, and will guide the GEF Council in its decision-making for replenishment and allocation of funds in the LD FA.

The format and length of the information paper are flexible, and a preliminary structure of the information paper was proposed, as outlined below. UNU-INWEH would take the lead in preparing the information paper. Additionally, EAG members expressed their interest in contributing to the following broad components:

- a) Summary for decision-makers
- b) Rationale and process description: David Dent and Ravi Prabhu
- c) Selected indicators and their presentation: Cheryl Palm, Bob Scholes, and Lawrence Townley-Smith
- d) Application and usage of selected indicators: Wafa Essahli, Bob Scholes, Alex de Sherbinin
- e) Appendices containing detailed information about methodology

EAG members recommended that the information paper be published in a journal or other independent platform. It is hoped that a publication will be disseminated more broadly and therefore reach a wider target audience beyond the GEF Secretariat. This is expected to be critical in achieving the uptake of indicators outside the GEF.

In order to enhance the collaboration across GEF FAs, Andrea Kutter (GEF Sec) proposed to informally update colleagues through a brown-bag lunch on the progress being made in the KM:Land initiative and to receive their comments and feedback. This will play a significant role in ensuring cross linkages with other GEF FAs.

Next steps

Participants agreed to undertake the following:

1. GEF Sec will update other GEF FAs on the progress made with regards to the indicator selection (brown-bag lunch).
2. UNU-INWEH and GEF Sec will jointly compile a brief (1-2 page) status report for the GEF Council meeting in April.
3. The EAG and UNU-INWEH will jointly develop an information paper for presentation to the GEF Council and will explore opportunities for its publication and wider dissemination.

3. Action items

A number of follow-up activities undertaken by different organisations were agreed upon during the meeting. They are as follows:

UNU-INWEH

- Compile a report of the EAG meeting and disseminate to participants (early February 2008);
- Establish a wiki on the KM:Land website to provide a platform for online surveys and/or online discussions for a wide range of user groups (February 2008);

- Compile a brief (1-2 page) status report for the GEF AMR for GEF Council meeting in April 2008, in consultation with GEF Sec (end of February 2008);
- Lead the preparation of an information paper for the GEF Council meeting in November 2008 and coordinate support from the EAG members (deadline: early September 2008).

And subject to modification according to the outcome of the review:

- Conduct a review of existing scorecard and tracking tool systems and synthesise lessons learnt and recommendations for the development of a similar system to be used within the Land Degradation Focal Area (prior to Second Expert Workshop);
- Compile an inventory of existing networks on SLM and initiate linkages with network coordinators (prior to Second Expert workshop).

EAG

- Provide a write-up outlining methodologies proposed for the Greenness Measure (lead: Bob Scholes, CSIR and David Dent, ISRIC) (early February 2008);
- Provide inputs to the final draft report prepared by CIESIN (end of February 2008);
- Compile a brief summary of the methodologies for the proposed project-level impact index (early March 2008);
- Contribute to the preparation of an information paper to GEF Council for November 2008 (deadline: early September 2008); and
- Take the lead in developing the new indicator for human well-being (medium-term perspective).

GEF Sec

- Update colleagues in other GEF FAs on the progress made regarding the indicator selection (brown-bag lunch) (early February 2008);
- Review status report for GEF Council meeting in April 2008 (end of February 2008).

CIESIN

- Adjust and complete profiles for the selected global-level indicators including, *inter alia*, description of methodologies, confirmation of data availability, sensitivity analyses based on time series, indication of cost implications and production of global maps (deadline: end of February 2008).

4. Conclusions

During the Second Meeting of the Expert Advisory Group, excellent progress was made in terms of finalising a set of global-level indicators and refining their measurement methodologies. For the project-level indicators, it became evident that there will be a need to distinguish between two different sets of indicators, namely impact and outcome indicators. The latter indicators will need to be embedded in a scorecard or tracking tool system in order to strengthen adaptive management at the project level. The meeting also resulted in a shared understanding of next steps for the Learning Network and capacity building components of the project, and paved a way forward for the reporting to GEF Council.

Annex 1: Summaries of Presentations

Modus Operandi of the EAG

Brigitte Schuster, UNU-INWEH

Under the GEF MSP “Ensuring Impacts from SLM – Development of a Global Indicator System”, two distinct groups were established to support the implementation of the project: 1) the Inter-Agency Working Group (IAWG) and 2) the Expert Advisory Group (EAG). While the IAWG consists of international agencies with the responsibility to steer the implementation of the project, the EAG was convened to provide scientific guidance and advice to the project.

The EAG consists of eight experts that were selected based on nominations from the KM:Land IAWG. Members of the EAG represent a wide-ranging expertise and knowledge in the topic of combating land degradation in various regions. The members are as follows:

- David Dent, Director, ISRIC – World Soil Information, Wageningen, The Netherlands
- Wafa Essahli, Directrice Chargée du Développement Rural, Communauté des États Sahélo-Sahariens, Libya
- Charles Hutchinson, Professor and Director, Office of Arid Land Studies, University of Arizona, USA
- Cheryl Palm, Senior Research Scientist, The Earth Institute at Columbia University, USA
- John Pender, Senior Research Fellow, International Food Policy Research Institute, USA
- Ravi Prabhu, Coordinator, CGIAR Regional Plan for Collective Action in Eastern & Southern Africa, The Alliance of CGIAR Centres, Kenya
- Bob Scholes, Fellow, CSIR Natural Resources and the Environment, South Africa
- Lawrence Townley-Smith, Agriculture Ecologist, Agriculture and Agri-Food Canada, Canada

The EAG is expected to provide input to the project during scheduled meetings (such as in Bonn) and at the Expert Workshops. In addition, members of the EAG will contribute to a report to the GEF Council, which will present the final indicator selection in terms of its scientific merits, and the opportunities created for learning and knowledge generation on SLM.

It is proposed that the exchange of information among the experts be enhanced, while at the same time communication tools such as videoconferencing be explored to facilitate the communication between UNU-INWEH and the EAG in between meetings. It is also recommended that a chairperson be nominated to coordinate activities of the EAG.

Strategic Significance of KM:Land

Zafar Adeel, UNU-INWEH

The lack of knowledge management in the LD FA of the GEF was identified as a major constraint. Despite the wealth of information that emerges from projects, there is no effective strategy in place for disseminating and sharing generic lessons learnt that would help improve the design of future initiatives and support decisions regarding resource allocation. Therefore, in 2004, the Land Degradation Task

Force initiated a process that led to the inception of the GEF MSP "Ensuring Impacts from SLM" in 2007, as the first phase of a broader three-phase KM:Land initiative.

KM:Land is intended to lay the foundations for a comprehensive system to track progress across the LD Focal Area and its portfolio of projects. Under this MSP, indicators to demonstrate the benefits derived from actions on sustainable land management will be developed, as a first step in this process. Further steps will include the establishment of a Learning Network to strengthen exchange of knowledge on SLM and to support the establishment of a harmonized interagency monitoring system.

In its endeavour, the KM:Land initiative recognises and links to parallel processes within the GEF Scientific and Technical Advisory Panel (STAP) and GEF Technical Advisory Groups (TAG), the strategic planning process within the UNCCD, and other indicator development initiatives in the UN family such as the GEF-UNDP Least Developed Countries - Small Islands Developing States (LDC-SIDS) initiative, TerrAfrica and the Global Land Degradation Assessment (GLADA). The GEF-4 Land Degradation Focal Area portfolio provides the basis for undertakings by KM:Land.

The KM:Land initiative plays a significant role for the GEF, as it will provide evidence to the GEF Council for environmental impacts and human well-being benefits derived from GEF investments. Furthermore, the project will help to prioritise resource allocation under GEF-5 and synthesise lessons across the Focal Area as a basis for adaptive management. The monitoring parameters and standardized methodologies developed by KM:Land are expected to be adopted more widely beyond GEF.

Methodologies and Data Availability of Global-Level Indicators

Alex de Sherbinin, CIESIN

Indicator profiles were compiled in four different categories as selected at the First Expert Workshop including land cover, land productivity, water, and rural income. In the following, proposed measurement methodologies, coverage, data availability and the average score by reviewers are presented.

For land cover, the following indicators are proposed:

Indicator	Coverage	Status	Average Score*
Land Use Systems	Global	Available in early '08	5.7
% of Biomes in Protected areas	Global	Indicator ready	6.1
% Change in Forest Cover, 2000-05	Global	Indicator ready	6.9
Cropland Area	Global	Indicator ready	7.5

In the land productivity category, the following indicators were presented:

Indicator	Coverage	Status	Average Score*
Crop and Pastureland Intensity	Global	Data available	6.7
Change in NPP, 2000-05	Global	Data available	7.3
Degraded Land Area	Drylands	Data available	6.2
Crop Yields for the Year 2000	Global	Data available	6.2

For water availability, two indicators were chosen:

Indicator	Coverage	Status	Average Score*
Water Stress	Global	Indicator ready	6.7
Water Quality	92 countries	Indicator ready	6.3

For rural income, poverty rate was suggested as an appropriate indicator:

Indicator	Coverage	Status	Average Score*
Poverty Rate	95 countries	Data requested	7.0

* Average scores derived from scores related to relevancy, reliability, validity and simplicity of proposed indicators on a scale from 1 (weakest) to 10 (strongest).

For each methodology, comments provided and questions raised by the reviewers are presented and, where possible, global maps are presented.

Overview of Guidance Material Development and Training Workshops

Brigitte Schuster, UNU-INWEH

Following the refinement of project-level indicators, a set of guidance materials will be produced and a series of four regional training workshops will be held to familiarise SLM project managers, agency staff, and other stakeholders with the standards and tools needed for measuring and reporting on the new indicators. This guidance and training is seen as an important component because SLM projects will be expected to adopt the agreed indicators and apply them into their project designs. Projects that have already been approved will be expected to retrofit the global indicators.

Guidance materials will take the form of hard-copy and web-based documents, which can be used on a standalone basis, or incorporated into training workshops on SLM indicators. Two-day training workshops are proposed. The workshops would cover presentations of considerations in indicator design and issues in cross-scale application of integrated SLM indicators. Their focus will be mainly to provide a platform for discussions and sharing experiences by participants on the effective design and use of indicators for adaptive management of SLM.

Possible recipients for training include agency task managers, managers of existing projects, other stakeholders in existing projects (e.g. Ministries, UNCCD Focal Points, NGOs, Universities, etc.) and developers of future projects. Due to the budget limitations, not all of the above groups can be supported to participate in the regional training workshops. Therefore a strategy for prioritization of access to training will be needed.

Linkages with experts at WOCAT are being pursued as potential partners, in particular to seek advice in the design of toolboxes on project design and indicator use. UNU sister organisations are proposed as partners for hosting regional workshops. It is intended that funds will be transferred to regional partners to organize training workshops and to locally produce the training materials already developed by the project.

A period of two months, February-March 2008, will be available for the capacity needs assessment and finalisation of logistical arrangements for the regional training workshops with the host institutions.

Training materials and programmes will then be finalized for training workshops to begin in June 2008 and will continue until the beginning of 2009.

Key Elements of a Learning Network

Zafar Adeel, UNU-INWEH

In the general sense of the term, a learning network is a network with a common sense of purpose, where experts come together to share their work-related knowledge and experience. A Learning Network is an established and accepted mode or forum for interaction amongst colleagues. It stewards competencies, transfers knowledge to newcomers, and explores emerging ideas.

The KM:Land Learning Network is intended to be an over-arching network that extends over the GEF LD Focal Area. It will comprise experts from GEF projects (managers and scientists), independent experts, existing network and institutions, as well as regional and thematic networks. It is anticipated that the KM:Land Learning Network will be maintained through a web-based portal, will compile an inventory of best practices and supporting documentation, and will make use of products for dissemination and training.

The KM:Land Learning Network will serve a few key functions. First, it is intended to create an informational (project) inventory for the GEF. Second, it is intended to create and bring together a network of individuals. Third, it will provide an unstructured thematic dialogue that documents synthesized scientific findings, generic lessons to be transferred to other projects, and a description and application of indicators. Lastly, the KM:Land Learning Network will create an on-online portal, which will serve as an open-source community through which online surveys can be done, through which toolboxes can be provided to project and agency managers.

A list of current and potential partners for membership to the KM:Land Learning Network include:

- IW: Learn
- LADA
- TerrAfrica
- DeSurvey
- DesertNet
- DRFN
- OSS/Roselt
- WOCAT/CDE
- CIESIN
- CENSAD
- DRI
- CGIAR/ICARDA/IFPRI/ILRI
- ISRIC
- CSIR

Approaches to the Development of Project-level Indicators

David Niemeijer, KM: Land Project Team

The KM:Land initiative seeks to develop project-level indicators in order to demonstrate environmental and livelihood benefits derived from GEF-funded projects and programmes in the LD FA.

Information collected at the project level will be rolled up and accumulated at the portfolio level. To facilitate roll up, some form of standardization is necessary. Three non-mutually exclusive approaches were considered:

1. Make use of portfolio-level indicators that are downscaled to the project-level;
2. Express all selected project-level indicators in the same units;
3. Select project indicators such that they are well aligned with the different categories of GEF project activities, facilitating roll-up per category.

Table 1: Overview of Strategic Objectives, Expected Outcomes and Expected Impacts as defined in the GEF-4 LD FA Strategy.

Strategic Objectives	Expected Outcomes	Expected Impacts
To develop an enabling environment that will place sustainable land management in the mainstream of development policy and practices at regional, national and local levels.	<ol style="list-style-type: none"> a. SLM is fully supported by policy, regulatory and planning frameworks. b. Institutions have the capacity to support SLM at local, sub-national and national levels. Regional and trans-boundary institutions have the capacity to address and promote the management of trans-boundary resources. c. Access to sustainable financing for SLM is facilitated. 	<ol style="list-style-type: none"> a. Overall decrease in trend and/or severity of land degradation. b. Protected ecosystem functions and processes, including carbon stocks in soil, plants and biota, and fresh water. c. A decrease in the vulnerability of local populations to the impacts of climate change. d. Improved livelihoods of rural land users. e. Diversified funding sources for SLM.
To upscale sustainable land management investments that generate mutual benefits for the global environment and local livelihoods	<ol style="list-style-type: none"> a. Systematic large-scale application and dissemination of sustainable community-based farming and forest management systems. b. Communities benefitting from applying and disseminating SLM practices. c. Sustainable financing for integrated approaches to SLM achieved. 	

The most straightforward approach to select project-level indicators in line with typical GEF project activities would seem to establish indicators for each of the expected outcomes and the expected impacts as defined by the GEF-4 Land Degradation Focal Area strategy (see Table 1). In this approach, the expected outcomes can to some degree be seen as intermediary steps to reach the expected impacts and can thus form intermediate measurement points for impacts that will only be achieved indirectly or in the longer term.

In order to monitor progress towards achieving expected impacts as defined by the GEF-4 strategy, the use of global-level indicators at the project level through downscaling seems suitable, where possible. Different indicators will need to be identified to demonstrate expected outcomes as defined by the GEF-4 strategy. For each project, it needs to be clear to which outcomes the project aims to contribute, and for each of those outcomes, the project would then provide information on all the indicators selected for that outcome.

While it seems to be cost-efficient that data collected to measure expected impacts are generated based on the portfolio analysis and downscaled to the appropriate level for each project, project managers would contribute to the interpretation of data and have the primary responsibility for collecting and analyzing data to measure progress towards expected outcomes. It is recommended that each project delivers data for the selected indicators as part of the project proposal, at mid-term and at project termination.

The proposed approach to project-level indicators is meant to be relatively simple. It is sufficiently specific to the GEF-4 approach to reasonably match project activities, yet covers a wide enough spectrum of aspects to be a good basis for wider application. It covers both indirect and direct interventions to SLM.

Current Indicator Use in Selected Case Studies

Caroline King, KM:Land Project Team

The current use of global indicators was reviewed in a limited number of case study projects. These had been selected by the IAWG because they represented a range of mature SLM projects, including also portfolio approaches.

The sample projects presented include:

- Sustainable Land Management for Mitigating Land Degradation, Enhancing Agricultural Biodiversity and Reducing Poverty (SLaM)
- Development and Implementation of a Sustainable Resource Management Plan for Marsabit Mountain and its associated Watersheds
- Sustainable Management of Inland Wetlands in Southern Africa: A Livelihoods and Ecosystem Approach
- Sustainable Land Management, Bhutan
- Least Developed Countries and Small Island Developing States (LDC and SIDS) – Targeted Portfolio Approach for Capacity Development and Mainstreaming of Sustainable Land Management
- Land Degradation Assessment (LADA)
- Strategic Investment Programme, TerrAfrica

Indicators reflecting land cover state and changes are currently being assessed in 5 projects, including Marsabit Mountain, SLaM, SLM Bhutan, TerrAfrica SIP and LDC-SIDS. In most cases, basic information on land cover classes (forest, agricultural, pastoral, wetland, etc.) is available at the start of the project. The focus is mostly on assessing impacts on land uses within land cover classes such as % increase of area under SLM, or % enhancement of ecological functions, etc. In some cases, methodologies to

measure land covers are highly specific and time consuming, while in other cases, simple methodologies are used.

Four projects, including SLaM, South Africa Wetlands, TerrAfrica SIP, and LADA, compile data and report on Indicators related to ecosystem services, including land productivity and water availability. Indicators used include, *inter alia*, agricultural productivity potential, % change in NPP and productivity in wetlands considering stream flow and groundwater levels. Productivity land cover classes are examined in project-specific ways, and projects attempt to determine sustainable productivity levels.

The third category of indicators looked at in the sample projects relates to human wellbeing, i.e. rural income. Four projects, including SLaM, Marsabit Mountain, SLM Bhutan, and TerrAfrica SIP, document the livelihood impacts by reporting on sustainable alternative income generation, % increase in farm incomes and nutritional changes, institutional and financial sustainability, access to land and water resources, and a wide range of additional economic and social indicators. Most projects acknowledge that even though they do aim to affect rural income, effects generally cannot be measured within the project timeframe of 4 years.

Some preliminary capacity needs were identified through this review. First, methodologies for indicators measured at the project level and used to inform the portfolio evaluation need to be included in project design. Furthermore, there is also a need to identify relevant sources of information at local, national or regional levels, for example, through ongoing national and district-level surveys, in order to facilitate the compiling of information. Indicators will need to be incorporated into a harmonised interagency M&E approach that needs to be developed to coordinate reporting. Finally, measures for reviewing and updating indicators and reporting guidelines will need to be identified.

Case study selection

Caroline King, KM:Land Project Team

The objective of the pilot testing of the SLM indicator system on selected projects is to test the feasibility and possible effects of integrated use of selected indicators from project to portfolio levels. This includes the effects on adaptive management in projects, and the achievement of the GEF-4 Strategic Objectives.

Several parallel activities will feed into the pilot study, and these include the ongoing project-level capacity needs assessment being conducted by UNU-INWEH through conclusions from Workshop discussions, analysis of Mid-term Reviews from existing projects, and surveys of agencies and project managers; and, the design of guidance materials and planning for training workshops.

In preparation for the pilot testing, a review of existing project case studies is needed. Cases of relevant indicator use have been identified; however, few projects address all selected indicators, with the exception of TerrAfrica SIP and the Marsabit Mountain project.

Indicative methods for carrying out the pilot testing include: review of the relevance of selected indicators to existing interventions, through project documents and outputs; identification of relevant information and processes outside the project through consultation with project partners including national and international agencies; and, exploration of the possible effect of the indicator system on

project design, adaptive management and mainstreaming, again through consultation with project partners.

The Marsabit Mountain project is recommended as the case study through which to carry out the pilot testing of the indicator system. Consultations are suggested to be carried out through the Marsabit Mountain project partners, such as the local and national government, local NGOs and universities, and through other stakeholders like the GEF Sec, GEF Council, international agencies, and other related initiatives such as TerrAfrica, LADA, or ICRAF (World Agroforestry Center).

The proposed timeline is to have a report on the pilot testing of indicators in the Marsabit Mountain project finalized by July 2008.

Annex 2: Agenda

Monday 21 January 2008

Chair: Zafar Adeel, UNU-INWEH

Co-rapporteurs: Harriet Bigas, UNU-INWEH and David Niemeijer, KM:Land Project Team

Session 1: Opening Session

- 8:30 Welcome Remarks (Zafar Adeel, UNU-INWEH)
- 8:45 Overview of EAG Meeting Objectives (Brigitte Schuster, UNU-INWEH)
- 9:00 Modus Operandi of Expert Advisory Group (Brigitte Schuster, UNU-INWEH)
- 9:15 Strategic Significance of KM:Land (Zafar Adeel, UNU-INWEH)
- 9:30 Plenary Discussion
- 10:00 *Coffee break*

Session 2: Finalisation of Global-level Indicators

- 10:30 Status of Global-level Indicator Selection (Zafar Adeel, UNU-INWEH)
- 10:40 Definitions, availability and methodology for Global-level Indicators (Alex de Sherbinin, CIESIN)
- 11:10 Plenary Discussion on Global-level Indicators
- 13:00 *Lunch*
- 14:00 Plenary Discussion on Global-level Indicators (continued)
- 15:15 *Coffee break*
- 15:45 Plenary Discussion on Global-level Indicators (continued)
- 16:30 Wrapping up of Discussion on Global-level Indicators
- 16:45 Closing of the day

Tuesday 22 January 2008

Chair: Zafar Adeel, UNU-INWEH

Rapporteur: Harriet Bigas, UNU-INWEH

Session 2: Finalisation of Global-level Indicators (continued)

- 8:30 Recap of Day 1 (Zafar Adeel, UNU-INWEH)
- 8:45 Plenary Discussion to Finalize Global-level Indicators
- 9:30 Summary of Final Global-level Indicator Selection and way forward (Chair)
- 10:15 *Coffee break*

Session 3: Report to GEF Council

- 10:45 Overview of report writing to GEF Council (Andrea Kutter, GEF Sec)
- 11:00 Plenary Discussion on Outline for Report and Allocation of Tasks
- 11:45 Wrapping up and way forward (Chair)
- 12:00 *Lunch*

Session 4: Planning for Development of Guidance Materials and Training Workshops

- 13:00 Overview of guidance material and training workshops (Brigitte Schuster, UNU-INWEH)
13:15 Plenary discussion on
- Contents, venue/hosts, target audience
 - Next steps
- 14:15 Wrapping up and way forward (Chair)
14:30 *Coffee break*

Session 5: Planning for Learning Network

- 15:00 Key elements of a Learning Network (Zafar Adeel, UNU-INWEH)
15:15 Plenary Discussion on next steps for KM:Land Learning Network
16:15 Wrapping up and way forward (Chair)
16:30 Future meetings of EAG (Brigitte Schuster, UNU-INWEH)
16:45 Closing of EAG meeting (Chair)

Wednesday 23 January 2008

Chair: Bob Scholes, CSIR

Rapporteur: Harriet Bigas, UNU-INWEH

Session 1: Opening Session

- 8:30 Welcome Remarks (GEF Sec, UNU-INWEH)
8:50 Objectives of the Project Indicators Review Meeting (Brigitte Schuster, UNU-INWEH)
9:00 Recap of discussions at EAG meeting (Chair)
9:20 Plenary for clarifications

Session 2: Review of Project-level Indicator Selection

- 9:40 Status of Project-level Indicator Selection (Zafar Adeel, UNU-INWEH)
9:50 Approaches to Project-level Indicators (David Niemeijer, KM:Land Project Team)
10:10 Plenary Discussion on Approaches to Project-level Indicators
10:45 *Coffee break*
11:15 Review of Current Indicator Use in Case Study Projects (Caroline King, KM:Land Project Team)
11:25 Breakaway Groups on Project-level Indicators (TORs to be provided)
12:45 *Lunch*
13:45 Report back from Breakaway Groups
14:45 Wrapping up on Selection of Project-level Indicators (Chair)
15:15 *Coffee break*

Session 3: Assessment of Capacity Needs

- 15:45 Comments on Technical Capacities Required to Measure Indicators in Projects (Plenary)
16:05 Comments on Institutional Capacities Required to Report on and Collate Indicators in a Global System (Plenary)
16:25 Pilot Testing of Indicator System (Caroline King, KM:Land Project Team)
16:35 Plenary Discussion on Next Steps
16:50 Wrapping up and way forward (Chair)
17:00 Closing of day (Chair)

Annex 3: List of Participants

Name	Affiliation	Email
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Annex 4: List of Acronyms and Abbreviations

AMR	Annual Monitoring Report
CDE	Centre for Development and Environment
CENSAD	Communauté des États Sahélo-Sahariens
CIESIN	Center for International Earth Science Information Network
COP	Conference of Parties
CGIAR	Consultative Group for International Agricultural Research
CSIR	Council for Scientific and Industrial Research
DRFN	Desert Research Foundation of Namibia
DRI	Desert Research Institute
EAG	Expert Advisory Group
GEF	Global Environment Facility
GLADA	Global Land Degradation Assessment
IAWG	Inter-Agency Working Group
ICARDA	International Center for Agricultural Research in the Dry Areas
IFPRI	International Food Policy Research Institute
ILRI	International Livestock Research Institute
ISRIC	World Soil Information (International Soil Reference and Information Centre)
LADA	Land Degradation Assessment in Drylands
LD	Land Degradation
LDC-SIDS	Least Developed Countries – Small Islands Developing States
LD TF	Land Degradation Task Force
FA	Focal Area
FAO	Food and Agriculture
ICRAF	World Agroforestry Center
IPCC	Intergovernmental Panel on Climate Change
IW	International Waters
KM:Land	Knowledge Management: Land
M&E	Monitoring & Evaluation
MSP	Medium-sized Project
NDVI	Normalized Difference Vegetation Index
NPP	Net Primary Productivity
OSS	Observatoire du Sahel-Sahara
PDF	Project Development Facility
ROSELT	Réseau d'Observatoires et de Surveillance Ecologique à Long Terme
RUE	Rain- use Efficiency
Sec	Secretariat
SIP	Strategic Investment Programme
SLM	Sustainable Land Management
SLaM	Sustainable Land Management for Mitigating Land Degradation, Enhancing Agricultural Biodiversity and Reducing Poverty
STAP	Scientific and Technical Advisory Panel
TAG	Technical Advisory Group
UNCCD	United Nations Convention to Combat Desertification

UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFF	United Nations Forum on Forests
UNU	United Nations University
UNU-EHS	United Nations University – Institute for Environment and Human Security
UNU-INWEH	United Nations University – Institute on Water, Environment and Health
WOCAT	World Overview of Conservation Approaches and Technologies