Ecoagriculture Partners' Landscape Measures Initiative
Toward a Proof of Concept



Planning Workshop, May 12th 2009

Washington, DC

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CONTENTS

1. Summary 2

2. Background and Opening 3

3. Presentation: "Overview of the Landscape Measures Approach". 5

4. Group Activities 8

4.1 Table Discussion: Calibrating the relevance of the LM approach and demonstrating 'proof of concept' 8

4.2 Open Space Session: Considering concrete applications of the LM approach for implementing a 'proof of concept' 9

5. Wrap-Up 11

6. Conclusions and Next Steps 14

Appendices 15

A. List of Participants 15

B. Staments of Interest in the LM Approach 17

C. Agenda 27

D. Slide Presentation: "The Landscape Measures Approach: Integrating Production, Conservation and Livelihood Goals" 29

E. Calibrating the relevance of the LM approach and demonstrating 'proof of concept': Discussion Table notes and Plenary analysis ..... **Error! Bookmark not defined.**

F. Considering concrete applications of the LM approach for implementing a 'proof of concept': Open Space Session notes and Plenary ('news brief') presentations 43

1. Summary

The H. John Heinz III Center for Science, Economics and the Environment hosted a day-long 'proof of concept' planning workshop on May 12th 2009 that brought together 25 people from 18 organizations to consider needs and opportunities for systematically advancing methods for assessing the performance of complex agricultural landscapes along production, conservation and livelihood dimensions. The workshop was organized around the Landscape Measures (LM) approach that Ecoagriculture Partners has pioneered through its Landscape Measures Initiative (LMI). The collaboratively developed conceptual framework that underlies the approach is specified in *Understanding Ecoagriculture: A Framework for Measuring Landscape Performance, Discussion Paper #2* available at http://www.ecoagriculture.org/publications.php. Information and tools for operationalizing the approach are available from the Landscape Measures Resource Center (LMRC), an online forum designed to aid local stakeholders and their collaborators in selecting and creating meaningful indicators, and measuring and tracking them over time. See *http://landscapemeasures.org*. Information about the LM approach and these resources was conveyed to participants through a 45 minute slide presentation and discussion that followed the opening of the workshop.

With this background, participants broke into Table Discussion groups to consider how the LM approach was relevant to the interests and activities of their own organizations, how its relevance to others might be advanced, and what it may mean to 'prove the concept' in their respective programmatic settings. Group reports and an analysis of the plenary presentations revealed the approach was highly relevant to the organizations present in a wide variety of ways. They also generated a preliminary set of criteria for ensuring relevance for others and guidelines for implementing a proof of concept.

Following a congenial lunch break, participants were invited to select an Open Session group of their choice to consider in some detail how the LM approach and Proof of Concept (PoC) might be applied to one of five priority challenges: 1) understanding impacts of integrative programming in rural landscapes and providing a source of information for adaptive management, 2) evaluating ecosystem service provision from rural landscapes including carbon sequestration and co-benefits, 3) improving the development and use of indicators for market eco-certification, 4) improving understanding and management of poverty-environment linkages, and 5) improving communication and knowledge-sharing across diverse sectors and across scales. The fifth topic was selected by no one as participants viewed it to pertain to each of the others. The four Open Session reports and the plenary 'news briefs' exposed a wealth of ideas and cautions for moving forward successfully with 'proof of concept' activity in these domains. Furthermore, the group and plenary discussions appeared to spearhead some viable partnerships for fundraising and implementation of LM PoC activity.

A Wrap-Up session provided opportunity for participants to highlight what was foremost on their minds regarding ways to initiate and succeed at demonstrating proofs of concept for the LM approach in different institutional and geographic settings. A fledgling PoC Leadership Group was formed to carry forward the ideas and the momentum of the participants. The workshop leadership team hopes that this report will aid the Leadership Group in fostering partnerships, proposals and work plans to transform the ideas and information generated at the workshop into useful practice.

2. Background and Opening

The Landscape Measures Initiative (LMI) was created in 2005 to pioneer a methodology for measuring social, economic and ecological outcomes of landscape-scale management practices, and to develop tools to help multi-stakeholder groups plan landscape activities and set measurable goals and targets. During its first three years the LMI has developed a common framework and a collection of resources, online, to support local stakeholders in working together with public, private and civic institutions to develop evaluation criteria and indicators that simultaneously assess outcomes on biodiversity conservation, sustainable production and rural livelihoods in agricultural landscape mosaics. We refer to this emergent methodology as the Landscape Measures (LM) approach.

The Landscape Measures 'proof of concept' (PoC) planning workshop was conducted on May 12th, 2009 in Washington, DC with an aim to stimulate the development of strategic partnerships to carry out a 'proof of concept' (PoC) of the LM approach from mid 2009 through 2011, that would set the stage for large-scale implementation in 2012 and beyond. Twenty-three people from 18 organizations attended the workshop, representing a mix of conservation, agriculture, and rural development organizations and interests. Several individuals who had hoped to attend the workshop but were unable due to scheduling or logistical constraints contributed ideas in advance and expect to engage in follow up activity. These participants "in spirit" are identified in the Participant List (see *Appendix A).*

Participants were invited, in advance of the workshop, to prepare a brief 'statement of interest' that highlighted how they thought a landscape measures approach might pertain to the challenges and opportunities that their programs and/or organizations were facing. The statements submitted were distributed at the workshop and are presented in *Appendix B.*

To open the workshop, Anne Marsh, Director of Policy Dialogue of The H. John Heinz III Center for Science, Economics and the Environment, warmly welcomed participants to the Heinz Center. She highlighted the importance of a landscape approach to understand changes in land use patterns and how they affect the ecosystem services on which people's livelihoods depend. The Heinz Center's eight-year project, conveyed in the recent publication "2008 State of the Nation's Ecosystems Report", used this approach to track landscape performance indicators. Following the opening, Anne invited participants briefly to introduce themselves.

Sara Scherr, President of Ecoagriculture Partners (EP), in welcoming participants to the event identified the Landscape Measures Initiative as integral to EP programs, and thanked the Bill and Melinda Gates Foundation for its financial support of the workshop through a planning grant that aims to strengthen methodologies and capacities for landscape level management of agricultural assets. She highlighted the importance of bringing together people from different sectors to contribute to the LM approach PoC. Sara introduced Philip Thomas, a member of Generative Change Community and valued partner in designing and managing the workshop. Philip worked for 15 years supporting peace processes in Latin America with the Organization of American States (OAS) and has extensive experience in supporting multi-stakeholder and cross-sectoral change processes.

Philip reviewed the workshop agenda (see *Appendix C*) and invited Louise Buck, Coordinator of the LMI, and Jeff Milder, a Research Associate, to provide an overview of the LM approach, and the idea of "proof of concept' as a milestone in demonstrating its feasibility. In their presentation, Louise and Jeff summarized the current stage of development of the LMI, the framework, and the tools for measuring the performance of multifunctional landscapes. They explained why the PoC is considered an important stage in the development of this initiative, and what we will need to know to be able to `prove' and carry the LM approach forward to influence practice and policy. Louise and Jeff stressed that the effective application of the framework and tools in the field depends on building partnerships and working together to foster synergies and achieve co-benefits (see *Section 2. Presentation and Appendix D*).

3. Presentation: "Overview of the Landscape Measures Approach", by Louise Buck and Jeff Milder (Cornell University and Ecoagriculture Partners)

Through a 45-minute presentation, Louise Buck and Jeff Milder reviewed the history and aims of the Landscape Measures Initiative (LMI), its current stage of development and the steps that will be required to apply and advance a landscape measures approach. The main ideas that were conveyed in the presentation are highlighted below. Appendix D exhibits the slides used in their presentation.

An ecoagriculture landscape is a mosaic of natural features – such as forests and wetlands – and human land uses – such as agriculture and villages - that are managed to conserve biodiversity, produce agricultural products and support rural livelihoods.

The full potential for achieving ecoagriculture landscapes that jointly meet these goals is poorly understood. At the first International Conference on Ecoagriculture in September 2004, the participants identified the dearth of good indicators and monitoring methodologies as a major impediment to mainstreaming the ecoagriculture vision. Some difficulties identified in understanding the effects of efforts to bring about ecoagriculture in real landscapes were:

- Assessing landscape-scale impacts on biodiversity,
- Demonstrating linkages between changes in management practices and conservation and livelihood outcomes,
- Linking farm-level actions and outcomes with landscape scale actions and outcomes,
- Developing sampling and stratification schemes across plot/farm/landscape scales,
- Incorporating both participatory and scientific indicators and methods, and
- Designing cost-effective monitoring programs that support adaptative management.

Most of these difficulties derive from the scale at which ecoagriculture outcomes are meant to be realized. Thinking and working at a landscape scale is more difficult because it requires taking into account many factors of the ecosystem and their relationships. Why is it necessary, then, to work at a landscape scale? Because landscape is the scale at which tradeoffs and synergies between production and conservation are likely to become apparent.

The idea of landscape has several meanings. Landscape can refer to a territory that is characterized by distinctly recognizable and usually unique features. Landscape can also refer to a geographic domain of human perception. Landscape also is used as a spatially organized framework and 'unit of analysis' for evaluating relationships between human activity and environmental change, and for planning policies and management

interventions that aim to affect these relationships and their outcomes. Based on this definition, landscapes are best defined by their stakeholders, taking into account the particular issues or problems that they want to address, and to assess (see *http://landscapemeaures.org, Unit 1. Defining the approach,* for a more detailed description of the landscape approach).



Photo 1. The Landscape Measures Resource Center (LMRC), an online tool for assessing the performance of ecoagriculture landscapes **a)** home page **b)** detail of the menu.

Following the Nairobi conference, Ecoagriculture Partners (EP) developed the Landscape Measures Initiative (LMI) to address these challenges. The LMI has developed the Landscape Measures Resource Center (LMRC) (*http://landscapemeasures.org*), an online tool designed to help to build capacity for assessing the performance of ecoagriculture landscapes (see **Photo 1**). A team from the Cornell University Ecoagriculture Working Group (EWG) and EP developed the LMRC with input and advice from an International Steering Committee (see *www.ecoagriculture.org*, for more information about the LMI).

The LMRC methodology for measuring the goals of ecoagriculture landscapes is based on a conceptual framework developed through the LMI (see *Understanding Ecoagriculture: A Framework for Measuring Landscape Performance*. Ecoagriculture Discussion Paper #2, in *http://www.ecoagriculture.org/publications.php*). The framework provides an approach for measuring the performance of entire landscapes with respect to the goals. The purpose is not to determine whether a given landscape has attained some desirable end condition, but whether is moving in the right direction, that is, whether the management practices and resulting mosaic of land uses across the landscape are yielding progress toward the goals.

The measurement framework is organized into a hierarchy with four levels:

- **Level 1:** The four goals of ecoagriculture. These goals are universally applicable since they define the ecoagriculture concept: conserve biodiversity and ecosystem services, provide for sustainable agricultural production, enhance rural livelihoods and well being, and establish and maintain institutions for implementation and capacity-building.

- **Level 2:** Twenty criteria that provide a set of "20 questions" for stakeholders to consider when implementing ecoagriculture management strategies. These criteria describe the characteristics of a highly successful ecoagriculture landscape.

- **Level 3**: Indicators of each criterion. The indicators are the factors that are actually measured to reveal how well each criterion is being fulfilled. Normally, the indicators are site-specific.

- **Level 4:** Means of measure. The techniques, methodologies and units of measure that are used to evaluate each indicator on a quantitative or qualitative scale. They are also site-specific.

The document "Understanding Ecoagriculture: A Framework for Measuring Landscape Performance" lays out the logic for this structure and is available at the EP web site (*www.ecoagriculture.org*).

The next step in the LMI is to apply, test and refine the resources on landscape measurement that have been developed. For this critical stage to be successful, organizations that recognize value in the approach and resources created so far need to assume strategic roles in advancing their use and further development. This 'Proof of Concept' planning workshop was designed to address this need.

The workshop provided participants the opportunity to discuss their ideas regarding the LMI, options for field-testing the LM approach and further developing the LMRC, and how these ideas relate to their work and interests. To explore these questions they worked in groups lead by members of the EP/Cornell leadership team. The facilitator provided materials and guidance for the development of the group activities, as described in the following section.

4. Group Activities

4.1 Table Discussion: Calibrating the relevance of the Landscape Measures approach to participants and others, and demonstrating 'proof of concept'

The facilitator randomly clustered participants into three Table Discussion groups. Members of the groups chose a partner whom they did not know, introduced themselves and the pairs and then explored the questions listed below (see *Appendix E*). The first question was discussed in pairs. After a brief discussion, each person introduced his/her partner to the table and explained what he or she liked about what was presented and how they saw the approach connecting to their work.

Table group discussion questions:

- **Question 1:** What do you like about this approach and how you see it potentially connecting to your own work?
- **Question 2:** What would be necessary to increase the perceived relevance so that stakeholder groups are more likely to integrate this approach and tools?
- **Question 3:** What questions, concerns, challenges would need to be addressed?
- **Question 4:** What do we mean by 'proof of concept' and how important is this?
- **Question 5:** What criteria and/or conditions are necessary in order to effectively demonstrate 'proof of concept'?

At each table a member of the workshop leadership team helped the group focus on the questions and captured the main statements and ideas on hexagon cards. The groups chose a member to report the ideas back to plenary using the hexagons, which were posted to the wall. Subsequent groups connected their ideas to those previously presented, allowing clusters to be formed, as illustrated below.

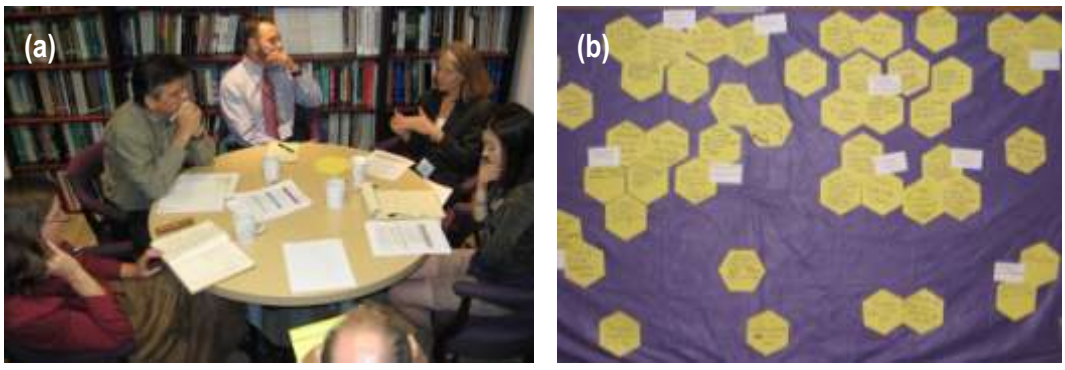


Photo 2. a) Participants during a Table Discussion, **b)** Clusters of ideas discussed in plenary

Appendix E summarizes the Table Discussions and related plenary outputs.

4.2 Open Space Session: Considering concrete applications of the LM approach for implementing a 'proof of concept'

The participants selected a proposition from a list of potential applications of the LM approach, for implementing a 'proof of concept', to discuss with a group in an Open Space session (see **Photo 3**). The choice of propositions were:

- **Proposition #1:** The Landscape Measures approach can improve the value of monitoring and evaluation for understanding impacts of integrative programming in rural landscapes and for providing a source of information that contributes to adaptive management.

- **Proposition #2:** The Landscape Measures approach can improve the evaluation of ecosystem service provision from rural landscapes including carbon sequestration and co-benefits.

- **Proposition #3:** The Landscape Measures approach can improve the development and use of indicators of market eco-certification.

- **Proposition #4:** The Landscape Measures approach can improve understanding and management of poverty-environment linkages.

- **Proposition #5:** The Landscape Measures approach can improve communication and knowledge-sharing across diverse sectors and across scales; for example scaling up successful local sustainable farming initiatives.

The propositions selected, according to the number of participants who selected each, were: 2, 1, 4 and 3. No one selected proposition 5.

Participants joined the conversations in the assigned area and appointed a person to take notes and capture concrete outcomes. They were encouraged to frame their discussion around the following questions:

- **Question 1:** What might the elements/components be of a process to evaluate the proposition/hypothesis?

- **Question 2:** How might a set of activities be structured over a 3-year period to implement such a process?

- **Question 3:** How might your proof-of-concept process be organized and managed? Who might partner to implement the process; how might the activity be funded; how might leadership for the effort emerge and be sustained?



Photo 3. Workshop participants during an open space session.

The deliberations of the four groups are summarized in *Appendix E*.

5. Wrap-Up

The wrap up session included three activities: 1) a quick poll, 2) suggestions for moving forward, 3) tips for the PoC leadership group that emerges from the workshop.

1. Quick poll. Philip asked participants for a show of hands for which of the following three statements they related to best:

#1. The LM approach fits with my organization and we would be ready to move forward with PoC activity.

#2. There is a potential fit, but I am uncertain about moving forward at this time.

#3. I do not see a fit between the LM approach and my organization, and I do not anticipate the possibility of engaging with it now.

Approximately 2/3 of those in the room voted for #2. One participant voted for #3. The remainder identified with statement #1.

2. Ways the Initiative Could Move Forward

In the time allotted to this activity, the six ideas below were shared.

- At CI it will be important to involve Celia Harvey and Goetz Schroth. With their support we have numerous programs that overlap and much potential for moving forward together. We would need a collective proposal, with EP and other partners, to enable us to apply and modify and evolve the approach. We have a good learning framework, now we need to find out how effective is the web-based tool, can we calibrate it and extract from it on an on-going give and take basis? Elizabeth Kennedy expressed enthusiasm for participating in the PoC leadership group that will emerge from the workshop, suggesting that if not her, someone else from CI should take a role in it.

- At WWF we could engage in places where we are doing work on agriculture. We have been thinking about energy at a landscape scale. The best entry point may be in developing certification schemes. We (Karen and others) are working on markets for certified water, developing standards for water use. The LM approach could inform how this moves ahead.

- CARE is becoming increasingly decentralized, so it will be important to share this experience and approach with others in the field. Kevin expressed excitement about the approach and its applicability within CARE, and knows of much talent in the field who could actively engage with it, but stressed that he cannot commit others. He would like to stay engaged and look for opportunities to move forward.

- Rainforest Alliance could engage in the approach through landscape carbon. This cuts across a number of RA's interests, and integrates them at landscape scale. If PoC activity moves in the CC adaptation direction RA can engage.

- The USDA Office of Ecosystem Services is still evolving. We will stay engaged and can give a more concrete answer over time. Probably the OESM can apply the LM approach in the Chesapeake Bay, where there is a new 7-member team for the Chesapeake working on TMDL (Total Maximum Daily Load) standards for the area, led by Dana York who is now the Agriculture Advisor for the Chesapeake Bay.

- USAID is pleased to see where this is going. While there are a number of people and programs that would like to move this forward, our Climate Change team offers the best opportunities to engage at present. This is an innovative group that is moving fast. Chris will introduce us to the CC team.

3. Tips for the Leadership Group – suggestions for getting started

Thomas facilitated a brainstorming activity around this statement to generate the following suggestions:

- Develop concrete action items and deadlines.

- Work on small pieces that generate momentum, organize around actions rather than ideas.

- Create bi-lateral partnerships first, and then expand to bring in more partners.

- Better describe the utility of the LMRC for this leadership group, so they can describe it better to others. Explain ways that the LMRC can be used to share information, and help people gain access to it, generate transparency, make it easy to use.

- Consider using Facebook to improve activity at the LMRC site, get key discussions happening.

- Explore other on-line platforms, such as Webinars. Generate energy through interaction with others.

- Look beyond the status quo. Engage landowners, investors and key folks in the middle.

- Find ways to get the private sector at the table. Ask Sara Scherr and Chris Kosnik for their ideas.

- As we get more concrete, have teams whose tasks move back and forth together to feed into larger group thinking.

- Host quarterly meetings where we can share experiences.

- It's not always people in the field who can get things going on the ground. Bring EP people to offices of these organizations to meet others (the Conservation Measures Program visited one another's organizations, brought decision-makers and field staff into the process).

- Set up a Webinar to bring everyone into the process.
- Bring in an expert knowledge management person who can help build platforms for communication, need to get this part down pat. Consider blogging and tagging functions.
- Connect with the Land Tenure and Property Rights initiative of USAID.
- Connect with PES program at Forest Trends, and other organizations working on PES.
- Get up to date on social change methods for moving to scale. In particular, become familiar with social networking analysis as an assessment tool.

6. Conclusions and Next Steps

The Landscape Measures Proof of Concept (PoC) Planning Workshop appears to have successfully laid the groundwork for a collaborative effort by a committed group of well respected organizations to engage in the further development of the landscape measures initiative and approach; a group who can be instrumental in leveraging financial and technical resources to make success in this endeavor possible.

Participants in the workshop, including those who were there 'in spirit' by virtue of the 'statements of interest' and/or consultations with the organizers that they provided as inputs, articulated the value of a landscape perspective in a variety of ways that are repeated throughout this report. Arenas where participants anticipate the approach could make valuable contributions to current programming efforts include sustainable land management, climate change adaptation and mitigation, land use carbon accounting, scaling of conservation agriculture practices, eco-certification of products and services from agriculture landscapes, markets and payments for ecosystem services, biodiversity conservation outside protected areas, rural poverty alleviation and asset generation, integrated watershed and rangeland management, and local/community engagement in collaborative landscape assessment-planning-management processes. Probably there are others.

The final output of the workshop will be the formation of the Landscape Measures Proof of Concept Leadership Team. The main mission of the *Leadership Team* is to represent workshop participants (including the 'spiritual' ones) in communicating with potential donors and sponsors ideas that emerged from the workshop, to solicit their input, and discuss funding opportunities. Ideally, such meetings will be followed up over the subsequent few months with an intensive period of proposal writing and planning for field activities. An initial task of the Leadership Team will be to synthesize results of the PoC Planning Workshop, and to create a presentation that proposes an approach to field testing. Volunteer members of the Leadership Team, so far, include Jonathan Haskett (World Agroforestry Center-ICRAF) and Fabrice DeClerck (CATIE). We encourage others to join!

Participants suggested ways that the Leadership Team might proceed in carrying forward the mission of the workshop to organize and implement a PoC of the LM approach; see forgoing section, pages 11 and 12. They also articulated some concrete ways that PoC activity might gain traction in their own organizations; see forgoing section, pages 10-11.

Notable among suggestions for moving forward was the idea of pursing an opportunistic approach that builds upon work in progress by organizations present at the workshop and their partners. A related suggestion is to initiate PoC activity through partnerships that are ripe for action, and then expand to bring in others as these incubation nodes begin to mature.

We anticipate that the contents of this report will provide useful fodder for the Leadership Team to use in generating a plan for moving forward the landscape measures proof of concept initiative to which you have all contributed so generously. We are deeply thankful for your contributions and look forward to our ongoing work together!

Appendices

APPENDIX A

List of participants

	Name	Email address	Organization
1	Buck, Louise	leb3@cornell.edu	Cornell University / Ecoagriculture Partners
2	Butterfield, Rebecca	rbutterfield@ra.org	Rainforest Alliance
3	Canfield, Elouise	elouisec@iadb.org	Inter American Development Bank
4	Casal, Patricia	pc387@cornell.edu	Cornell University / Ecoagriculture Partners
5	Catacutan, Delia	D.Catacutan@CGIAR.ORG	Land Care International
6	Cavalieri, Tony	tonycavalieri@msn.com	Consultant
7	Covell, Phil	pcovell@forest-trends.org	Forest Trends
9	Greenberg, Brian	BGreenberg@INTERACTION.ORG	InterAction
10	Hayward, Jeffrey	jhayward@ra.org	Rainforest Alliance
11	Ingram, Carter	cingram@wcs.org	Wildlife Conservation Society (WCS)
12	Kamp, Kevin	kkamp@care.org	CARE
13	Kennedy, Elizabeth	bazody@gmail.com	Conservation International (CI)
14	Kosnik, Chris	CKosnik@usaid.gov	USAID – Agriculture and Natural Resources
15	Lucero, Carl	Carl.Lucero@osec.usda.gov	USDA - Office of Ecosystems and Markets
16	Luz, Karen	Karen.Luz@WWFUS.ORG	Word Wildlife Fund (WWF)
17	Marsh, Ann	marsh@heinzcenter.org	The Heinz Center
18	Milder, Jeff	jcm85@cornell.edu	Cornell University / Ecoagriculture Partners
19	Richard, Florence	frichard@worldbank.org	TerrAfrica
20	Scherr, Sara	sscherr@ecoagriculture.org	Ecoagriculture Partners
21	Summit, Ariela	asummit@ecoagriculture.org	Ecoagriculture Partners

	Name	Email address	Organization
22	Thomas, Philip	philip@gc-community.net	Generative Change Community (GCC)
23	Wilkie, David	dwilkie@wcs.org	Wildlife Conservation Society (WCS)

People participating "in spirit"

	Name	Email address	Organization
1	Chandrasekharan Behr, Diji	dchandrasekharan@worldbank.org	The World Bank, PROFOR
2	Changxiao, Li	cl694@cornell.edu	Hubert Humphrey Fellow, Cornell University, Ecoagriculture Partners
3	DeClerk, Fabrice	fdeclerck@catie.ac.cr	CATIE
4	Fernandes, Erick	efernandes@worldbank.org	The World Bank
5	Getz Escudero, Arthur	Arthur.GetzEscudero@heifer.org	Heifer International
6	Haskett, Jonathan	jhaskett2008@gmail.com	World Agroforestry Centre (ICRAF)
7	Neely, Constance	Constance.Neely@heifer.org	Heifer International
8	Tilghman, Laura	laura@sustainableharvest.com	Sustainable Harvest
9	Wood, Stanley	S.WOOD@CGIAR.ORG	International Food Policy Research Institute (IFPRI)

APPENDIX B

Statements of Interest in LM Approach

Delia Catacutan, World Agroforestry Center (ICRAF) and Landcare International

Programs of interest for collaboration between ICRAF and Landcare and LMI

1) ICRAF-CIFOR biodiversity platform: (http://www.biodiversityplatform.cgiar.org/_ref/home/index.htm), particularly the "Integrating Livelihoods and Multiple Biodiversity Values in Landscape Mosaics" (or the Landscape Mosaics Project in short)", focuses on informing and facilitating a negotiation process on land use rights allocation between communities and district level and other key stakeholders that will enable them to manage landscape mosaics more sustainably. To support and inform this process, the project will conduct a series of research activities in order to collect and analyze socio-economic and biophysical data, also investigating the potential for reward mechanisms for environmental services. The comparative information gathered from these research activities will be used to test four thematic hypotheses related to multifunctional landscape mosaics. The project has sites in five countries:

- Tanzania: East Usambara Mountains, Tanga Region;
- South West Cameroon: Takamanda-Mone Technical Operation Unit;
- Sumatra, Indonesia: Bungo District, Jambi Province;
- Northern Laos: Vieng Kham District, Luang Prabang Province; and
- Eastern Madagascar: Manompana corridor, Soanierana-Ivongo District.

Within these countries, a landscape has been selected that reflects a gradient from a densely forested protected area to land covers fragmented by agricultural uses. From these landscapes, three representative territories (villages) will be selected in which the negotiations and empirical research will take place. The project is funded by the Swiss Agency for Development and Cooperation and supported by other donors such as the European Commission, the Governments of Finland, the Netherlands and Australia.

2) TULSEA- *Trees in multi-use landscapes in Southeast Asia*. Implementation of various tools: RHA, RABA, RATA, RAMA, PALA, etc. (contact: Meine van-Noordwijk).

3) Possibly in Cameroon, and in the future UNEP and Finland funded projects in East Africa (contact: Frank Place).

East African Landcare project, starting in Uganda or Tanzania (contact: Jeremias Mowo).

Anthony Cavalieri, Consultant, (formerly with TNC and original LMI member)

I am interested in increasing the understanding of how best to maximize food production and natural resource conservation. Currently, maximizing each separately seems to make the most sense and, in fact, the argument is often made for intensive food production on land that is farmed as a way of preserving natural lands for biodiversity and other ecosystem services. The cases where both can be accomplished within the same landscape are important but to date poorly understood and complex. I am also working on a project to improve wheat-rice systems in the Indo-gangetic plains. This project is concerned with conservation agriculture as well as more traditional crop improvement. There is currently limited consideration of landscape level management. In order for landscape level thinking to make a significant contribution, methodologies for monitoring and assessment at the appropriate level are required. If these methodologies are developed and agreed upon by a range of organizations the field can move forward faster.

Li Changxiao, Hubert Humphrey Fellow, Cornell University;
Intern, Ecoagriculture Partners

Since many years, ecoagriculture has been playing a significant role in sustainable agriculture development in China, and also a key subject at Southwest University (SWU). SWU is a key comprehensive "211 Project" university, directly subordinate to the Ministry of Education. It was newly established in July 2005 through amalgamation of former Southwest Agricultural University and Southwest China Normal University, both of which had a common origin, i.e. from East Sichuan Teachers College in 1906. It excels in agricultural education and teachers' education. In particular, some disciplines taking the lead in China are of great superiority, such as agronomy, ecology, geography, economics, pedagogy, psychology, and so on. SWU has more than 90,000 students and 5,000 faculty, and occupies a campus area of 9,000 Chinese mu (= 600 hectares) situated in Beibei District of Chongqing Municipality.

Chongqing Municipality, a leading city for China's West Development Project, is located at hinterland of Southwest-China, a region being mainly composed of mountains and hills. The altitude of mountains varies between 1,500-2,700 m. Interestingly, the lowest altitude in Chongqing is only 100 m. Due to huge population (31 million in Chongqing) and limited lands (82,4000 km^2 in Chongqing), very intensive ecoagriculture is extremely popular and important, not only in Chongqing region but also in other neighbouring provinces. Moreover, 85% of the Three Gorges Reservoir is situated in Chongqing Municipality, which further highlights the importance of ecoagriculture in Chongqing given the fact that a large amount of arable lands were submerged.

In consideration of the research conducted at Southwest University and the needs in Chongqing/China, enhancing content of the landscape measures through developing indicators for agriculture-related carbon assessment, sustainable agriculture standards and moisture/nutrition management may be an ideal link with the Landscape Measures Project (i.e. Page 5 B1). (*Li is participating in the LMI-POC workshop in spirit.)*

Fabrice DeClerck, Landscape and Community Ecologist, CATIE

My interest in landscape monitoring: My group works on the conservation of biodiversity in agricultural landscapes. We're primarily interested in two components related to this more general theme. First, as it has become increasingly evident that conservation of biodiversity will be impossible alone, how do we ensure that there is sufficient space, and connectivity in landscapes dominated by agriculture for wild biodiversity (or species of conservation concern). Second, much interest has been placed on the capacity of ecosystems to provide ecosystem services. I share the ecological point of view that the quantity, quality, and stability of the provisioning of these services is a function of biodiversity in the largest sense. Many studies have demonstrated that altering the number of species, or kinds of species in a community can impact key services. There is also a growing body of literature that has demonstrated that the spatial arrangement of these communities also plays a key role.

As such, my group is interesting in landscape monitoring that facilitates the understanding of how natural, and semi-natural communities can be arranged within landscape contexts to maximize both conservation and production functions. One final note of clarification, my group is more interested in those ecosystem services that are both managed and received within the focal landscapes such as water quality, mitigation of disasters, pollination, pest control, conservation of wild biodiversity and connectivity to name a few. We are less interested in services that are global or whose function is not spatially explicit (such as carbon sequestration).

Finally, the reason for the above stated interests is to be able to integrate ecological knowledge, tools and understanding in the development of multifunctional landscapes in developing countries that are productive, conserved, and adaptive to climate change.

Related program areas: My group currently works in related program areas in Mesoamerica. Most importantly, we have two projects in their initial phase that explore how species traits can be assembled at the community and landscape scale to increase the provisioning of ecosystem services (FUNCiTree and Multifunctional Landscapes). My group also managed a long-term bird monitoring station (PMA – Programa de Monitoreo de Aves) in the Volcan Central Talamanca Biological Corridor. This program collaborates closely with the corridor's steering committee to apply this data in landscape scale modeling for prioritizing conservation efforts. A recent product of this activity is ecosystem services map which models erosion and biological connectivity hotspots in an attempt to locate where PES schemes should be located in order to maximize the value of PES. Finally, the PMA is initiating a participatory landscape monitoring project (the reason I can not be with you today) where stakeholders in the landscape actively participate in monitoring biodiversity throughout the biological corridor in the aim of increasing our efficiency, and involving and educating local stakeholders in conservation efforts. We would be interested in further explore the role of citizen science in landscape scale monitoring.

Prospective benefits of partnership in landscape measures activity: There is so much momentum on landscape measures in this day and age with innovative actions that inspire

and motivate in every corner of the globe. I view partnership activities as an essential means of sharing such experiences as a means of both advancing our knowledge, and more importantly increasing the practical application of landscape monitoring. One of my observations from our work in Mesoamerica is that the chasm between the academic/corporate advances in landscape monitoring, and its application in rural developing communities remains immense. What financially available tools exist, what positive experiences can be shared? What setbacks to be avoided or modified to turn into successes? (*Fabrice is participating in the LMI-POC workshop in spirit.)*

Jonathan Haskett, World Agroforestry Center (ICRAF), Carbon Benefits Project

The carbon benefits project (CBP) is a GEF funded project that seeks to develop a measurement and monitoring system for terrestrial carbon stocks that is applicable to mixed use agricultural and forested landscapes. To accomplish this, the project seeks to create a system that integrates ground based carbon measurements with remote sensing. The system will enable projects across the GEF portfolio to quantify the accumulation of carbon as a global environmental good. The system will have broad application catalyzing land use carbon projects, particularly in smallholder land use systems in the developing world that have not been participants in the carbon market, due in part to the difficulty of measuring and quantifying carbon in these landscapes. The project also has a significant modeling component that seeks to project carbon stocks under a variety of management options to assist land use managers in decision-making.

A key component of the CBP is the effort to include community members in the ground based measurement aspect of the work. Having community members do this type of work has a number of significant potential benefits:

- A recent study in Tanzania has indicated that having community members perform these measurements can reduce measurement costs almost by half in the first year as compared with professional measurement. Savings are potentially even greater in subsequent years when training and technical backstopping costs are much lower.
- A greater percentage of project development moneys go directly to the community.
- Community buy-in and understanding are increased and transparency for future carbon transactions is also increased.
- There is an increase in technical capacity within the community that can later be used to advantage by acting as a carbon measurement service provider for future projects.

The CBP will seek to review the existing state – of – the – art regarding community based carbon measurement and build on this knowledge to create a practical, cost-effective methodology that is fully integrated into the larger carbon measurement system.

This effort has potentially significant synergies with the work of the Landscape Measures Resources Center. Carbon on the landscape is an important indicator of soil productivity and soil health and terrestrial carbon projects facilitated by carbon knowledge can combine climate change mitigation and adaptation benefits, with livelihood enhancement and biodiversity conservation in a smallholder agricultural context. The effort to partner with communities in measurement and monitoring of carbon also has the potential to significantly empower communities as they seek to engage with the evolving carbon market. Further, the community based measurement work under CBP has the potential to complement and support efforts going forward under the LMRC particularly as the CBP tools will provide effective means to involve communities in establishing baselines and tracking change with respect to landscape carbon. (*Jonathan is participating in the LMI-POC Workshop in spirit.*)

Kevin Kamp, CARE

CARE implements a diverse range of agriculture and natural resource programs throughout the world. I have been personally involved in programs developing and implementing approaches to enhancing and conserving biodiversity in agriculture landscapes. Given an increased level of focus on value chains in agriculture as the primary means to addressing rural poverty and food security, I am concerned about a reduced interest on environmental impacts (biodiversity and other) of such a market focus. I am particularly interested in finding ways to enhance biodiversity resources within more productive and intensive farming systems. While CARE is good at working with farmers and partners at the field level, we are not always as good at being able to monitor the impacts of our work. This is probably even more true when it comes to measuring impacts related to biodiversity resources. Therefore I am interesting in exploring how CARE can contribute to advancing work in this field as well as exploring partnerships which would enable us to measure progress and impacts.

Elizabeth Kennedy, Conservation International

Conservation International (CI) conducts interventions at the landscape level and accordingly strives to demonstrate achievement of targeted outcomes as well as learn from implementation at this level. Accordingly we are interested in landscape level monitoring for both measuring results and adaptive management objectives. Additionally, in terms of better understanding adaptation and effects of phenomenal such as climate change, we conduct research, modeling and monitoring at this level to generate improved knowledge and strategy design.

Related program areas:

CI houses multiple programs that both conduct research and implement interventions at the landscape level. A non-exhaustive list of CI programs includes:

- Land Use Strategies

- Global Change and Ecosystem Services
- Corridor Economics and Planning
- CELB Business Partnerships
- Conservation Priorities and Outreach
- Monitoring Support
- Freshwater Initiative
- Climate Initiative
- Tropical Ecology Assessment and Monitoring (TEAM)

Expectations for partnership: Identify opportunities for synergy in data generation, development of tools and analytic frameworks for ecosystem management.

Chris Kosnik, USAID, Land Resources Management

At USAID we continue to struggle with meaningful development indicators of development at different spatial scales. We have seen multiple situations where practices that simultaneously promote good governance, increased incomes and resource /biodiversity conservation have hit significant scale. We are continuing to try to identify the causal factors for success that push sound resource management and governance past the tipping point where widespread adoption occurs without on-going donor/program incentives and investments. Our experience points us to several key elements including:

- Local ownership – clear tenure or secure access to resources for local resource users (usually preceded by policy change that clarifies secure access to land, trees, wildlife or other natural assets);
- Institutional capacity for community mobilization, organization, and advocacy – usually through local organizations with legal status and sufficient transparency, organizational and financial management skills to effectively advocate for local rights and aggregate from a local to provincial and ultimately at the national scale
- Sufficient increases in income to incentivize individuals to invest time labor and money into improved soil, water & resource management practices that are not compensated through traditional markets. This is typically via multiple revenue flows from multifunctional landscapes.
- Time – in all cases, decades of support have been required to reach the point where policies are in place and enforced; sound management is understood and incentivized; local institutions have developed the capacity to effectively manage operations and negotiate with government and private sector interests; and good management practices spread on their own.

However, we don't have clear data that supports our perceptions, nor do we have approaches for incorporating key elements more systematically into future programs. At the same time, focus on global climate change and advances in geospatial information technologies have raised new questions regarding the potential for aggregating the impact of improved management among small-holders to a larger scale – for potential payments for ecosystem services such as carbon sequestration in agriculture and agroforestry components of multi-functional landscapes.

In looking at the Landscape Performance Scorecard, I'm interested to see whether there are opportunities to marry the community engagement; capture of individual perceptions of landscape performance /institutional capacity with more concrete/analytical measures of biophysical, economic and institutional change.

Constance Neely, Heifer International

Heifer International, now almost 65 years at work in regions around the world, takes a holistic approach to sustainable development. Originally, the concept of "not a cup but a cow" was intended to ensure sustainability in communities and resulted in the development of a model of "passing on the gift" of livestock (some 30 different kinds, but also trees, skills, networks, advocacy, among others) with a focus on empowerment and organization of farming communities to sustainably manage their resource base and improve livelihoods. There has been a strong emphasis on agroecological approaches to ensure that the underpinning natural resource base is conserved and regenerated– getting at the pillars of ecoagriculture – and supports sustainable livelihoods.

Most recently Heifer embarked on a pilot research study to understand the 'carbon hoof print' of farming practices in communities with which Heifer works. This study looked at some 40 farms in countries within Central and Eastern Europe (Lithuania, Latvia and Estonia), Africa (Tanzania), Latin America (Ecuador) and Asia (Indonesia) and is currently analyzing the carbon budget (full GHG accounting) for these farming systems in collaboration with USDA and other international scientists. It is anticipated that this pilot effort will become more mainstreamed into the monitoring and evaluation of Heifer activities over the coming years.

In the short term, we now have some baseline for carbon stocks and sustainable farming practices that enhance biological diversity, etc. As well, Heifer has recently engaged in activities related to extensive pastoral systems particularly in light of carbon, water and biodiversity and the use of management practices that enhance carbon sequestration, water infiltration and holding capacity, and biological diversity of crops, grass, trees, and livestock breeds. It is anticipated that landscape scale sustainable land management can be directly tied to value chain efforts for both meat and milk production and local food systems. (*Constance is participating in the LMI-POC workshop in spirit.).*

Florence Richard, The World Bank, TerrAfrica

TerrAfrica is a partnership platform with the goal of scaling up support to Sustainable Land Management (SLM) approaches and investments in sub-Saharan Africa by improving investment programming for SLM, NRM, climate change, and agriculture - at the levels of national programs and discrete investment operations.

Partners involved in TerrAfrica are seeking and developing tools such as best practice guidelines, indicators, and benchmarks to improve performance of portfolios and individual operations. An M&E system is currently being developed and a framework with many indicators for measuring progress towards scaling up SLM is already available. In this context, linkages with the Landscape Measures Resource Center developed by Ecoagriculture Partners are ongoing so as to benefit from local level/landscape indicators. A shared set of indicators will support activities to scale up SLM in SSA through sharing of experience and knowledge at all levels and across the portfolio. There is a need to know better than is currently the case what is working, where, and under what conditions. Improved M&E metrics will facilitate impact evaluations. In the context of TerrAfrica, the current nearly $1 billion multi-partner investment portfolio in Africa can benefit from such tools. The development of a second portfolio will need to be driven by such tools.

Laura Tilghman, Sustainable Harvest

Sustainable Harvest is a social enterprise whose mission is to improve the livelihoods of small-scale coffee farmers around the globe. Established in 1997, Sustainable Harvest provides the market linkages, training, and technology that farming communities need to compete and thriven the global economy. By proving the business case for sustainable, transparent trade, Sustainable Harvest leads innovative approaches to livelihood security and long-term environmental sustainability for about 150,000 coffee farmers in thirteen countries throughout Latin America and East Africa. For further information, visit www.sustainableharvest.com.

Opportunities for Landscape-scale Initiatives and Collaboration:

1) Traceability and Mapping Technologies

Within Sustainable Harvest's on-going collaboration with farming communities in the Americas and East Africa, we invest in technologies to improve coffee quality and operational efficiencies of farmer cooperatives. Our technology innovations integrate several primary objectives: a) to help farmers thrive in high paying global markets; b) to increase their productivity in a sustainable, ecological manner; and c) to promote farmer education.

Currently, our highest priority technology project is the creation of a multi-faceted, web-based traceability application specifically designed for small-scale farmers and their supply chain partners. This system will not only track global coffee shipments; it will provide a

flexible platform for tracking a variety of social, economic, and environmental data from the individual farm to the cooperative and regional levels. As part of this traceability system, Sustainable Harvest plans to track, quantify, and map landscape-level information on geophysical factors (climate, topography, soils, water resources, etc.), as well as coffee and agricultural production data. This information will be overlaid with information about relevant certification systems (e.g., certified organic farmers), social and economic information about the families and communities, as well as media resources including photos and videos of the farms and families. This multi-layered, multi-level mapping approach will allow Sustainable Harvest, as well as cooperatives, local and regional governments, and non-governmental organizations, to target their training, technical assistance, and environmental management strategies given the on-the-ground realities and needs of farming communities.

Sustainable Harvest expects to pilot its traceability system with farmers in Peru, Mexico, and Tanzania starting late 2009, with larger distribution beginning in mid 2010. Once farmers are using the system, maps and information on best practices will be available to users in all regions. Joint efforts in designing the indicators tracked and mapped, especially those related to understanding agroecology at the landscape level, provide one potential area of collaboration between the Landscape Measures Initiative and Sustainable Harvest.

2) Impact evaluation of the Gombe Coffee Promotion Project in Kigoma, Tanzania

The second area of interest in landscape monitoring within Sustainable Harvest□s programmatic work is an upcoming final evaluation of the three-year Gombe Coffee Promotion Project in Kigoma, Tanzania. At the end of 2009, Sustainable Harvest will begin the process of evaluating its impacts working with over four thousand small-scale coffee farmers from 2007-2009. Specifically, assessments will focus on the following impact areas:

- Livelihood improvement through increased income from coffee quality improvements, transparent business relationships, and linkages to the international specialty market;
- Institutional strengthening of the Kanyovu coffee cooperative;
- Environmental management, including reforestation initiatives, water management, waste management, and organic production techniques;
- Social improvements in education and health services facilitated via Sustainable Harvest's trade model and partner organizations.

Expectations and Benefits of Potential Partnership: Sustainable Harvest envisions that collaboration with the Landscape Measures Initiative (and Ecoagriculture Partners more generally) would strengthen the work of all involved. Sustainable Harvest brings its private sector led approach to fostering agroecological approaches among small-scale coffee farmers. Our organization counts with strong on-the-ground understanding of farmers'

needs as well as trusting, transparent relationships with farming communities. Joint efforts with the Landscape Measures Initiative could build on the existing Sustainable Harvest efforts and in-country structures, refining the ecoagriculture techniques promoted by our field offices and local partners. Collaboration with the Landscape Measures Initiative would help all partners to better understand and document the specific areas of impact of Sustainable Harvest's existing approaches to sustainable agricultural practices and resource management, livelihood security, and sustainable international trade. (*Laura is participating in the LMI-POC Workshop in spirit.*)

APPENDIX C

Agenda

Time	Activity	Responsible
9:15 – 9:30	Welcome to the Heinz Center	Anne Marsh
9:30 – 9:35	Workshop Opening: Welcome to the EP LM Planning Workshop	Sara Scherr
9:35 – 9:45	Overview of purpose and Agenda	Philip Thomas
9:45 – 10:30	Presentation: "The Landscape Measures Approach. Integrating Production, Conservation and Livelihood Goals"	Louise Buck and Jeff Milder
10:30 – 11:20	Table Discussion (I) Questions: ❖ *What do you like about this approach and how you see it potentially connecting to your own work?* ❖ *What would be necessary to increase the perceived relevance so that stakeholder groups are more likely to integrate this approach and tools?* ❖ *What questions, concerns, challenges would need to be addressed?*	Leadership Team
11:20 – 11:40	Break	
11:40 – 12:30	Table Discussion (II) Questions: ❖ *What do we mean by proof of concept and how important is this?* ❖ *What criteria and/or conditions are necessary in order to effectively demonstrate "proof of concept"?*	Leadership Team
12:30 – 13:00	Group presentation of ideas in plenary	Philip Thomas and the appointed person in each group
13:00 – 13:45	Lunch	

Time	Activity	Responsible
13:45 – 14:45	Open Space Session (I) Questions (about the selected proposition): ❖ What might the elements/components be of a process to evaluate the proposition/hypothesis? ❖ How might a set of activities be structured over a 3-year period to implement such a process?	EP Leadership Team and Philip Thomas
14:45 – 15:15	Open Space Session (II) Questions (about the selected proposition): ❖ How might your proof-of-concept process be organized and managed? ❖ Who might partner to implement the process; how might the activity be funded; how might leadership for the effort emerge and be sustained?	EP Leadership Team and Philip Thomas
15:15 – 15:30	Quick report backs from Open Space sessions: "2.5 minute News Briefs"	EP Leadership Team and Philip Thomas
15:30 – 16:00	Group presentation of key points in plenary	Philip Thomas
16:00 – 16:15	Wrap-up and Adjourn Closing reflections and comments and concrete next steps	EP Leadership Team, Philip Thomas and participants

APPENDIX D

Slide Presentation: "The Landscape Measures Approach: Integrating Production, Conservation and Livelihood Goals"

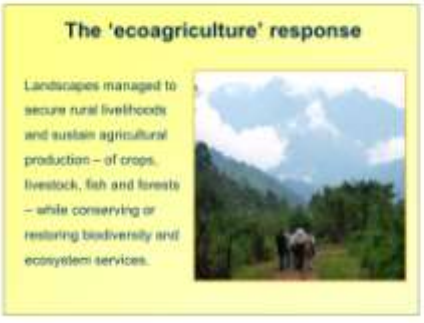








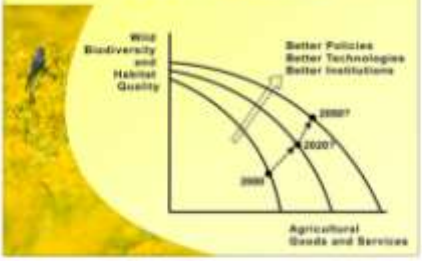




Concept of ecoagriculture



Theory of ecoagriculture



Sources of synergy

- Increase input efficiency
- Manage biological and ecological interactions
- Improve spatial organization of land use
- Realize economies of scale through collective action
- Substitute natural capital for financial capital



Value of the landscape perspective

- Links farm or forest level actions to the broader ecosystem
- Integrates community based initiatives with wider regional perspectives
- Merges (agro) ecosystem thinking with related stakeholder processes



Landscape goals and practices vary


Kabale, Uganda


Osorno, Chile


Eastern region, Burkina Faso


Northern Croatia

Landscape Measures approach



- Processes and tools for 'negotiating landscapes' and assessing landscape performance
- Supports stakeholder-driven adaptive management embedded in a social learning process


Multi-stakeholder platforms for landscape negotiation


Stakeholders in landscape negotiation and management
• Communities / municipalities
• Environmental organizations
• Farmers' associations
• Women's groups
• Foundations
• Government agencies
• Indigenous peoples
• International organizations
• Businesses
• Colleges and universities
• Trade unions


Framework for measuring landscape performance

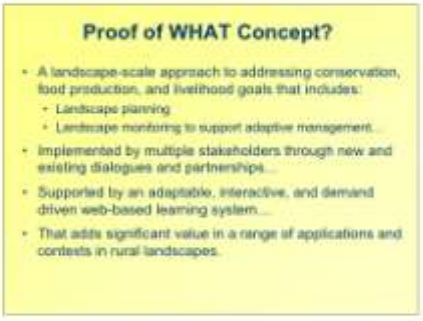

Landscape assessment process
DEFINING THE APPROACH
ENGAGING STAKEHOLDERS
Feedback
CREATING PERFORMANCE GOALS AND CRITERIA
TRACKING CHANGE
CHOOSING INDICATORS
ESTABLISHING A BASELINE


Is the landscape moving in the right direction?


Landscape Measures Resource Center (LMRC)


Generalizing Landscape Approaches
Five salient characteristics:
• Landscape scale
• Landscapes as systems
• Multi-functional management
• Adaptive management
• Participatory management through social learning


The LM Approach supports adaptive management in specific landscape contexts
adaptive management


Proof of WHAT Concept?
• A landscape-scale approach to addressing conservation, food production, and livelihood goals that includes:
• Landscape planning
• Landscape monitoring to support adaptive management...
• Implemented by multiple stakeholders through new and existing dialogues and partnerships...
• Supported by an adaptable, interactive, and demand driven web-based learning system...
• That adds significant value in a range of applications and contexts in rural landscapes.


Proof of Concept FOR WHOM?
• Initial user community
• Does this approach help us meet our mission, or enable us carry out projects more successfully, more cost-effectively, or with longer-lasting positive results?
• External organizations
• Can we scale up the use of this approach by demonstrating its value to others, including:
- NGO and government implementing agencies
- Donors
- Policy makers (district, state, national, int'l)
- Scientific community


Where to next?

APPENDIX E

Calibrating the relevance of the LM approach and demonstrating 'proof of concept'

Table Discussion Notes

Group 1: Louise Buck, Rebecca Butterfield, Patricia Casal, Phil Covell, Kevin Kemp and David Wilkie

Question 1: What do you like about this approach and how do you see it potentially connecting to your own work?

- Promotes access by small farms to the carbon market, as a benefit of conserving ecosystem functioning.
- Fosters integration with water resources, analysis and management at a watershed level.
- Improves provisioning services (agriculture production) and livelihood security, and regulating services and resilience (biodiversity conservation), at a larger scale.
- Landscape level thinking would benefit the conservation of wildlife.
- Helps analyze value chains of different types of crops.
- Illustrates ways to increase the income of small farmers. How can they get benefits from the conservation of the ecosystem services?
- Supports monitoring and verifying environmental standards.
- Helps analyzing value chains for products from forest ecosystems.
- Is useful for certifying products.
- Incorporates the landscape perspective for measuring production and conservation outcomes, defining units of measure.

Questions 2, 3: What would be necessary to increase the perceived relevance so that stakeholder groups are more likely to integrate this approach and tools? What questions, concerns, challenges would need to be addressed?

- There is a need for strong institutional support.
- Different stakeholders have different perceptions about conservation priorities. Working at a landscape scale involves dealing with different groups with different interests. The difficulty is to balance all groups' priorities so we can get

collaboration from them (farmers, institutions, conservations groups...). For instance, the organizations that work with farmers are interested in increasing production.

- Although the overall analysis is at a landscape scale, it might be combined with activities at a local level, so local people become aware of the benefits derived from the changes in land management. For instance, it can be difficult for local farmers to think at watershed level, they have to perceive the benefits at a local scale, of the decisions made.

- Different organizations are interested in different components of the biodiversity, depending on what kind of organizations they are. For instance, organizations for conservation are more interested in upland biodiversity (forests, watershed, etc), while organizations like CARE are more focused on livelihood improvement, so they are more interested in agro-biodiversity and species or functional groups that are important in agricultural landscapes at a local level, and conservation of local resources.

- How can the Landscape Measures Scorecard be tailored to help policy makers assess whether they are taking the right decisions?

- Landscapes are dynamic. How do we know that what we are measuring is a result of our land use management?

- Certification can enhance the benefits from conservation, e.g. "wildlife friendly rice".

Questions 4, 5: What do we mean by 'proof of concept' and how important is this? What criteria and/or conditions are necessary in order to effectively demonstrate 'proof of concept'?

- Should the LM approach be integrated with health and nutrition strategies? Some issues, like livestock diseases are connected to public health, which can foster efforts to implement this approach.

- Plan to accomplish the implementation. Think about how is the LM approach is going to be implemented (from theory to the field). The farmers make their own individual decisions that we might not be able to control and that are "not visible" at landscape scale. On the other side, the resources and funding are available to do particular actions that are easy to measure and demonstrate.

- There is a need to define the priorities, the important actions. Should we focus more on wildlife conservation or agricultural production? What are the local preferences/needs?

- Costs of monitoring need to be funded.

- Political process must ensure transparency and collaboration.

- Explore possible partnerships in broader frame.
- Take into account the tenure rights. The rights are different for each stakeholder, so the process to implement this approach should be different too.
- Measure the benefits at a landscape scale.
- Food security must be the priority and the conservation of services that benefit people's livelihoods.
- Define the limits of what we want to measure (species, functional groups, global production...).
- Select good conservation indicators.
- Theory of Change: start with a major goal and select the factors that influence its achievement. Define goals, select the factors that influence that, see how to manage those factors and how to measure them and track the changes. The goals can be the ecosystem services or functions. The decisions should be based on a conceptual model that explains our selection of indicators and the analysis at a landscape scale.
- Select the appropriate techniques to work at a landscape scale. Factors like the image resolution (pixels per inch) can influence our results at a landscape scale. How do we look at the changes?
- The conceptual models are useful for diverse landscapes with different stakeholders and goals, and they can foster this approach.
- Measurement plan from the implementation and forward, do we have long-term presence of different groups? Can we count on institutional support for a long-term implementation? Are their mechanisms to support external consultations? Is there somebody to "put all the parts together", to manage the implementation?
- Identify the services and define the cost change flow (who pays, how, who gets the money, where is being delivered, is it publicly regulated...).

Group 2: Elouise Canfield, Carter Ingram, Chris Kosnik, Karen Luz, Jeff Milder and Florence Richard

Questions 1, 2, 3: What do you like about this approach and how do you see it potentially connecting to your own work? What would be necessary to increase the perceived relevance so that stakeholder groups are more likely to integrate this approach and tools? What questions, concerns, challenges would need to be addressed?

- Looking at why scaling up of NRM works well in some instances but not others (governance, networking, and incentives at both the community and household levels).

    - One of the challenges is bringing people together who speak different disciplinary / sectoral languages. How do you create a sustainable platform for dialogue?
    - Making this work on the ground: concept of ownership. Need secure tenure (predictability; various property rights systems) to make it worthwhile for communities and landowners to invest in landscapes.

- You need an institution to start things off. Ideally, it would be a local organization such as producers' associations, to moderate the dialogue, but it needs to be a fair broker.

- Example of Coffee systems: there used to be tons of different third party certifications and internal certifications (Starbucks, etc.). There was a 'cacophony' of objectives and criteria with some looking at social and others at various environmental criteria. Now they are all starting to converge. Now, 80% of the coffee certification systems all have some core objectives. Marketing to origin is a beginning of that since it is place based. And you have an analogous situation going from the local level up, where groups like watershed groups or farmers' federations begin with local problems and issues and could branch out.

- Importance of tenure, including common tenure arrangements. Looking at ownership patterns.

- Use the LM to demonstrate to owners the value to using these approaches. Incentives / value to landscape-level property owners and corporations, investors, international actors. LM should have tools for documenting the value (economic but otherwise) of these kinds of approaches.

- More quantitative indicators are needed.

- How do you get people to sit around the table? Who takes on that role?

- Can the LM process add value to the certification process – e.g. a landscape certification?

- The platform you put in place to inform and create the indicators is critical. Need the right stakeholders at the table. In Africa, they work at the level of Regional Economic Committees to inform all of the indicators, which goes back to the M&E system. Takes a lot of time to coordinate with the stakeholders.

Questions 4, 5: What do we mean by 'proof of concept' and how important is this? What criteria and/or conditions are necessary in order to effectively demonstrate 'proof of concept'?

- What does landscape scale mean in an agricultural context? There may not be an organizational imperative from agriculture. So how do you create this?
    - Ecosystem services – water, soil, pollination.
    - Ecosystem service markets
    - Regulations
- Observation from both development and conservation groups: neither group does each group's work particularly well. LM approach can help each sector think more appropriately and more sophisticatedly about the other's work.
- Most of the projects reviewed did not carefully articulate conservation outcomes and successes, and monitoring did not really yield valuable data on conservation outcomes.
- The problem begins with planning, and if you haven't clearly articulated the project goals and the causal chains, then it's unlikely that it will be successful.
- There are two different agriculture audiences: 1) the producer who is likely to have an understanding of NR dynamics, and 2) the supply chain people who will have an understanding of scaling, but from more of an economic perspective.
- If conservationists want to do work that is enterprise driven, they need a better understanding of the motivations and business cases for these activities.
- Economic indicators are easy to measure. Other field-based indicators like soil are more difficult to evaluate. For piloting this: work in areas where you expect to have some short-term positive biophysical change so that you can measure this change, e.g. increased soil organic carbon or land cover change.
- There are examples of longer-term community based monitoring where communities own them and it's worth them to do it. E.g., community water monitoring in the Philippines where the monitoring data were used to advocate for the government; also community based wildlife management in Namibia.
- If farmers and supply chain actors are currently acting in their best economic interest, what is the incentive for them to be interested in the LM? Especially when there is no direct payment?
- Resilience indicators are good and missing in other indicator / monitoring frameworks.
- WCS already works at landscape scale, although landscapes are determined by species, which are selected because they represent different parts of the ecological and social communities. The 'landscape species' approach helps then cover many of the legs of the stool. But they are lacking some of the measures, including resilience, and they would be interested in incorporating this into their metrics.

- Currently they use income and basic necessities (subsistence) to measure the livelihoods leg of the stool.
- E.g. for a PES program, they would adopt an indicator of income generation.

- Worked on an AID project with very good indicators.
- Indicators over time can change. Need to make sure that indicators align with objectives. Check these and make sure they're correct. Will the data generated from the indicator answer the question?
- WCS has found value in using conceptual modeling (Maradi) to understand linkages between project objectives, interventions, and monitoring indicators.

Group 3: Delia Catacutan, Tony Cavalieri, Jeff Hayward, Elizabeth Kennedy, Carl Lucero, Ann Marsh, Sara Scherr and Ariela Summit.

Questions 1, 2: What do you like about this approach and how do you see it potentially connecting to your own work? What questions, concerns, challenges would need to be addressed?

- Scaling best practices, climate change for Rainforest Alliance, PES.
- IFPRI grant to TNC, crop improvement, AID/Gates project on India/Pakistan/Nepal.
- ICRAF, Landcare (12 countries) esp. East Africa, Philippines, Vietnam; link knowledge with action; access to science in relation to PES.
- CI – adaptive management –institutions and implementation; capacity-building, data user/generator project, community-based but linked to CI.
- Quantify ecosystem services produced (instead of just paying for practices).
- Threshold indicators.
- Environmental Performance Index work – noted scarcity of national and local data.

Question 3: What would be necessary to increase the perceived relevance so that stakeholder groups are more likely to integrate this approach and tools?

- Use to understand/document interconnectivity of ecosystem services, especially carbon (so not managed in isolation).
- Capture tradeoffs and synergies being made – be conscious about them.

- Collect information on costs to do Landscape Measures work –as a long-term process; how to make sustainable.
- Move from theoretical methods (quit 'tweaking')—do a 3-year study using Measures—show the variability; how people adapt the methodology in a number of landscapes.
- Monitor data, not just professional judgments.
- Integrate from the start of projects, it's hard to implement mid-way; can we do more in tracking indicators that are already established?
- Characterize a range of contexts and of decisions being made (when precise, when rough?).
- Define goals—relate to log frames on project performance.
- Determine how to mainstream in projects.
- Determine how to get agreement by donors to include in grant design.
- Pool information, a lot is already being done.
- Have a whole set of indicators across sectors.
- Remember we're seeking to shift a paradigm/philosophy, offering tools to do so, but we can't control or drive the paradigm shift (e.g., regional habitat planning in the U.S.)
- Train facilitators who have the paradigm and want to apply it.
- Track income impacts at household level, within landscape frame, need real indicators of change in households.
- Include criteria relevant for farmers.
- Staggering complexity if larger landscapes; how can you apply LM at these larger scales? Where is the funding? (maybe where PES?) Where is the legitimacy? An alternative to the donor cycle.

Questions 4, 5: Not discussed.

Plenary – "Clusters" of ideas posted to wall

A summary and analysis of the forgoing points was derived by clustering the hexagon

cards that each of the four Table Groups handed to the facilitator as it presented highlights of its discussion in the plenary session. Clusters formed around nine themes as presented below.

Support sound decision-making:

- Be clear on decisions to be taken and "who will do what", define responsibilities.
- Ensure a balance of power, e.g. land owners do all part, and get what benefits?
- Be clear on decisions being made on measures (who, what, how, are they cost-effective?).
- Take into account the interest in cross-sectoral outcomes for policy-makers.

Engage stakeholders in "making case for LM approach":

- Clarify public and private benefits.
- Both development and conservation communities should be interested in using these tools for a more rigorous and analytical approach.
- Local people have to find it useful.
- Articulate what LM approach delivers to different stakeholders.
- Strengthen agriculture producer interests.
- Better understand motivations and business case for cross-sector activities.
- Guide scientists to do "good" science.
- Make case for why agriculture sector should engage in landscape concept.
- Two types of agriculture audiences: producers, and supply chain actors. What is the message for each group?
- What to do about the outside "spoiler"?

Determine who is missing:

- Who is not here? What are the health people thinking about landscape?
- Engage financial institutions in paradigm/initiative.
- Clarify criteria for successful multi-stakeholder platform performance

Promote landscape literacy:

- Emphasize value of landscape literacy through dialogue.
- Track landscape literacy.
- Landscape literacy is a potential outcome of community engagement in negotiation and monitoring.
- Find more indicators that are scalable (from policy making to local management).

Improve the selection of criteria to measure the performance of the landscape:

- Include criteria and indicators that are useful for tenure.
- Adapt criteria to specific contexts and situations.
- Include resilience (both ecological and economic).
- Link to payments for ecosystem services (PES) conditionality (widen criteria).
- Adopt approaches based in climate change action standards (for multiple outcomes), link actions to climate adaptation plans.

Use conceptual tools:

- Conceptual modeling tools (e.g. MARADI) can help understanding the linkages and the selection of indicators.
- Conceptual models must be based in the theory of change.

Determine appropriate scale for evaluation:

- Define geographies of interest to partner organizations (mosaics, anticipating change).
- Scale continuums are key (e.g. intact vs. fragmented).
- Large scale to smaller scale locations.

Improve data collection and monitoring

- Sustain data provider-data user networks for the LM approach.
- Mobilize data collection availability (different audiences).

- Consult the examples of community-based/driven monitoring. Engaging communities in monitoring is cost-effective.
- Test the LM approach in landscapes where cost-effective data is available.
- Think about effective ways to measure ecosystem functioning.
- Assess within 3-5 years
- Provide for longer-term evaluation of indicators.
- In practice, indicators change over time, this is not useful. Need to identify indicators that will really answer our questions by measuring the same ones consistently.

Seek 'low hanging fruit', possibilities for success:

- There is no real evaluation of conservation outcomes, many indicators in current use are not meaningful enough to conservation goals.
- There is a potential for reconciling outcome measures with project-monitoring systems.
- Piloting: begin in landscapes where we expect some short-term biophysical changes.
- Biosphere Reserve Location is a good opportunity.
- Better address spatial dis-connects of food production supply and demand.

APPENDIX F

Considering concrete applications of the LM approach for implementing a 'proof of concept'

Open Space Session Notes

Proposition 1: The Landscape Measures approach can improve the value of monitoring and evaluation for understanding impacts of integrative programming in rural landscapes and for providing a source of information that contributes to adaptive management.

Participants: Tony Cavalieri, Jeff Hayward, Kevin Kamp and Jeff Milder

Question 1: What might the elements/components be of a process to evaluate the proposition/hypothesis?

- As a pre-requisite, actors coming from different sectors need to see the landscape as a valuable lens. Landscapes are not part of the theory of change for many organizations.
- The process should focus not on programs, but on activity.
- Challenge in certification: they audit a boundary of a production unit (agriculture or forestry) but recognize that this is not necessarily integrated, they don't look at the communities as much as they do the production unit itself.
    - Should all organizations use the same scorecard (the LM scorecard)?
    - Doing so (provided that the standards are credible) could help raise the bar. Right now it's a patchwork of standards and processes.
    - A LM framework would not replace a monitoring tool by sectoral actors (e.g. health programs). Could a health program be interested enough in landscapes because 'healthy landscapes' are important enough to their objectives?

Question 2: Not discussed.

Question 3: How might your proof-of-concept process be organized and managed? Who might partner to implement the process; how might the activity be funded; how might leadership for the effort emerge and be sustained?

- Who will encourage people to use a framework like this?
    - Donors and governments, esp. donors who want to try new ideas.

- Farm and forest managers use the certification information quite a bit because they use it to see where the weaknesses are. If they didn't have a vested interest in the certification, they probably wouldn't care as much about the findings.
- The value of the LM is not in the set of questions themselves but in bring together people to talk about all three legs of the stool at once.
- Who are the groups that can make people use a 20 questions framework? Donors and governments. NGOs that work with companies on certification. (External nudge to work at this scale; because the sectoral NGOs feel that their mission is sectoral, to do specific things, at the behest of the funders).
- A critical threat could motivate action and movement toward landscape scale.
- What would induce CARE to incorporate a landscape approach? What could Kevin say to the people in education or health to look at it from a landscape point of view? There may be some good reasons to do that. But right now, 'landscapes' don't appear in CARE's theory of change – and it doesn't seem to appear in many mission statements.
- Even in conservation and ecology, the landscape doesn't appear in many theories of change or mission statements.
- Part of this depends on how satisfied you are with current monitoring approaches. Many people argue that the project level approaches to agriculture, health, education, etc. doesn't work very well, but that's how funding and work are structured.
- RA wants to do more landscape level analysis because they want to analyze their impacts more broadly. e.g., start with a coffee cooperative that's 2000 members scattered throughout a watershed, but it could eventually be a major component of the landscape.
- Is there a strong motivation to work at the landscape scale? For Rainforest Alliance, maybe so. For a health project it may be a stretch. Minimum criterion: there must be at least one organization, and preferably many, that have interest in landscapes.
- Start in landscapes where there is a critical threat (e.g., mountaintop mining in West Virginia) – helps a community to mobilize. Communities need to see that their way of life is threatened and really need to work in a concerted way to address it.
- Could climate change be this threat?
- Perhaps, e.g., Colombia coffee growers just experienced a big crop failure due to heavy rains, and growers are blaming climate change.
- Climate adaptation is an impetus for working at landscape level. If you did wrap this around a currently 'sexy' topic (climate change) with a partner who could go out and do this work.
- At CARE, they have some donors that really want to see them work with researchers and universities to put a greater science component to their work. For example, if Gates was interested in exploring this idea, then for a small

amount of additional money CARE might want to test this out. Other entrepreneurial donors who are interested in this: not the bi-lateral donors usually but foundations, private individuals, and companies who have more intellectual interest in new ideas.

- The large companies they work for (Kraft, Chiquita) have expected the evaluations to come at the farm level, but might be open to a larger-scale landscape evaluation. E.g., with Unilevel growing tea in Kenya, there might be interest in a partnership between the company, a few int'l NGOs, a few local NGOs, and a group such as ICRAF to do an analysis such as this over time. Or in Ghana or Cote D'Ivoire around carbon financing and restoring degraded cacao production, and large corporations are involved here too. Companies, RA, and others want to report back about the impacts of an entire 'growing region'. Business case for the companies: gaining more credibility about the social and environmental outcomes of their practices.
- CARE has partnerships in many areas (with WCS and WWF, for example).

- How might this happen on the ground? Companies in tea and cacao landscapes might be interested in outcomes beyond the farm scale or production unit.

  - Partnership involving RA. They would want to have a lead on the technical side of methodologies and best practices; also capacity building. Others could do certain technical components such as carbon monitoring. Other stakeholders: local governments, cacao growers, large chocolate companies such as Mars or Cadbury. Would set some goals – e.g., a percentage of production areas have moved toward a particular more sustainable type of production system, movement toward more shade production, more trees, increasing carbon storage. So you would have the landscape stakeholders come up with a set of goals and ideally some price premium given by buyers attributable to the production practices.
  - Who would be the 'landscape facilitator'?
  - It could be almost anyone.
  - It would be better for EP not to be the facilitator because we would put forth the measures.
  - Two options: 1) You could attach this to an ongoing program (but is it too raw and we don't want to burden the communities?) or 2) Develop a new project or initiative that builds on this.

Proposition 2: The Landscape Measures approach can improve the evaluation of ecosystem service provision from rural landscapes including carbon sequestration and co-benefits.

Participants: Rebecca Butterfield, Delia Catacutan, Brian Greenberg, Phil Covell, and Sara Scherr.

Question 1: What might the elements/components be of a process to evaluate the proposition/hypothesis?

- Higher prices paid for ecosystem services where well-measured and planned.
- Can market easier (like CCBA) because can prove your case.
- Use payment system as unifying feature for organizing farmers.
- Monitoring helps to develop biodiversity offsets (e.g., with palm oil) – but hard to sell because impacts not measured.
- Framework helps to focus on elements for overall definition and evaluation of services.
- Help to define the services (e.g., for RUPES work in Asia) – who are the producers of the service and evaluating if pro-poor mechanisms are working.
- Help to map the interface between production and ES can help get refined plans of action (users and those impacting the resources).
- Analyze the extent and number of transactions – what are drivers of price? How much of premium is from BD vs. carbon.
- Look at climate adaptation (once data good enough for landscape-scale planning).
- Treat as a landscape management approach, rather than landscape measurements.
- Rainforest Alliance – seek interests through carbon – can't find a landscape to work with all three programs on (agriculture, forest production, tourism) - clarify who are the actors – use carbon as a common language; they are expanding # crops and livestock (sustainable practices)—how to quantify carbon in those systems; looking at additionality of certification for carbon markets; in agroforestry, where coffee brokers buy both carbon and coffee.
- Analyze where in the landscape are best opportunities for storage, sequestration and reducing emissions.
- Work on landscape carbon standards [interact with FT, RA, RUPES] – link with standards for markets.

- Cultural acceptance of multi-stakeholder process [faith in the process] – could be comparative advantage of EP; people don't even know how to do stakeholder mapping.

Question 2: How might a set of activities be structured over a 3-year period to implement such a process?

- Implement a set of ecosystem service assessments in a set of landscapes – how people are using them and what is important, what can and can't be quantified?
- Identify methods to capture changes in ecosystem services in the landscapes. What monitoring methods available–what methodological challenges?
- Assess potentials for PES within the landscapes.
- Further develop the LMI module to specifically answer those questions (set and sequence for applications in different contexts).
- Address politics of making ecosystem services matter, and making PES matter.
- Build a piece for communications/education for stakeholders about ES in the landscapes (to build political support) - understanding and data help to create new values and new markets.
- Verify that a landscape measures approach and process actually helped to facilitate the process.
- LM facilitating public goods planning into private market planning.
- Figuring out implementation roles, aggregation, intermediation, etc.
- Need training of facilitators in LM and provide support/paradigm.

Question 3: How might your proof-of-concept process be organized and managed? Who might partner to implement the process; how might the activity be funded; how might leadership for the effort emerge and be sustained?

- How organized and managed? Not discussed.
- Who might partner to implement the process?
    - NGOs who do community development/ag/livelihoods/BD/ resource governance (less capacity than meets the eye—but that changes with funding).
    - Existing carbon projects –see where we have value-added.
    - Climate response network emerging now.

- Link to RUPES sites in Asia (integrate LM indicators into the agreements for conditional tenure and land use in Sumatra).
- UNDP – interest to partner.
- Farm Bureau, Keystone Dialogue, Sustainable Food Lab – agribusiness & agroindustry.
- Integrate with partners in RF project & GEF learning network.

- How might the activity be funded?
  - Find carbon funder interested in landscape perspective, so work in their landscapes.
  - Draw on global climate adaptation funds.
  - Don't look for money as ' indicator' or measurement work – but focus on impacts.
  - Build links with government initiatives on performance-based budgeting (US federal government—how to quantify).
  - Pick areas to work where already lots of data to build on, but can't piggy-back on projects because you won't have the integration.
  - Thus need enough funding not just for coordination but for implementation of integrated activities.
  - Think of intermediate sized landscapes.
  - Build on existing multi-stakeholder platforms.
  - Heinz - $1 mln/year for coordination to learn back – travel, staff.
  - Identify sites where already initiatives – add value.
  - Use web-based platform to facilitate the partnerships and learning/training/support.
  - Market increased efficiency of systems.
  - Package "the ecoag advantage": knowledge of appropriate landscape management/design together with monitoring [sell as a service]—bundle cost-effectively –more attractive to a donor.
  - Look for $ with partners to provide ecoag support to their projects.
  - E3-EI – new initiative out of Cairo, Stockholm process –they do monitoring but don't have a 'package' and not good on carbon stuff yet [get from Brian Greenberg].
  - Financial incentives to do PES with carbon.
  - Partner with groups with complementary analytical skills.
  - Lessons from RUPES on tool development [6 tools]: challenge on how to move these out for others to work; Trees for Multi-Use Landscapes in Asia—BMZ-funded; did training-of-trainers from sites in 5 countries; each site asked to

develop a proposal for applying tools; for each tool field-tested $5000 on watershed of 50,000 hectares; local governments are co-investing; formed inter-agency committees —divided among themselves who would test which tool [check with Delia and Meine] - integrate LM into that one.

- Review of models of similar activities.
- Project by ARD in Philippines – municipalities did planning, and municipal funds for activities, stakeholder-driven funds; look at who is funding municipality capacity development [many doing stakeholder processes].
- Expensive to work with NGOs that don't have much capacity or funds; might be better to work with researchers who already have funds.
- US-based NGOs have $8 billion annually now (even after) –looking for grand vision to respond to climate change.

- How might leadership for the effort emerge and be sustained?
  - How will we articulate with the climate action?
  - What will our service model be? (Full LM or nothing; or incremental; or just PES with livelihood interests).
  - Act like a virus that affects other organizations –build capacities and co-implement projects.
  - Complementary capabilities.
  - Partner with a major donor, like UNDP – and they could push approach through their own system; Carbon Prototype Funds at WB (carbon-readiness)—test tool with their projects.
  - Sustain leadership through incentives.

Proposition 3: **The Landscape Measures approach can improve the development and use of indicators of market eco-certification.**

Participants: Karen Luz, Chris Kosnik, and Louise Buck.

Question 1: What might the elements/components be of a process to evaluate the proposition/hypothesis?

- Who and what? What private sector actors should be at table looking at this? Who looks beyond marketing to other interests?
  - Rainforest Alliance looks at benefits across l/s, mostly biodiversity and water.
  - Sustainable Harvest and Green Mt Coffee – socially responsible growing of coffee – do great work, linked into organic and fair-trade markets.

- Big Agriculture roundtables?
  - Auditing is involved, may be hard to use as a POC.
  - LM approach is relevant to row crops, but a harder sell. B/D benefits less easy to capture, these sites not near protected areas, their M-S processes are not decisive in influencing l/s approaches.
  - Cocoa/coffee better b/c they want to make positive environmental claims.

- Aim is to get an *appellation* for a type of product and capture the environmental benefits.
  - Coffee- Antique Guatemalian, for example, then build it up. Like wine.
  - Start with something do-able, smaller, agile products. Then grow it in to a certified area.
  - Bundled values; carbon, water, biodiversity, get all in your product!
  - Landscape labeling, builds on idea of *terroir*.

- Which certification regions might work?
  - Small, new groups, just getting off ground – WCS wildlife friendly farms provide wildlife habitat in Latin America – could also look at water provision, faire trade – social aspects.
  - WWF starting to work with TNC and others on water, Roundtable Process for sustainable water, maybe certify?
  - WWF is working on high conservation value (HCV) aquatic habitats, need still to define what happens when water enters into a certification scheme, at general level, regarding environmental flows – alteration of natural flow patterns, temperatures, species.
  - HCV Lake Malawi is a large system – what would be the catalyst for eco-certification? What inputs needed? Who responsible? Where? (None of this is clear).

- Summary of elements/components
  - Type of commodity (coffee, cocoa).
  - Type of certification (product quality, environmental, social, bundled, landscape, etc).
  - How far along in the development process the certifier is. To work on PoC we'd want to in on the ground floor.

- Landscape labeling
    - What consumers would be moved by a landscape brand? Consumers are significantly different drivers.
    - Idea of selling a certified landscape may be hard to understand.
    - Could move the market in massive way once understood and accepted.
    - Engage basic landscape scale commodities.
    - Link landscape with perceptions about product quality.

Question 2: How might a set of activities be structured over a 3-year period to implement such a process?

- Begin with a recognizable place where a process is getting under way, or changing focus or emphasis.
    - Consider the Chesapeake Bay. States have failed to deliver clean water, cannot meet their targets, time for federal actors to step in.
    - Partner with the new USDA Office for Ecosystem Services and Markets (OESM) to consider working toward a 'Chesapeake landscape' label.
    - Consider labels for commodities grown in the area, for the water, for the region? Bundled product certifications? Landscape certification? Sustainable Chesapeake? Sustainable Eastern Shore?
    - Must revolve around players in the market.
    - Process to include Ches. Bay Trust, Ches. Foundation, EPA's Chesapeake Bay program, governments of 3 states, Purdue Chicken, WSSC sewage dumping.
    - Key drivers – Government inspection can't get job done – critical mass of private sectors actors willing to engage including Purdue, Walmart and their supply chains, overcoming key bottlenecks allow them to get big bang for their buck.
    - Incentives for businesses to sign on: consumer demand, fear of regulation, reputation.
    - Need to ID other businesses in value chain of major players,
    - Need to ID sufficient consumer clientel for product that is certified.
    - Then propose and test the metrics for the scheme (complicated).

- Embeddedness - plug into certification systems for large scale commodities like soy, high value coffee and cocoa; and place-specific certifications, potential markets where people might pay for `certified Chesapeake', maybe places in Costa Rica?

- Round Tables could be 'low-hanging fruit'
  - Focus on 6-8 key impacts that commodity is having
  - Drivers from industry – soy, oil palm, image – company motives – don't want to be caught doing something bad
  - Motivations where charismatic species are threatened and livelihood issues are prominent (orangutan–free palm oil)
  - Identify a major commodity driving destruction.
  - They are simple systems, conceptually, that could be embedded in HCV methodology, if we come in the back door. Need to learn better how RT's work.
  - Banks require analysis of ecocertified forests. Our LM approach needs to shape thinking about environmental impacts.
  - EP's work on M&E systems for commodity RTs with BBOP and Forest Trends might provide an entry point.

- Begin with Wildlife, which is a very niche market.
  - Partner with WCS's COMOCO (Zambia)– It's Wild brand
  - Bundle with carbon rich farming products

- Climate adaptation practices or mitigation actions
  - CC lens linked to clean energy in corporate world, and consumer Interests.
  - At USAID many of the 'certification people have left, but new young staff involved in, cc is a growth area.
  - PES is a method of creating higher value C b/cause it incorporates other E/S services as well. PES gives a gold seal C+ other products produced sustainably, could be a good landscape label.

- Within the processes we choose to work in, partner with intermediary organizations.
  - WWF for example, is a shareholder in some certification processes, and sometimes a convener. WWF can feed into the process where it has a seat at the table, could support PoC activity in this way.
  - Rainforest Alliance is in consultation with businesses.

- Explore landscape labeling

    - Actors at landscape scale: producers, buyers, certifiers, conservation NGOs, governments (l/s scale brings in governments, natural party to be thinking of l/s)
    - Water people understand l/s scale, and farmers get it. More understanding of water mining needed, cannot continue it. Climate change impacts on hydrological cycle, people talking about it everywhere.
    - Need to engage private sector to determine if there is a market for landscape certified products.
    - L/s label certifies collective action – must rely on neighbors to get l/s-wide effects, those in l/s who agree to do certain things to avoid free riders require some level of participation by everyone.
    - L/s label could be limited in scope – such as a Galapagos label for certain agriculture products, but widely replicable.
    - WWF in Central America, especially Guatemala, might work on a label for coffee cultivation systems in mountaintops that are linked islands of biodiversity.
    - WWF has credibility for commodity based certifications b/c there is a recognizable process for putting it together, but if you do specific places for sustainable landscape label where is the credibility?
    - Need an umbrella organization that ensures basic principles are upheld, look to ICEAL principles as a legitimate way of creating certified systems using multi-stakeholder, 3rd party verification.
    - Need to design an organization that can be the standard-bearer for l/s certification, and we can help put together a process for landscape certification regimes, with viable metrics.

Question 3: Not discussed.

Proposition 4: **The landscape measures approach can improve understanding and management of poverty-environment linkages.**

Participants: Carl Lucero, Carter Ingram, David Wilke, Elizabeth Kennedy and Patricia Casal.

Question 1: What might the elements/components be of a process to evaluate the proposition/hypothesis?

- The LMA can improve the understanding of the linkages between poverty and environment and help manage the landscape to balance poverty alleviation and environmental conservation.

- To address this question we should look at the ecosystem services (ES) (provisioning, regulating and cultural services), the benefits (services and goods) that local people get from the environment. People know these services and goods because they are an essential part of their lives, therefore they can define the ES that are a priority for conservation, in terms of poverty alleviation and livelihood improvement, in a particular landscape.

- The first step in the process would be asking local stakeholders: what are the environmental services/goods that you get from the environment? What services/goods do you consider as "basic needs"? and, Do you have them? If yes, Where do you get them?

- The survey should be designed carefully, to get useful information about the ES that are most valued for the local people. It must be to local people to respond to in a reasonable amount of time.

- The importance of the ES is different depending on the local needs of a community, and depending on what local people value, or what local people consider as a basic need, so the concept of poverty changes depending on where we are asking that question. There are economic definitions of what is considered as "poverty status". However, there are some ES and particularly, cultural services, that are considered a basic need for some people and that are difficult to value economically, although there are mechanisms to do that (like asking the people how much would they pay for the conservation of a particular service or resource...). Another factor that influences the answer to this question is the scarcity of a service or resource.

- Who are the stewards and the beneficiaries of the resources, because they are not always the same.

Question 2: How might a set of activities be structured over a 3-year period to implement such a process?

- First, we need to assess the state of the services to define the baseline. The ES would be those identified as indicators of poverty and environmental conservation.

- To measure the ES we have to think about whether we are looking at the problem uni or bi-directionally. If we look at it from the anthropogenic perspective, we can see the changes in the provision of some ES within a 3-year period, but from the conservation perspective this may be too short a period to see the outcomes. For instance, it will be difficult to see changes in the values of the conservation criteria included in the scorecard. Not all participants in the discussion group agree with this, some argue that what really matters is moving the landscape "in the direction of the ecoagriculture land use and outcomes". There is no need to get the maximum score for the criteria in the scorecard, but rather to pursue the continuous improvement of the system. Moreover, is always possible to monitor the indicators to see the trends (how they change over time).

Question 3: How might your proof-of-concept process be organized and managed? Who might partner to implement the process; how might the activity be funded; how might leadership for the effort emerge and be sustained?

- Doing a survey to ask the communities about the essential services or basic necessity services. For some people, an essential service can be to have three meals a day, or access to a doctor or have protection from floods, for others it may be to have access to a particular resource or good. After identifying these services/goods, we would ask "Do you have it?", or vice versa, we can ask first about the scarcity of ES/goods and then, about their relevance for local peoples lives.

- Difficulties would be the design of a good survey, and measuring the ES. One thing to solve this problem is finding the relationship between the ES and the ecosystem functions and selecting good indicators to measure the indicators (theory of change). It has to be proven that there is a relationship between the two concepts. How do we know that if the ecosystem function that we are measuring is improving, the ES improves, and so do peoples livelihoods? Those relationships are difficult to demonstrate.

- Poverty is difficult to measure and monitor. We suggested indicators that inform us about the state of the ES, but how to compare them in terms of poverty? Maybe we need some specific indicators for poverty. What does poverty have in common with the ecosystem services and the indicators chosen? Is there any real linkage between poverty and the ES? Is there any way to demonstrate those linkages? How different services change? How those changes affect local livelihoods? How are the measures going to be performed to be significant at a landscape scale?

- As a result of the survey we might have a list of different types of services that we could value to estimate the level of poverty:

    - E.g. Protection from floods: Is this service a basic necessity? Yes/No, Do you have this service? Yes/No---> estimation of "poverty status" ---> Value service depending on its importance for poverty alleviation.

- The design of the survey is critical, it should ask different questions, be accessible for local people and relevant to our analysis at a landscape scale. It should be designed by a multidisciplinary group of experts.

- We can do a sample survey in selected places to do this, select two or three landscapes to test the survey. We can count on people working with local communities to facilitate this process.

- The donors might be interested in this approach, particularly, those investing in poverty alleviation (Gates, World Bank...). If we apply for a grant, we have to define what are our interests for conservation, how the conservation of the ES/resources can impact local livelihoods and reduce poverty. The indicators for poverty at a landscape scale can be expressed as proportions of people who do not have the basic needs; we can also analyze how the relative value of the ES changes from family to family and between areas and communities within the landscape.

Plenary - Presentation of 2.5 minute 'news briefs' from each Open Space group

Proposition #1: Improved value of M&E for integrative programming and adaptive management

- It is important to clarify that the Landscape Measures Scorecard that was passed around is a tool for starting conversations about the performance of landscapes. Quantitative indicators emerge from these discussions about the 4 Criteria and 20 questions. The scorecard itself is not a list of indicators.

- Actors from different sectors have different requirements for `proof'. Landscapes are not part of a theory of change for most organizations. We need to get the idea into the DNA of more organizations.

- Communities respond to imminent threats. Climate change is one of these, it should be possible to build landscape linkages through programs on climate change adaptation and mitigation.

- To move forward in this direction will require donors to appreciate the value in using landscape outcome measures as a way to review projects. This need speaks to benefit of seeking money from foundations to try out the idea and approach.

- There are fertile opportunities to test the LM approach on the ground, for example through large commodities engaged in agroforestry or mosaic landscapes that are interested in social and environmental outcomes beyond the farm unit.

Proposition #2: Evaluation of Ecosystem Services (ES)

- Landscape measures will be essential for driving the voluntary C market and emerging funding for adaptation and mitigation coming from the GEF and World Bank.
- Relationship between the LM approach and other ESs may need more attention.
- We should form partnerships with donors looking to sharpen their programs for funding the development of tools/methods for available for evaluating ESs.
- Need to build on existing multi-stakeholder processes in the field to reduce start-up costs.
- There are embedded advantages in standing behind the LM initiative and strengthening it; we can build upon its current technical capacities and demonstrate its further capacity to support, for example: a) climate-readiness activity, b) devolution and decentralization of information to support decision-making.
- US NGOs have own budgets to work on ES, but lack capacity. We should design an initiative with joint implementation by a range of partners, with clearly identified roles.
- Leadership for this work requires incentives that induce organizations to get engaged around it. We need to address the leadership issue by: a) Training to help organizations gain capacity for multi-dimensional development, b) Clarify roles so that leadership emerges with defined space to operate.

Proposition #3: Market Ecocertification

- There are different types of ecocertification and it how relates to landscape. Usually it is related to a product. Thinking about landscape level certification turns things on their heads.
- What % of a landscape has to demonstrate good practices to be certified? Where might landscape certification work? What might it look like? How do we get landscape certification?
- Carbon payments provides an obvious opportunity for landscape certification, it identifies the markets for the products.
- LS certification needs a business justification, who would pay more? Bring big business to table through avoided regulation incentive, and reputation as good stewards.
- It's complex and requires a wide range of players

- Begin with low hanging fruit – 3 possibilities are: a) Large scale commodities near critical conservation areas, b) High value niche products, target the water required to produce them, and other ESs, c) Special places, such as Sustainable Galapagos, or a Chesapeake Bay sustainable label?

Proposition #4: Improved understanding of poverty-environment linkages

- Key question is does environment, as expressed through the 4 types of ecosystem services, contribute to poverty?

- Begin with a basic needs survey – and ask the questions, do they have access to these 4 services? From where do they get this access?

- Create a modified basic necessities survey designed to see how access changes over a landscape continuum. Donors would like to know how access to ecosystem services changes over time.

- Test the modified survey where groups are already working effectively.