African Regional Workshop on Compensation for Ecosystem Services

22-24 May 2006, Nairobi, Kenya

Benson Ochieng, Brian Otiende and Rachel Rumley

World Agroforestry Centre
TRANSFORMING LIVES AND LANDSCAPES

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Correct citation: Ochieng B, Otiende B and Rumley R. 2007. African Regional Workshop on Compensation for Ecosystem Services (CES), May 22 – 24, 2006, Nairobi, Kenya. ICRAF Working Paper no. 35. Nairobi, Kenya: World Agroforestry Centre.

Titles in the Working Paper Series aim to disseminate interim results on agroforestry research and practices and stimulate feedback from the scientific community. Other publication series from the World Agroforestry Centre include: Agroforestry Perspectives, Technical Manuals and Occasional Papers.

Published by the World Agroforestry Centre
United Nations Avenue
PO Box 30677, GPO 00100
Nairobi, Kenya

Tel: +254(0)20 7224000, via USA +1 650 833 6645
Fax: +254(0)20 7224001, via USA +1 650 833 6646
Email: icraf@cgiar.org
Internet: www.worldagroforestry.org

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ICRAF Working Paper no. 35

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With generous support of the International Development Research Centre, Canada

The World Agroforestry Centre (ICRAF) and a diverse team of partners were tasked by the International Development Research Centre (IDRC) to contribute to the conceptualization and development of their Rural Poverty and Environment (RPE) programme related to Compensation and Rewards for Environmental Services (CRES) by providing an overview of relevant developments in Africa, Asia and Latin America, a global synthesis of results and recommendations. Truly global in nature, the CRES Scoping Study was undertaken by the following partners and collaborators based in 7 countries across 4 continents.

The African Centre for Technology Studies (ACTS) is a Nairobi-based international intergovernmental science, technology and environmental policy think-tank that generates and disseminates new knowledge through policy analysis, capacity building and outreach. The Centre strives to rationalize scientific and technological information to enable African countries make effective policy choices for improved living standards. ACTS works with partners and networks including academic and research institutions, national governments, UN bodies, regional and international processes and NGOs. ACTS' research and capacity building activities are organized in five programmatic areas: Biodiversity and Environmental Governance; Energy and Water Security; Agriculture and Food Security; Cross-Cutting Issues; and Science and Technology Literacy. Its members include the Governments of Kenya, Malawi, Malta, Uganda and Ghana, as well as the World Agroforestry Centre (ICRAF) and the Third World Academy of Sciences (TWAS). www.acts.or.ke

Corporación Grupo Randi Randi (CGRR) is a non-profit corporation, whose mission is to build and motivate equitable development and a healthy environment, stimulating the imagination, creativity and the talent of our collaborators, incorporating gender, generation and ethnic equality, local participation, the sustainable management of natural resources and the conservation of biodiversity. CGRR was legalized in Ecuador in 2000, currently has 17 members, and operates a range of research and development projects, with international and national funding, ranging from participatory watershed management, watershed inventories and modeling, gender and environment, community conservation, conservation planning for protected areas and integrated crop management for sustainable development. CGRR is a member of the Consorcio para el Desarrollo Sostenible en los Andes (CONDESAN), the International Union for the Conservation of Nature (IUCN), the Ecuadorian association of environmental NGOs, (CEDENMA), and is a founding member of RISAS, a national network focused on the study and promotion of environmental services research and action. www.randirandi.org

Forest Trends is an international non-profit organization that works to expand the value of forests to society; to promote sustainable forest management and conservation by creating and capturing market values for ecosystem services; to support innovative projects and companies that are developing these new markets; and to enhance the livelihoods of local communities living in and around those forests. We analyze strategic market and policy issues, catalyze connections between forward-looking producers, communities and investors, and develop new financial tools to help markets work for conservation and people. www.forest-trends.org

The Institute for Social and Economic Change (ISEC) is an all India Institute for Interdisciplinary Research and Training in the Social Sciences, established in 1972 by the late Professor VKRV Rao. It is registered as a Society under the Karnataka Societies Registration Act, 1960, to create a blend of field-oriented empirical research and advances in social science theories leading to better public policy formulation. Its mission is to conduct interdisciplinary research in analytical and applied areas of social sciences, encompassing diverse aspects of development; to assist both central and state governments by undertaking systematic studies of resource potential, identifying factors influencing growth and examining measures for reducing poverty; and to establish fruitful contacts with other institutions and scholars engaged in social science research through collaborative research programmes and seminars, and to conduct training courses and refresher programmes for university and college teachers and public functionaries.

www.isec.ac.in

The World Conservation Union (IUCN): Founded in 1948, IUCN brings together States, Government agencies and a diverse range of NGOs in a unique partnership with over 1000 members spread across some 150 countries. As a Union IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

www.iucn.org

UNEP is the voice for the environment in the United Nations system. It is an advocate, educator, catalyst and facilitator, promoting the wise use of the planet's natural assets for sustainable development. UNEP's mission is "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations".

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The World Agroforestry Centre (ICRAF) is the international leader in the science and practice of integrating 'working trees' on small farms and in rural landscapes. We have invigorated the ancient practice of growing trees on farms, using innovative science for development to transform lives and landscapes. The World Agroforestry Centre is one of the 15 centers supported by the Consultative Group on International Agricultural Research (CGIAR).

<http://www.worldagroforestry.org>

About the authors

Benson Ochieng	African Centre for Technology Studies (ACTS), Nairobi, Kenya. Currently Institute for Law and Environmental Governance, Nairobi, Kenya
Brian Otiende	Research Assistant African Centre for Technology Studies (ACTS)
Rachel Rumley	Media Associate, World Agroforestry Centre (ICRAF) Nairobi, Kenya and Assistant Coordinator Global Scoping Study on CES

Abstract

As part of the study, CGRR, together with Forest Trends and IUCN, were responsible for organizing a Latin American workshop on PES and poverty. The workshop was held in Quito, Ecuador, April 26-28, 2006. This report covers the organization and planning process of the workshop. It includes summaries of all presentations made as well as summaries of the case studies presented by international participants. A synthesis of the current situation and trends in the region concerning PES and poverty is presented and followed by conclusions and recommendations proposed by workshop participants.

The Africa Regional Workshop was staged as a component of the Global Scoping Study on Compensation for Ecosystem Services (CES). Commissioned and funded by the International Development Research Centre (IDRC), the general objective of the study is to contribute to the conceptualization and development of the IDRC's Rural Poverty and Environment (RPE) programme related to CES by providing an overview of relevant developments in Africa, Asia and Latin America, a global synthesis of the results, and recommendations for a possible niche for RPE.

As a key part of the study, a 3-day workshop is being held in each focal region. The Africa Regional Workshop was hosted by the World Agroforestry Centre (ICRAF) in Nairobi, Kenya, from 22-24 May 2006. The event brought together participants from across the region, including Kenya, Uganda, Tanzania and South Africa. Delegates represented international and national level organizations, academic bodies, NGOs, consulting firms and donor agencies.

Lead by ICRAF, the study is being performed by a diverse network of partners: Institute for Social and Economic Change (ISEC), African Centre for Technology Studies (ACTS), Corporacion Grupo Randi Randi (CGRR), Forest Trends, The World Conservation Union (IUCN Sri Lanka), with inputs from the United Nations Environment Programme (UNEP).

Keywords

Environmental services, Ecosystem services, Africa, Tanzania, Uganda, Kenya

Acknowledgments

Many individuals and organizations deserve credit for making possible the workshop and subsequent report. Special thanks go to: Victor Orindi and Joan Kariuki, for their technical and logistical support to the workshop preparations; all the participants and presenters, for their rich and invaluable contributions to the workshop; and, Dr. Brent Swallow, Rachel Rumley and Thomas Yatich of ICRAF, for their invaluable support in organizing and conducting the workshop. The African Regional Workshop on CES, a component of the CES Global Scoping Study, was made possible by the generous support of the International Development Research Centre (IDRC) of Canada.

Preface

From the beginning of 2006 until March 2007, the World Agroforestry Centre (ICRAF) led a consortium of organizations and individuals from around the world in a pan-tropical scoping study of Compensation and Rewards for Environmental Services (CRES). The scoping study was commissioned by the Rural Poverty and Environment Programme of the International Development Research Centre of Canada (IDRC) to identify critical issues affecting the development, operation, impacts and institutionalization of mechanisms linking beneficiaries of ecosystem services with stewards of those ecosystems. Particular attention is paid to the potential for CRES to alleviate or exacerbate the multiple dimensions of poverty: rights to productive assets, streams of income and consumption, and vulnerability to shocks.

The scoping study included a series of regional workshops held in Latin America (Quito, Ecuador), Asia (Bangalore, India) and Africa (Nairobi, Kenya). Participants presented and discussed practical CRES experiences from across the developing world, experiences which informed and challenged the development of several cross-cutting issue papers. A series of nine working papers have been prepared to summarize the results of the scoping study, including an introductory paper, three regional workshop reports, and five issue papers on key topics.

ICRAF Working paper 32 – Compensation and Rewards for Environmental Services in the Developing World: Framing Pan-Tropical Analysis and Comparison.

ICRAF Working paper 33 – Report on the Latin American Regional Workshop on Compensation for Environmental Services and Poverty Alleviation in Latin America.

ICRAF Working paper 34 – Asia Regional Workshop on Compensation for Ecosystems Services. A component of the global scoping study on compensation for ecosystem services.

ICRAF Working paper 35 – African Regional Workshop on Compensation for Ecosystem Services (CES).

ICRAF Working paper 36 – Exploring the inter-linkages among and between Compensation and Rewards for Ecosystem Services (CRES) and human well-being: CES Scoping Study Issue Paper no. 1.

ICRAF Working paper 37 – Criteria and indicators for environmental service compensation and reward mechanisms: realistic, voluntary, conditional and pro-poor: CES Scoping Study Issue Paper no. 2.

ICRAF Working paper 38 – The conditions for effective mechanisms of Compensation and Reward for Environmental Services (CRES): CES Scoping Study Issue Paper no. 3.

ICRAF Working paper 39 – Organization and governance for fostering pro-poor Compensation for Environmental Services: CES Scoping Study Issue Paper no. 4.

ICRAF Working paper 40 – How important will different types of Compensation and Reward Mechanisms be in shaping poverty & ecosystem services across Africa, Asia & Latin America over the next two decades? CES Scoping Study Issue Paper no. 5.

The working papers are designed for relatively limited circulation of preliminary material. We anticipate that all of the papers will be revised and published in a formal outlet within the next year.

Brent Swallow
World Agroforestry Centre
Nairobi, Kenya

Hein Mallee
International Development Research Centre
Singapore

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Session I - Official Opening and Introductions

Opening Remarks

Benson Ochieng opened the workshop by welcoming all the participants. He gave a brief introduction to the African Centre for Technology Studies (ACTS), outlining the Centre's mission, programme of work and projects, and highlighting their links with Compensation for Ecosystem Services (CES).

Luis Navarro of the International Development Research Centre (IDRC) spoke on behalf of the Rural Poverty and Environment (RPE) Programme, an IDRC initiative that addresses issues relating to rural poverty alleviation and environmental sustainability. Specific areas of focus include: improving governance, increasing access of the rural poor to natural resources, rewarding people for their responsible environmental stewardship, improving services derived from the environment, promoting markets for the rural poor, protecting marginalized markets and ensuring their sustainability, and embracing adaptive learning and supporting action research that is development conscious.

Anantha Duraipappah, Chief of the Analysis and Emerging Issues Unit of United Nations Environment Programme, Division of Environmental Law and Conventions (UNEP-DELIC), underscored the need to draw lessons from ongoing initiatives, like the Millennium Ecosystem Assessment of 2005. The public presentation of the document, made in New York City the same year, highlighted that markets are as good as the company they keep. He explained that the study revealed a 60% decline in ecosystem services and that CES can be adopted as a potential tool to address this decline, thereby helping in the fight against poverty in developing countries.

Duraipappah emphasized UNEP's tradition of promoting pro-poor markets through its Poverty and Environment Programme, which, by the year 2000, was operational in 6 or 7 African countries. The conceptual framework developed, as part of this programme, indicated that CES will become a fundamental principle in addressing the declining environmental services. He explained that UNEP-DELIC's activities include: designing multilateral agreements and undertaking evaluation studies, among others. UNEP-DELIC is implementing a CES project in Lake Victoria with the Environmental Services Theme of The World Agroforestry Centre (ICRAF). He concluded by saying that UNEP-DELIC expects the workshop will help identify existing gaps as far as environmental services are concerned.

Mohammed Bakarr, Director of Strategic Initiatives at ICRAF, took the opportunity to welcome the workshop participants to ICRAF campus. He expressed hope that the workshop will open avenues for exploring strategic partnerships between the institutions represented at the meeting, which may, in turn, lead to lasting initiatives in their areas of work. He reminded the audience to draw on ICRAF's considerable experience in the arena of CES, particularly through the RUPES programme in South East Asia. RUPES has generated innovative tools to support Compensation for Ecosystem Services schemes, with the buyer and seller in mind. Bakarr further highlighted the fact that RUPES does not always rely on monetary compensation, but has found other forms of remuneration more effective, for example land tenure benefits. Africa, he suggested, can learn from these experiences and may want to consider a similar approach. Bakarr reiterated ICRAF's support for CES initiatives, and looked forward to the lessons that will emanate from the African Regional Workshop on CES.

Session II- Epistemological and Conceptual Issues

Presentations

Conceptual Framework: Pantropical Scoping Study of Compensation for Ecosystem Services (CES)

*Brent Swallow, Coordinator of the CES Global Scoping Study
Principal Scientist and Environmental Services Theme Leader, ICRAF*

Swallow opened by reviewing the geographic focus of the IDRC's RPE programme. Although the Philippines and Indonesia are not among the RPE's list of priority countries, he echoed the important contribution that can be made by experiences in these regions, particularly through the RUPES programme. Swallow made a point of clarifying two common terminologies that describe market-like mechanisms, differentiating between Payment of Environmental Services (PES) and Compensation for Ecosystem Services (CES). PES, he explained, addresses environmental services which include biodiversity and issues relating to climate change such as adaptation. On the other hand, CES looks into ecosystem services such as production services which are not necessarily environmental in nature. These refer to regulation and cultural services as well as benefits derived from the ecosystem. He also explained that the term 'modifiers' refers to the people living in a certain environment whose activities are damaging to the ecosystem.

Swallow went on to define several generic types of compensation:

- CES 1: Compensation for threat reduction - compensates for activities forgone with the intent of conservation (compensation for opportunity cost).
- CES 2: Compensation for conservation or investment.
- CES 3: Compensation for damage - compensates against activities that degrade the environment, e.g. pollution.
- CES 4: Compensation for diverted use - one group compensates another, e.g. the Emission Trading Union mechanism, where there is transfer of rights from one group to another.

The indicative instruments for CES mechanisms are:

- Encouraged conservation - the reduction of threats and pressures, as well as investments and management practices that preserve and protect ecosystem services, are the basis for rewards.
- Allowed pressures, threats, investments and management practices that are within the bounds of acceptable behaviour. These may be shifted through market-based instruments of Compensation for Ecosystem Services.
- Prohibited pressures, threats, investments and management practices which are subject to enforced compensation for damage to ecosystem services.

Examples of the benefits accrued through the protection of ecosystem services include: regular water supply for hydropower through runoff and an increase in the total water yield for hydropower generation via storage reservoirs; the provision of drinking water from surface or ground water; mitigation of floods and landslides through the rehabilitation of watersheds and soil erosion control; biodiversity conservation around protected areas; restocking degraded landscapes; ensuring production landscapes meet set environmental governance standards; and, improved aesthetic and recreational value of landscapes.

The interface between CES and the Rural Poverty and Environment (RPE) programme encompasses four broad areas of activity:

- building effective environmental governance;
- enhancing equitable access and use rights;
- strengthening the capacity of communities to respond to and benefit from integration with wider social and economic systems; and,
- adaptive learning.

The conceptual framework also introduces five Issue Papers which seek to address:

- What are the direct and indirect links between CES and poverty?
- What criteria and indicators should be used to evaluate the actual / potential effectiveness of pro-poor mechanisms of Compensation for Ecosystem Services?
- Under what conditions — poverty, environment, institution and market — are different types of CES schemes likely to be most effective?

- What are appropriate roles for intermediary organizations and government institutions that seek to foster pro-poor CES?
- How important will the different types of CES mechanisms be in shaping poverty and ecosystem services across Africa, Asia and Latin America over the next two decades?

Discussion

Some participants expressed fear that prohibited pressures, threats and management approaches might adversely affect farmers if they become the subject of enforced compensation for damage to ecosystem services. This instrument was reported to be different from paying people not to engage in certain activities. Charles Earhart from CARE-Tanzania emphasized that CES should not be treated as a silver bullet for poverty, but should be taken only as part of the solution. Brent Swallow noted that compensation for damage is not a new concept, several industries, for example mining, have laws in place that attach consequences to ecosystem damage.

An example from the Philippines where the opportunity to receive some form of payment provided the impetus for conservation efforts was cited. Participants debated whether compensation should be made to individuals or the community as a whole. In Nairobi National Park, for example, the Kenya Wildlife Service (KWS) works alongside the community.

Participants emphasized that laws are effective only so long as they are obeyed and that enforcement measures need to be in place. Policy interventions are required as guiding principles. A need was identified for problem-focused research to strengthen policy by addressing existing gaps. Several issues were tabled for further attention, notably land ownership and tenure, where it is often stated that only land owners are to be compensated on any damage that is caused to their land.

Property Rights and Compensation for Ecosystem Services: Policy Issues and Challenges in Kenya

Benson Ochieng
African Centre for Technology Studies (ACTS)

A fairly comparable property rights regime exists across East Africa. Critically, property rights pertain not only to issues of ownership, but also to different rights that users have to a specified resource. Property rights are a tool to help establish financial instruments that can support monetary incentives for environmental

conservation, help identify different stakeholders, and address issues such as who is entitled to compensation and what mechanisms are to be followed in the process. Conservation in Africa is critical, given the continent is endowed with the rich natural resources. Community participation is vital when it comes to conservation matters, while institutions provide governing instruments.

The nature of property rights often results in discussions of resource interests rather than rights. In such a case, it is important to note that the law only considers enforceable claims. CES will have a different role to play in cases where individuals have legal privileges, e.g. in the case of land.

There are different types of rights that are held in different forms such as possession, use, personal enjoyment, management, income, capital, immunity and gifted. These rights have both spatial and temporal dimensions. Property rights regimes refer to the totality of social and institutional arrangements by which individuals become aware of what is theirs and what belongs to others. It also outlines the duties imposed on individuals and upheld by the virtue of others' property rights. The different types of regimes are: state property, common property, individual property and open access.

Property rights are not absolute but must ensure reciprocity of access, utilization and husbandry of resources. Property rights are linked to the environment through seeking to ensure environmental sustainability. On the other hand, individuals too have rights towards the environment. Property rights in relation to CES refer to property as a legal concept, rights of participation, and compensation and rights sharing.

The legal and policy framework for CES addresses customary, modern and public tenure regimes. However, the control of rights is vested in political authorities. Property rights can therefore be considered with respect to natural resources such as forestry and water.

In conclusion, the presentation points out key weaknesses in the existing legal framework to support CES:

- The assumption that unrestricted private property rights are imperative for rational resource use, decision-making, and management;
- The decline in the regulatory attributes of common property regimes;
- The misconception concerning public rights in private property; and,
- The ineffectual nature of state regulatory functions and powers.

As a result, the following recommendations were made:

- Alternative laws and policies that define property rights in a manner that incorporates conservation ethics need to be adopted;
- Devolvement of such laws and policies with control over natural resources to local communities is needed. To be effective, we need to encourage appropriate local-level institutional and normative regimes for sustainable resource management; and,
- Identify opportunities in emerging laws and on-going policy/legal reforms.

Overview of the African Regional Workshop on Compensation for Ecosystem Services (CES)

Benson Ochieng, African Centre for Technology Studies (ACTS)

Benson Ochieng gave an overview of the workshop. The objectives are to address:

- Solutions to the challenge of achieving sustainability;
- Valuation of nature's ecosystem services, assigning an economic value capable of contributing to the global economy;
- Tapping the potential of market-based approaches while structuring incentive schemes;
- Institutional innovations that can enhance conservation; and,
- Moving towards realizing the potential that CES holds for developing countries.

The workshop approach:

- Discussions to identify the future prospects for CES and other market-based instruments;
- Explore possible ways of improving these instruments to improve the benefits to both the rural and urban poor in developing countries; and,
- Gather stakeholder perceptions and identify knowledge gaps relating to key issues affecting the potential for CES mechanisms to alleviate rural poverty and conserve ecosystem functions.

The intended outcome of the workshop is to strengthen the application of financial and incentive-based instruments for conservation and reducing poverty in Africa, and identify the future agenda across the continent, particularly as it pertains to IDRC's Rural Poverty and Environment (RPE) programme. The workshop was tailored to capture key concerns such as epistemological and conceptual mechanisms, and lessons and experiences from individual CES projects. The final

sessions focused on a priority setting, including salient research questions and critical policy issues.

Discussion

Participants pointed out that natural resources, and the basis for ecosystem services, often fall under the jurisdiction of more than one political body. This complicates management of the resources. Catchment areas being under the control of different ministries, for example water and forestry, was cited as an example. Conservation ethics need to be taken into consideration. Attention was also paid to the question of capacity building. Devolving power to communities requires training in order to ensure that they can effectively manage the resources within their control.

Session III- Designing CES Mechanisms

From Donors to Markets: seeking sustainable incentives for ecosystem services

Dr. Charles Earhart, Programme Coordinator, CARE/WWF - Tanzania

Charles Earhart gave a brief introduction to the Participatory Environmental Management (PEMA) programme, which is active in two sites: the South Nguru Mountains in Tanzania and the Kasyoha-Kitomi Forest Reserve in Uganda. PEMA's overarching goal is to broadly promote replicable approaches to natural resource management and governance that improve local livelihoods by enhancing ecosystem services.

Key findings from the PSA include:

- The decline of useful biodiversity within and outside of forests reserves;
- Increased human-wildlife conflicts in Uganda;
- Soil erosion and forest degradation which seem to be reducing rainfall associated with micro-climates, particularly in Tanzania; and,
- The need for fuel to replace extreme stress on forest resources in the various landscapes.

In outlining the way forward, emphasis was placed on the need for long-term solutions, including: long-term incentives for people to participate in the protection of forest biodiversity, improving farming/livelihood systems which would restore

useful biodiversity to the landscape, and the wide-scale adoption of appropriate technologies which reduce the demand for forest resources.

Earhart reviewed current CES activities surrounding three ecosystem services: *biodiversity*, *watersheds* and *carbon*.

With regards to *biodiversity*, PEMA is finding it easier to negotiate non-monetary forms of payment, for example greater rights of use for forest resources. However, these efforts are hampered by the establishment of strict nature reserves contingent with village boundaries. In these cases, governments tend to support revenue-sharing from eco-tourism. PEMA is skeptical of this approach, feeling it is unlikely that nature reserves will ever generate adequate revenues to pay villagers for their contributions to biodiversity conservation.

PEMA's current thinking on CES for *watershed management* emphasizes the need for a compelling business case coupled with engineering-based approaches to meeting current demand for water. Success of CES schemes will require encouraging willingness-to-pay for ecosystem services, backed by concrete payment schemes. Earhart warned of a political quagmire that could result from revenue opportunities for powerful institutions, and highlighted the need to consistently make space for community voices and concerns.

PEMA is currently designing proposals for its second phase of *carbon* CES programmes in Uganda and Tanzania, focused on carbon sequestration and energy. These activities take a 'multi-benefit' approach by seeking to combine poverty reduction, biodiversity conservation, carbon sequestration and reduced emissions. Earhart highlighted the potential to finance climate change adaptation strategies, in particular disaster risk reduction.

In conclusion, Earhart offered several ways in which poor farmers can benefit from CES:

- Direct financial benefits to individual farmers and households;
- Direct benefits that accrue at a community level, e.g. hospitals, schools and roads;
- Indirect benefits such as community empowerment and land tenure;
- Indirect benefits from landscape restoration, such as decreased vulnerability to climatic changes; and,
- Indirect benefits derived from stable social, cultural, and environmental conditions.

Earhart wrapped up by pondering the following points:

- Low-level, long-term CES financial inputs may be able to play an important role in biodiversity conservation, livelihoods improvement and securing those improvements in the face of changing climatic conditions – *IF the market is purpose built.*
- The workability of CES may be exponentially enhanced by bundling different services, thereby providing multiple benefits.
- NGOs have limited familiarity with working with long-term, market-based mechanisms.
- Research is needed into the property value consequences of CES, and the impact on asset acquisition/poverty reduction amongst the youth.
- CES is a supplement not a replacement for government financing for conservation.
- Market-shaping policy frameworks are already at risk of diverging from experiences from the ground.
- Given the realities of climate change, should Land-Use, Land-Use Change and Forestry (LULUC-F) allow large emitters of carbon to pay their way out of fundamental reductions to their emissions? And, if LULUC-F cannot provide resources for adaptation to climate change, who will?

Discussion

Earhart explained that Tanzania proved a better business case than Uganda because of landscape issues, i.e. the project site in Tanzania is fundamentally drier.

Regarding non-monetary CES, the Forest Act (2003) passed by the government of Uganda provided the legal framework for participatory forest management and allowed for the establishment of legal contracts with local communities.

It was added that while a global market exists for carbon CES, the question remained whether CES for watersheds would work.

Panel Discussion

Panelists:

Dr Alan Rodgers, *UNDP*

Ongeli Makui, *ILRE/WF*

Dr Charles Earhart, *PEMA*

Byamukama Biryawaho, *ECOTRUST-Uganda*

Dr James Kungu, *KU/ICRAF*

Msafiri Wambua, *Nairobi Water and Sewerage Co.*

The panelists were asked to highlight what they felt were the most critical issues, as far as CES is concerned. The following emerged as key interests and priorities:

- Community participation in conservation needs to empower community members to have real influence on policies;
- There is an opportunity to employ land use, land use change and forestry projects for carbon sequestration;
- Need to establish strategic forums at the national level;
- Harmonization of policies among different stakeholders;
- Capacity building among decision makers, government and regional cooperation bodies with the influence to affect CES, for example the New Partnership for Africa's Development (NEPAD);
- Improving smallholder farmers access to and ability to participate in international markets for carbon;
- Generating models that can value amounts of carbon captured versus the money to be paid;
- Embracing engineering options as participatory actions;
- Improving institutional arrangements; and,
- Taxation issues.

'Capacity' was identified as a very important aspect. Panelist warned against bantering 'capacity building' as a catch all phrase with no solid activities behind the term. Capacity should be viewed as an ongoing process not an event, and should have clear goals, methodologies and activities in order to reach the desired outcomes. Institutional arrangements and donor support is necessary to create forums for learning the skills necessary for successful CES schemes, as well as fostering multi-sector approaches.

Capacity building amongst CES practitioners was highlighted with regards to Clean Development Mechanisms (CDM) requirements which can be rather intimidating to the non-expert, and basic understanding of ecosystem services. It was suggested that specific training programmes should be integrated within CES programmes.

Practical strategies to implement CES projects need to be adopted, and honesty must be cultivated among different stakeholders. Since a complete transformation of policies is difficult, it was suggested that existing policies should be exploited to the fullest before proposing changing them completely. Compensation should be considered in a broad sense, and more than just monetary payments. The involvement of environmental economists would also add value to the CES schemes.

Session IV- Lessons and Experiences from CES Projects

Inventory of CES Projects in East Africa

*Thomas Yatich
Environmental Services, The World Agroforestry Centre (ICRAF)*

Thomas Yatich took the participants through a comprehensive inventory of CES projects in East Africa. Matrix 1 tabulated country-level inventories of ecosystem service payments, existing markets, and the mechanisms governing these markets. Matrix 2 provided assessment of local involvement and benefits in selected case studies. Matrix 3 reviewed the legislative and policy issues pertaining to ecosystem services such as carbon, biodiversity and water.

Overview of CES in Uganda

*Alice Ruhweza, LEAD Agency Coordinator/Consultant
National Environment Management Authority (NEMA – Uganda)*

Alice Ruhweza presented an inventory of CES projects in Uganda. These projects focused on three categories of ecosystem services: carbon, biodiversity and water. The carbon portfolio included tree planting, clean energy and waste composting activities. Purchase of high value habitats, payment for access to resources, payment for biodiversity conservation, community ecotourism projects and the World Bank-GEF trust fund were evaluated under the banner of biodiversity. Despite lots of potential, there were no specific projects for watershed services in Uganda, although there were isolated rainwater harvesting projects supported by

Uganda Breweries Ltd. Ruhweza highlighted that there is no specific legislation pertaining to CES in Uganda.

The following gaps were identified from the inventory:

- Ecosystem service providers were not aware of monetary value;
- Difficulty in defining rights;
- Lack of effectiveness and efficiency of the projects;
- Issues of equity;
- Limitation of technical expertise in project implementation;
- Inadequate market information; and,
- Poor availability or lack of incentives.

Ruhweza pointed out that ecosystem service users need to be made aware of what they are paying for. This means there is a need to raise awareness and for training to be conducted in order to implement practical projects with real benefits. Uganda's future plans are to initiate water payment schemes, identify appropriate sites, finalize valuation and undertake ecosystem assessments.

Pro-poor Compensation for Environmental services: Trees for Global Benefits Programme of ECOTRUST Uganda

Byamukama Biryawaho, Programme Officer, ECOTRUST Uganda

Byamukama Biryawaho focused on forestry and the carbon trade, with reference to the Kyoto Protocol and CDM projects. The Trees for Global Benefits Programme provides support to smallholder farmers in Bushenyi District, Uganda, who are planting trees for carbon sequestration. The overall objective of the project is to address climate change and reduce poverty levels, by developing and operationalizing a model for carbon trading with smallholders. Subsidiary goals include building institutional and technical capacity of participating institutions to implement carbon projects and the creation of baseline data for agroforestry/forestry activities.

The benefits of the project include: reduction of carbon emissions through tree planting which capture carbon dioxide from the atmosphere and evaluation of CDM projects following the Bonn Agreement and Marrakech Accords. Biryawaho added that carbon trade can bring in resources that will help poor forest owners meet their forest management objectives.

To date, over 100 farmers have registered in the scheme, 40 of which have received their first payments. Tree seedlings have been raised and distributed to farmers, some of which have started their own tree nurseries.

Biryawaho highlighted several lessons that emerged:

- Carbon trade transactions require considerable investments of time and financial resources.
- The roles of different players must be well negotiated and documented from the start. Legal instruments are needed to accomplish this.
- Systems – such as technical specifications and institutional frameworks – must be appropriate to local conditions.
- There is need for establishment of working institutional and policy frameworks for administration of the incentives.
- Carbon trade incentives should be treated as a supplement to private funds, rather than the main source of capital.

In conclusion, Biryawaho added that:

- Private forest owners should be made aware of the incentives.
- It is possible to design other innovative payments for management of private natural forests such as biodiversity offsets, watershed payments by water users, environmental easements or long-term conservation leases and price premiums based on certification.

Discussion

As part of the Trees for Global Benefits Programme, payments to farmers are made in installments in order to monitor their progression. The farmers are also recruited in groups. This is done in the hope that peer pressure encourages farmers to deliver on their tree planting targets; if one farmer in the group does not meet the targets the whole group bears the burden. ECOTRUST is responsible for the carbon modeling research. Data on tree species that the project intends to plant is obtained from the Forestry Department which has data dating as back as 100 years. The price per ton of carbon is valued at about USD 700-800 per hectare for the whole project period of 25 years.

PES in a Kenyan Context: Potential opportunities and practical applications

Steve Were, Research Associate, Bureau of Environmental Analysis International

Steve Were began by reviewing the agro-climatic zones and hydrological characteristics in Kenya, noting that most of the country is ASAL (Arid and Semi-Arid Land). Kenya has two critical watersheds: the Indian Ocean and Lake Victoria, which subsequently flows north into the Nile River.

Were transitioned to CES by pointing out that the term lacks a specific definition and is often thought of as either an economic or ecological concept that refers to provision of food, medicines, fuel and the regulation of the environment, such as air quality standards, climatic conditions, water purification and waste management. CES also refers to other cultural considerations such as heritage, recreation and religious values, as well as support services such as primary production, soil and oxygen formation.

The presentation focused on how CES can relate to carbon sequestration, biodiversity, CDM, forestry, agricultural practices and land use change in Kenya. General conclusions from the presentation include:

Kenya's environmental and social conditions provide a unique challenge in implementing smallscale CDM agroforestry projects.

Promotion of agroforestry options within Kenya's agricultural sector can provide significant and tangible benefits to both the environment and to the social welfare of communities.

Challenges inherent in designing and implementing smallscale CDM projects include: involving stakeholders, developing a clear understanding of cultural beliefs, and the careful selection of species which have direct benefit to landholders.

Lessons from the ENCOFOR (www.encofor.org) experience in Kenya will improve the effectiveness of future projects and pave the way for the implementation of effective smallscale CDM projects.

The Vanilla Jatropha Project: A Case Study on Compensation for Environmental Services

Tom Owino, Environmental Cost Management (ECM) Centre Ltd

Tom Owino gave a brief overview of the project, noting that the Vanilla Jatropha project was designed as a poverty reduction activity that allowed communities to benefit from ecosystem services. The Vanilla Jatropha project is part of six smallscale projects that apply simplified CDM methodologies. In 2005, 4000 farmers in two locations, Migori District and Malindi District (Kenya), participated by growing vanilla plants alongside Jatropha, which acts as shade and tutor for the vanilla vines and fencing for the plantations. The project hopes to involve 10 000 farmers by the year 2014.

Besides generating income from the vanilla crop sales, and with about 93% of the rural poor dependent on kerosene for lighting and some cooking, farmers are able to sell the Jatropha seeds, which are then pressed for oil. The oil can be sold to farmers at a subsidized price to replace kerosene. The surplus oil can be converted by transesterification into a biofuel and sold as substitute for diesel commonly used for transport and power generation in stationary engines, such as posho mills. This would result simultaneously in emission reductions and income generation. The excess cake, the by-product of oil extraction from seeds, can be sold as fertilizer for farmers fields.

The project has the following benefits:

- Alleviation of poverty through the increase of disposable income;
- Increase in forest cover;
- Reduction of greenhouse gas emissions;
- Source of renewable energy;
- Forex savings on fossil fuel importation;
- Improved health by means of reducing the number of bronchial infections cause by inhaling kerosene fumes. Malaria infection rates also declined since Jatropha oil can be used to kill mosquito larvae;
- Organic manure with pesticide properties for high quality vanilla; and,
- Production of raw materials, such as glycerol, for soap production.

Owino highlighted the lessons learned:

- A strong, viable business plan is critical to success.
- 30 000 tons of CO₂ equivalent per year is the minimum level for sequestration.
- From financiers' and buyers' perspectives, the more development dividends the riskier the project. The risk needs to be distributed amongst players.
- There are a number of barriers to financing CDM projects which need addressing.
- Financing could be sought from multiple sources: equity investors (local/international, public/private sector), both local and international lenders, insurers, suppliers of Renewable Energy and Energy Efficient (RE & EE) technology, grant providers and carbon credits.

The challenge is to develop 'bankable' projects. This requires project proponents to think like bankers, investors and Certified Emission Reduction (CER) buyers, but act in way consistent with the creation of projects with significant development dividends. If the development dividend is seen as a risk rather than reward (from the financial sector perspective), how do we encourage the development dividend? According to Barry M Jackson, a policy analyst with the Development Bank of South Africa, one of the four things bankers are looking for is 'socially responsible investments' in which to sink their money. Could the development dividend be related to 'social responsible investments'?

Discussion

Farmers can benefit from existing forests stands by understanding what ecosystem services — including carbon sequestration — could be subject to CES.

Raising farmer awareness through consultative gatherings will build capacity on the ground to design and sustain projects for longer periods of 20-25 years. High demand for cash crops supports the uptake of *Jatropha* trees for oil. Convincing farmers to give *Jatropha* a try is no problem.

It was noted that, in South Africa, *Jatropha* is considered an invasive species. Environmental Impact Assessments, which should be conducted as part of the project development activities, provide an effective tool to ascertain whether *Jatropha* poses a similar risk in East Africa. Owino did not think, given the current experience, that planting *Jatropha* posed a risk in Kenya, but felt that the South African experience pointed to the need extensive research into the economical and ecological aspects of the species. This is particularly true as *Jatropha* gains in popularity in Tanzania and Uganda, where the tree is also being used as a tutor for vanilla plantations.

The technology being employed in Jatropha oil lamps is quite simple, but research could support new technologies, if necessary. At the moment, transesterification is the process used for conversion of Jatropha oil into biofuel. This is accomplished using Japanese equipment. It was reported that biofuel has a ready market, since EU laws seek to increase biofuel usage within the European Union. However, if biofuel is exported, there are no CERs to be earned locally. Under CDM criteria, the CERs can then be claimed by the importer and user of the fuel.

Since much of Kenya is classified as ASAL (Arid and Semi-Arid Land), what is the impact on livestock? It was suggested that central 'fattening grounds' be adopted before selling-off the livestock. The fattening and slaughtering of livestock at a common place presents good prospects for using the waste generated for biogas production, which qualifies for CDM funds. This cash can, in turn, be ploughed back to farmer groups. Farmers Choice and Alpha Foods have shown interest in such an arrangement. CARE Canada is working with both companies to determine the feasibility of the approach.

Wildlife Lease Programme

*Ongeli Makui, Community Facilitator
International Livestock Research Institute (ILRI/WF)*

Ongeli Makui highlighted the problems facing Kitengela, including: heavy industrial growth, population growth, migration of cattle to the city, unplanned urban development and landlessness. Development of the EPZ-A (Economic Processing Zone) has worsened land fragmentation and contributed to uncontrolled industrialization.

A socioeconomic study, conducted by ILRI and ACC in 1999, indicated that the Masaai community in the area was open to new ideas and approaches for addressing these challenges. However, efforts have been hampered by a lack of harmonization in land use policy, particularly with regards to industry, such as floriculture and mining.

Masaai households have accrued benefits from conservation of wildlife, such as the mobile phones distributed by the Kenya Wildlife Service (KWS) to community members, who were then able to report wandering wildlife which could pose a threat to human life.

Makui added that a consolation scheme has been established to compensate against human injury and loss of cattle, as a result of wildlife. The project is recognized as a community conservation programme and Global Environmental Facility (GEF) has pledged to fund the project to the tune of USD 1 million. The

Wildlife Lease Programme shows the potential for CES to address conservation problems.

Private farmers compensation and viability of protected areas: The case of Nairobi National Park and Kitengela dispersal corridor.

Luis C. Rodriguez, International Livestock Research Institute (ILRI)

Luis Carlos Rodriguez presented a case study from Kitengela, Kenya, a dispersal area for Nairobi National Park (NNP). He expressed concern that the Park may be too small to be economically viable for CES. Rodriguez noted that the protected areas appear to be too small to maintain viable populations of certain wildlife, and threats to dispersal areas, as a result of land use change and fencing, have implications for both the environment and economic sustainability.

The Kitengela study proposed that recognition of the contribution of ecosystem goods and services provided by the park to the well-being of local people, and the perception of the costs and benefits of distinct land management schemes, might affect people's incentives to participate and contribute to conservation initiatives in Kitengela.

The study team gathered empirical evidence of the perceived importance of some ecosystem goods and services provided by NNP to the people living in both urban Nairobi and the dispersal areas in Kitengela.

The study also sought to quantify the willingness-to-pay (WTP) for a compensation programme for private landholders in the dispersal area, in order to promote land use managements which preserve the structure and function of the dispersal corridors and promote the sustainability of Nairobi National Park. The study estimates the WTP of 23,000 households at KES 355/month — amounting to transactions worth KES 98 Million per year. Comparing the aggregate WTP of Nairobi residents (KES 98 Million) with the annual wildlife-related losses to farmers in the dispersal areas of Kitengela (KES 52 Million), leaves a significant surplus, which project proponents suggest be invested in the capital market. The interest could be used to keep the payment schemes self-sustaining in perpetuity.

Thus, different payment schemes with or without complementary external funds, could be developed to ensure payments in the precise time and sites to compensate landholders in perpetuity for their estimated wildlife-related losses.

And finally, the study observed that small pilot payment initiatives have had a positive impact on people's livelihood and in the reduction of human-wildlife conflicts.

Discussions

Participants were pleased that activities of this nature were going on. A study from the Netherlands was cited, where willingness-to-compensate farmers for leaving land fallow was evaluated.

The issue of gender was raised. Who amongst the pastoral Masaai would receive the income from CES? It was indicated that Masaai women control wildlife lease money more so than men, because there was suspicion among the men. The women were given authority to handle the money since they were channeling it to good use, e.g. secondary education of girls.

Some participants questioned the impact of donor fatigue on the longevity of the lease and compensation schemes. The KWS is only assisting for 5 years; there is a need for other strategic plans to be put in place. Examples of complementary activities attractive to donors included ILRI's contribution of small cross-breeding stocks that bolster income for communities.

It was pointed out that group ranch activities and the subdivision of land are common in Kitengela. These trends and their interaction with land tenure systems needs to be addressed in any long-term programme in the area. Gate fees for tourists are too low, and not able to make substantial contributions to financing the CES in Kitengela. However, a number of stakeholders are already willing to contribute to endowment fund. These include Kenya Commercial Bank who are contributing towards the conservation of lions, the symbol on their corporate logo. The Master plan deadline has been set for June 2006. One participant questioned how the existence of different methodologies will impact the ecological viability of Nairobi National Park.

Several aspects of the Kitengela context were discussed. It was suggested that migration could reduce the population pressure that is leading to the subdivision of land. The community in Kitengela rejected a major housing plan that could have had negative environmental impacts. The Environment Mangement and Coordination Act (EMCA) serves to protect encroachment of protected areas. Gradual changing of the land tenure system has contributed to conservation, not the Masaai selling off their land. The challenges facing Nairobi National Park will likely be replicated in other parks, such as the Masaai Mara and Amboseli.

Fencing of Nairobi National Park — to be undertaken by the KWS — was rejected by the Masaai community. If ecosystem services can pay, such schemes should be more acceptable to the Masaai communities. It was reported that fencing of the

park could be catastrophic, particularly since the Nairobi National Park sustains other small parks.

Working for Water Programme: Towards ensuring voluntary payments for ecosystem services

*Ahmed Khan, Research Manager
Department of Water Affairs, Government of South Africa*

Ahmed Khan provided an outline of the Working for Water Programme, and its engagement in the Compensation for Ecosystem Services arena. The Programme was initiated in 1995 to respond to the threat posed by invasive alien plants (IAP) to the water supply and biodiversity, utilizing a labour-intensive public works approach. Until the founding of Working for Water, contributions from taxpayers to support these efforts were primarily of an involuntary nature. Working for Water reflected a shift towards a voluntary payment system for this work.

The clearing of IAP was primarily funded from an existing poverty alleviation grant, with a small component supported through charges billed to water users. A proposal is under consideration with the South Africa Department of Water Affairs and Forestry to increase the voluntary payment component to raise funds for managing IAP within catchments or watersheds.

A number of CES components were developed through the activities of the Working for Water Programme, including:

- The extension of voluntary payments from managing IAP to a range of ecosystem services impacted negatively by IAP.
- The development of a number of similar public works programmes within the environmental conservation arena, including wetlands and indigenous woodlot conservation, and fire management.
- The utilization of the cleared biomass and rehabilitation of cleared areas to establish indigenous biomass utilization industries, e.g. thatching reed, which has spawned an additional payment arena to explore.

Lessons learned include:

- Public policy can be utilized to stimulate CES, thereby linking implementation and policy formulation;
- Valuation of ecosystem services needs to be methodologically sound and comparable;
- There is an increasing need for voluntary payments;
- Awareness of societal benefits of CES is growing amongst policy makers;

- Establishing institutional arrangements that serve as honest brokers in matching service providers to the market is critical; and,
- Key resources and sound leadership must be provided.

Equitable Payments for Watershed Services in Tanzania

*Gabriel Elisante, National Coordinator — PES
CARE- Tanzania*

Gabriel Elisante opened by stating two key challenges: mapping the direction of CES schemes (where we are and where we want to go), and how to create value for CES customers.

Elisante outlined CARE-Tanzania's CES project in the Mt Uluguru watershed, which is divided along the cardinal points North and South. South Uluguru is home to 16 villages with an estimated population of 50 000 people, while North Uluguru houses 32 villages that are home to approximately 40 000 people.

The following are the challenges experienced in the Mt. Ulugulu watershed:

- Poor living standards;
- Gaps in data concerning livelihoods and a need to collect data to support REPOA (REsearch for Poverty Alleviation);
- CARE and Eastern Arc have performed valuation studies that suggest willing buyers and sellers exist in the communities. However, comparison need to be made to the situation in South Nguru, where PEMA has conducted similar work;
- Economic valuations should be undertaken in collaboration with academic institutions;
- The current assumption is that the sellers will be the poor, but there is a need to be assured of net social and financial benefits to the underprivileged;
- The anticipated buyers are private sector corporations and government bodies (municipal, national), etc; and,
- Equitable outcomes should be the mutual objectives of both parties.

Elisante highlighted difficulties created by the complex political-institutional framework in Tanzania. Watershed management involves several government agencies responsible for maintaining or regulating ecosystem services. This potentially complicates negotiations of rewards for the provision of these watershed services. In Tanzania, he said, Water Authorities may feel that CES is their rival. However, Elisante noted that the current government (elected December 2005) is

supportive of environmental issues, and could be an opportunity to foster better government support for CES.

Obstacles facing PES include:

- Lack of awareness about CES among policy makers;
- Gaps in knowledge, particularly in recognizing potential markets and developing appropriate transfer mechanisms;
- Aspects of the Tanzania Revenue Authority (TRA) tax structure; and,
- Local government authorities may prove difficult to win over, but should be swayed by national-level political support for CES.

Elisante suggested that the government was not necessarily the best custodian of ecosystem services, when it came down to value creation. He proposed a model in which various stakeholders — including investors, managers, policymakers, buyers and sellers — work together to co-create value, both financial and non-financial.

Elisante put forward the idea of a 'Ministerial Cluster' for PES, which would be composed of the Ministries of Environment and Natural Resources, Industry and Marketing, local government representatives, building engineers and public stakeholders for education and capacity building.

In conclusion, he noted that CES is still a new concept in Tanzania. Political will, co-operation and equitability will be important in ensuring its future success.

Discussion

It was pointed out that South Africa's Working for Water programme is implemented on public land, such activities on private land remain quite controversial. Users who can pay for services need to pay according to South African policy. To respond to the proposed ministerial model, it was suggested that the 'Ministerial Cluster' should be country specific, and noted that political forces need to be manipulated to achieve this cooperation.

It was suggested that willingness-to-pay should engage industry to identify marginal value of products/services. Different components include tariffs, e.g. pollution levies. Sellers may not always be the poor communities, as sometimes assumed.

Ecosystem services such as the provision of natural fibers and the clearing of species need policies that focus on semi-natural and natural areas.

Payments for watershed services should be considered as part and parcel of CES schemes, although questions remain as to how effective these mechanisms will be in reducing poverty.

Session V- Issue Papers & Priorities

Outlines of the five Issue Papers were presented to the participants:

Issue Paper 1: Compensation for Ecosystem Services and Poverty Reduction

Presenter: Rachel Rumley (using presentation created by Consuela Espinosa, IUCN)

Lead Authors: Mikkel Kallesoe and Usman Iftikhar.

Issue Paper 2: Criteria and indicators for Compensation for Ecosystem Services: Realistic, conditional, pro-poor and voluntary

Presenter: Sandra J. Velarde

Lead Authors: Meine van Noordwijk, Tom Tomich, Beria Leimona and Sandra J. Velarde.

Issue Paper 3: Under what conditions are different types of CES schemes likely to be most effective?

Presenter: Brent Swallow

Lead Author: Brent Swallow

Issue Paper 4: Organizations and governance for fostering pro-poor CES

(Presentation focused on role of user organizations in CES schemes)

Presenter: Madhushree Sekher

Lead Authors: Sara Scherr, Carina Bracer, Augusta Molnar and Madhushree Sekher.

Issue Paper 5: How important will the different types of CES mechanisms be in shaping poverty & ecosystem services across Africa, Asia & Latin America over the next two decades?

Presenter: Thomas Yatich

Lead Authors: Sara Scherr and Carina Bracer.

Participants were then asked to write down 1-3 research priorities along with 1-3 policy priorities pertaining to CES. The goals were to:

- Identify priority knowledge gaps in order to guide future research agendas and prioritize policy issues that need to be addressed to ensure viability of CES mechanisms.
- Fit these questions and issues into the Issue Papers to provide a clear outlet to be addressed within the scoping study outputs.

Following the presentations, participants expressed a preference for discussing their priorities and the Issue Papers in open plenary, rather than selecting and submitting a few written priorities. As such, following the presentation of the issue papers, we adjourned for the day and took up these discussions the following day.

Plenary Discussions of the Issue Papers

Brent Swallow chaired the Issue Paper discussions, which sought to identify key issues, research gaps and overlaps in the Issue Papers that had been presented to participants the previous day. Swallow gave a brief overview of the expectations of the exercise, noting that it will serve to inform the final text of the Issue Papers. In addition to the project's main objective of poverty reduction and halting

environmental degradation, other specific objectives included increasing appreciation of environmental services in general, and compensation and payment schemes. He also emphasized that it's expected that there will be increased appreciation in the long run by people managing the resources in question. Swallow then invited comments from the plenary, beginning with Issue Paper 1 and moving through to Issue Paper 5.

Issue Paper 1: Compensation for Ecosystem Services and Poverty Reduction

- The participants felt that the paper should address the benefits, threats and opportunities that CES may pose to the effort to reduce poverty.
- There is a need to clarify definitions and the conceptual framework to provide better understanding of the concepts at play.
- Opportunities for mainstreaming CES into poverty reduction need to be identified.
- There was also the question as to whether CES needs to be developed within a particular framework or if it should be left open to address different concepts such as human well-being, sustainable livelihoods, capitals/consumption, vulnerability and power.
- • Not all compensation schemes bring in cash, some accrue non-monetary benefits.
- CES can be a slow income generation process. For example, certain land use changes may reverse land degradation, which in turn can help support increased agricultural productivity. The agricultural surplus decreases poverty and provides seed capital that can be invested in longer term efforts, e.g. fruit trees. To impact on development, there need to be appropriate institutional arrangements, for example micro-credit loan schemes.
- There is a need for well-intended intermediaries to provide capacity building and negotiation support, in order for the poor to access the potential benefits of CES.
- CES is not simply a matter of experts devising and implementing a scheme that is imposed on locals. Rather, local communities should have an active voice in the design of CES schemes.
- To overcome barriers to involvement in CES, projects should link up with existing efforts in knowledge generation, skills development and capacity building.
- Questions arose as to whether CES will really benefit the poorest of the poor, but participants felt that this pointed towards a need for a concerted effort to benefit the poor through such schemes — not a reason to discount them. One participant added that just because CES can't fix everything in all

circumstances, doesn't mean we should 'throw away the baby with the bath water.'

- One participant suggested that CES does not reach the poorest of the poor because ecosystem service sellers still have access to the resources they are stewarding. He went on to suggest that this explains why there is more opportunity for CES projects in humid areas, as opposed to semi-arid, and suggested that investments in CES be concentrated in these high-opportunity regions.
- What happens to the poor in the buyer/seller relationship? What if the poor end up as the buyers?
- Real poverty impacts should be evaluated in terms of the different types of compensation or payments and wealth creation activities. How will farmers benefit from fully grown trees to earn credits that would go into wealth creation? Other activities such as beekeeping and animal husbandry also need to be integrated in tree farms.
- CES should not be seen as compensation for forgoing use of a resource to build one's livelihood but should be taken as an incentive to achieve sustainability of the given resource. It should therefore be considered an incentive rather than as compensation alternative.
- Existing weaknesses such as landlessness also need to be considered when designing CES schemes.
- Unrealistic expectations were also identified as a threat to CES schemes.

Issue Paper 2: Criteria and indicators for Compensation for Ecosystem Services: Realistic, conditional, pro-poor and voluntary

The emphasis was placed on four criteria:

1. *Realistic/feasibility* which refers to biophysical and engineering cases, such as hydrological and biogeochemistry basis for providing incentives for behaviour that will lessen degradation of the environment. The business case must be identified based on clear cause and effect relationships. Efficiency of CES is compared to alternatives, e.g. government giving money to the community. Other issues considered as part of this criteria include: relevance, additionality, magnitude of the problem, supply and demand, and private returns from interventions.
2. *Conditionality* refers to the levels of contingency written into deals on the basis of outputs, for example when water reaches a verifiable quality standard, payment is made. Conditionality also demands clear evidence of the required action being taken, and that the base conditions for good environmental

management practices already be in place. This produces a high degree of accountability and requires the application of appropriate technology. Developing trust relationships is critical. Sustainability and long-term obligation to conservation are important and the question of whether the scheme will seek to provide environmental sustainability or improve economic conditions needs to be addressed. It was noted at this juncture that valuation needs to be considered as a cross-cutting issue.

3. *Pro-poor* addresses the equity of distribution within different groups receiving payment (community vs. individual payments).
4. *Voluntary* seeks to measure involuntary conditions such as responsibilities and duties. It also proposes legitimate ways to address the involuntary conditions with respect to laws, policies and customs on which CES is set upon. The issue of changing responsibilities was also raised. Under the realities of climate changes, what will the right to operate entail? Will business activities be limited compared to the current BAU (Business As Usual)?

Other issues raised by participants included:

- The need for means of comparison and measurement of CES mechanisms. Is there an identifiable framework to evaluate CES projects? The RUPES project in Southeast Asia has developed a matrix which they use to evaluate CES projects according to the aforementioned criteria.
- One participant suggested this could take the form of a diagnostic structure used to evaluate the initial project. Changes to the project as a result of monitoring could be tracked over time.
- A participant wondered if CES was the most efficient way to be pro-poor. Is it more effective than government payments?
- Participants took turns adding issues for consideration, including:
 - relevance of the CES project;
 - additionality;
 - legitimacy of the laws and policies to which CES is subject;
 - equity of distribution;
 - magnitude of the problem, i.e. supply/demand;
 - how to measure 'involuntariness';
 - private returns based on clear cause and effect;
 - how to measure 'trickle down effects';
 - how to monitor governance;
 - sustainability and long-term obligations;

- community versus individual payments; and,
- concern over the loss of indigenous rights.

The issue of appropriate terminology was raised again: CES or PES? One participant suggested that we stick to the normative terminology Payment for Ecosystem Services (PES), and then broadly define the term to include compensatory approaches. However, it was noted that different connotations are associated with each term and different sets of scenarios emerge thereof, some being payments while others are non-monetary forms of compensation. Other terms such as market-based, incentive-based and monetary or non-monetary instruments could also be employed together with the mainstream compensation and/or payments.

A participant noted that across the board, it is largely the rural community charged with the stewardship of natural resources. And they are often doing the best they can with limited resources. Poverty and environmental degradation is widespread and the blame is being put on these same impoverished rural people, yet they receive minimal support from society at large.

Issue Paper 3: Under what conditions are different types of CES schemes likely to be most effective?

Discussion brought out several aspects of the Issue Paper, including:

- There is a need to differentiate CES schemes based on the type of ecosystem services on offer and the types of individual deals involved.
- Consider who is driving the process; there should be an institutional role.
- What existing revenue mechanisms applicable to ecosystem services, e.g. taxes and fees? Ahmed Khan warned that in South Africa, government PES activities were viewed skeptically by the population as a means of gaining better control of the tax base.
- Case studies to be designed so as to provide clear short-term incentives while building towards long-term ecosystem management. Alice Ruhweza pointed out that there had been complaints in Uganda about payments going to schools rather than supporting ecosystem service providers. She wondered if this hinted at a necessary trade-off between conservation goals and equity in payment. What are the implications for equity and effectiveness of different conditionalities?
- What would be the impact of climate change in the designs and success of the CES mechanisms? This was highlighted as particularly important with regards

to watershed management and carbon sequestration. Take the case of watershed management, what if the parameters of the CES scheme are clearly outlined, but as a result of dropping water levels, ecosystem service providers become unable to meet their contractual quotas of fresh water to downstream ecosystem buyers? Could this result in litigation?

- To design appropriate schemes it is necessary to understand the base social and economic conditions. What is the poverty context (from the perspective of human well-being)?
- Managing transboundary resources, e.g. the River Nile, will require specific considerations, especially in heavily militarized zones.
- CES schemes need to clearly define who will pay for ecosystems services. Take watersheds, for example, will downstream water users or hydropower companies pay?
- Bundling and stacking may prove important techniques to encourage separate revenue streams derived from single or related behaviours, thus providing better returns.
- Institutional support will be needed to bring together the various buyers and sellers.
- Some mechanism(s) must be put into place to reduce transaction costs.
- Who is driving CES schemes and at what scale? Governments, NGO frameworks?
- Property rights will be a determining factor in maintaining the equity of CES schemes.
- Consider appropriate public relations regimes to raise awareness and levels of understanding amongst diverse stakeholders.

Issue Paper 4: Organizations and governance for fostering pro-poor CES

This paper addresses the roles of organizations in supporting functioning CES schemes, including research organizations, such as ICRAF, that provide scientific and technological interventions to support responsible stewardship of ecosystems. All manner of other organizations play critical roles in maintaining market-like mechanisms by grading ecosystem services, taking on supply and delivery, performing monitoring and evaluation tasks, fixing market failures to create functional markets, disseminating information, enacting and enforcing contracts, ensuring full representation of various stakeholders, and preserving mechanisms of arbitration.

It was noted that in Asia, intermediaries are already in place. Taking on additional roles pertaining specifically to CES will require clear guidelines on what is expected of these existing institutions.

Participants outlined three roles intermediaries play in getting markets started: information sharing, contracts and enforcement. A participant added a fourth: representation. Critically, intermediaries can 'level the playing field.' However, it was acknowledged that the election cycle is generally too short to enable political processes to accurately represent the interests of future generations.

Participants debated several other issues relevant to the paper:

- How to deal with the problem of 'free riders'? Who is benefiting most from CES schemes? Is it really the ecosystem service stewards? Need to consider different beneficiary and paying groups.
- Participants felt that enforcement should fall under the purview of government bodies, even if they are otherwise uninvolved as intermediaries.
- The legitimacy of intermediary institutions is a key to garnering trust and support from stakeholder communities. Sometimes, institutions purport to represent communities, when in reality they simply do not. Participants added that attention should also be paid to the legitimacy of those driving the CES agenda — is there a disjunct between the reality on the ground and current decision making.
- How will intermediaries interact? What will be the structure of the 'intermediary market'? The carbon trade was given as an example where an initially limited field of buyers and sellers has now ballooned into a large, global trade.
- Financial institutions have a role to play, particularly in providing start up capital.
- Mentoring was proposed as an experiential approach to capacity building. Intermediaries with experience can mentor those with less knowledge of CES, thereby walking them through the steps to the creation of a successful CES scheme. (South-South-North.)
- Valuation of ecosystem services should be reflected in national-level accounts of natural resource assets.
- Encourage mainstreaming of promising CES strategies into national development and poverty reduction policies.
- One option is to pay to decrease production. This could mean a role for CES in avoiding market distortions and informing subsidies. This could be implemented in a transnational, global context.
- CES concepts need to be simplified to ease adoption amongst stewards. Contractual terms need to be clear and easy to understand to engender community support.

Issue Paper 5: How important will the different types of CES mechanisms be in shaping poverty & ecosystem services across Africa, Asia & Latin America over the next two decades?

This paper examines the global trends in environment (e.g. climate change, energy pricing and pollution) and the political landscapes that will shape the future — and viability — of CES schemes. The goal is to generate a ten year research agenda with a twenty year perspective.

Participants were asked to share what they considered the most important environmental trends that had the potential to impact the development of CES mechanisms. Below the issues participants felt will be most critical:

- Changing trends and fluctuations in natural resources availability due to the impacts of climate change. Extreme weather patterns were also mentioned in this context.
- Resource scarcity, particularly water, energy and the right to omit pollutants.
- The increase of environmental goods and services for export. Africa needs to get in on the bio-trade, including certified organic products. Such products have a growing market in North America and Europe.
- The private sector is increasingly part of the agenda, especially with the widespread adoption of Corporate Social Responsibility policies, and in order to maintain sources of raw materials necessary for production. Public and community relations are also seen as a key driver of private sector involvement.
- Invasive species, which could potentially be linked to ecotourism, require special consideration, as they can have a dramatic impact on ecosystem functions in a very short period. The South Africa experience with Eucalyptus shows that significant impact (drying of water sources) occurred in just 20 years. Ecosystem functions likely to be affected are biodiversity and watershed functions, but impacts may extend to other functions as well.
- Impacts of urbanization, and dramatic increases in affluence coupled with escalating poverty; the gap between wealth and poverty.
- General awareness of CES at the community level could be improved. CES needs to be relevant to people's day-to-day lives.
- Growth of Africa's tourist trade could result in increased conservation of the scenery and wildlife that attract tourists. One participant questioned the role of the Internet in this process, citing an example of an eagle family in Victoria (Canada) that has received 10 million hits online. Such websites could be

important means of advertising ecosystem services and encouraging willingness-to-pay.

- Implications of regional integration in sharing and managing transboundary resources. This will encourage adoption of common policies across the region.
- Regionalization of African economies and trade.
- Corruption is a major threat across Africa.
- Participants noted an upward trend in synergies between community initiatives, CES participants and awareness.
- Stronger tendency towards interdisciplinary work, cooperation and openness in the creation of partnerships. This enhances policy coherence.
- Monitoring and evaluation will be critical to successful CES schemes, but are currently lacking.
- Are we moving fast enough? Will the implementation of CES projects occur in time to avoid critical levels of degradation?
- Bigger companies are lending strength to environmental concerns and focusing on sustainability. For example, the top three banks consider sustainability of practices when lending.
- Participants also questioned the role of super-NGOs in changing corporate culture. Does the conservation agenda of super-NGOs become co-opted when they enter into partnership with private sector companies? Do the NGOs lose their objectivity? Some participants questioned whether NEMA-Kenya was strong enough to engage the private sector.
- Is CES distracting attention from key conservational issues?
- Alice Ruhweza highlighted political barriers to the implementation of CES in Uganda. The government wants to encourage Foreign Direct Investment (FDI), but there is not enough land. In response, the President promises to make more land available, resulting in the degazetting of forest land. Political support will only be possible if CES can offer viable alternatives. After all, people can't be forced to migrate to land without the promise of some economic incentives.
- Evolving capacities of political figures and judges in handling environmental issues. There appears to be lack of awareness of basic environmental issues amongst current judiciaries in Africa, which needs to be countered with education and training.
- There is an increasing demand for ecosystem services, particularly by urban centres. It remains to be seen how this demand will be articulated. Will high demand lead to the formation of markets or will it be channeled into political processes.

- The increasing urban demand for ecosystem services also poses a threat to rural communities who are struggling to supply these needs. This problem worsens as population densities continue to rise.
- What role will science play in the development of CES? New services being discovered through the increase use of biodiversity.
- What impact will the use of Genetically Modified Organisms (GMOs) — particularly crops — have on maintaining biodiversity. Will the GMOs be invasive, out competing existing species? CES projects should be conscious of the existing debate on crop production and biodiversity.

Closing

Brent Swallow outlined the next steps in the Global Scoping Study on Compensation for Ecosystem Services. Immediately following the African Regional Workshop, project partners, including the IDRC, will be meeting for a writeshop aimed at incorporating the feedback from the three regional workshops (Latin America, Asia and Africa) into the Issue Papers. Held in Nairobi from 5-9 June 2006, the Final Writeshop will also be the opportunity for the project partners to prepare an interim report of the scoping study findings. This interim report will be presented at the IDRC Rural Poverty and Environment (RPE) programme annual meeting in Bali, Indonesia.

All workshop documents will be posted to the project website, hosted by the World Agroforestry Centre under the Environmental Services Theme (www.worldagroforestry.org/es). This provides a space for further networking and resource sharing among the project partners and other interested parties, such as IFAD, IIED, CARE and the Katoomba Group.

In conclusion, Brent expressed appreciation to all the participants for finding time to be part of the workshop and contributing to its success. He also acknowledged ACTS for its logistical organization and technical expertise that resulted to the success of the workshop.

Luis Navarro expressed his thanks for having been invited to the workshop, adding that, as someone actively working in across the region, he thoroughly enjoyed the workshop. He commended the organizers for having brought together such a rich pool of participants. Navarro confirmed IDRC's commitment to and enthusiasm for the project. He spelled out the IDRC's expectations for the project to bring about sophisticated development in terms of improving existing knowledge, policies and practices on the ground. Navarro closed by reiterating the connection between CES and poverty reduction.

Benson Ochieng thanked participants once again, as well as all ACTS and ICRAF staff who contributed in one way or the other towards making the workshop a success. Finally, he thanked Luis Navarro for his leadership and participation in the workshop on behalf of IDRC and as a representative of the donor community.

Annex A: Participant Information

Participant	Contact Information
Andrew ADWERAH Research Assistant African Centre for Technology Studies (ACTS)	P.O. Box 45917-00100 Nairobi, Kenya Tel: 254 7224712 Fax: 254 7224701 Email: a.adwerah@cgiar.org
Jennifer Kenney AUSTIN Journalist (The New Vision, Uganda)	26 Narragansett bay Ave Warwick, RI 02889 USA The New Vision P.O. Box 9815, Kampala, Uganda Tel: 256-75 2 999 059 E-mail: jaustin@newvision.co.ug or jkaustin18@gmail.com
Twesigye BASHIR Researcher ACODE	P.O. Box 29836 Kampala, Uganda Tel: 256-41 530798 E-mail: acode@acode-u.org
Byamukama BURYAHWAHO Programme Officer ECOTRUST Uganda	P.O. Box 8986 Kampala, Uganda Tel: 256-772480075 E-mail: bbyamukama21@yahoo.com/bb@ecotrust.or.ug
Anantha Kumar DURAIAPPAH Chief, Analysis and Emerging Issues Unit United Nations Environment Programme, Division of Environmental Conventions (UNEP-DEC)	P.O. Box 47074-00100, Nairobi, Kenya Tel: 254-20-7622309 E-mail: anantha.duraiapah@unep.org
Charles EARHART Programme Coordinator CARE/WWF	P.O. Box 110220 Dar es Salaam Tanzania Tel: 255-741-271-597 E-mail: charlesehrhart@gmail.com
Phil FRANKS Poverty and Environment Natural Coordinator CARE International	P.O. Box 2039 Nairobi 00202, Kenya Tel: 254-735 491943 E-mail: pnil@ct.or.ke
Elisante GABRIEL National Coordinator-PES CARE International	P.O. Box 10242, Dar es Salaam Tanzania Tel: 255-22-2666775 Mob: 255-744-434412 Fax: 255-22-2666944 E-mail: elisante_gabriel@yahoo.com

John Mwangi GATHENYA Senior Lecturer JKUAT	P.O. Box 62000-00200 Nairobi, Kenya Tel: 254-6752029 Fax: 254-67-52164 E-mail: mgathenya@jkuat.ac.ke
Laura Anne GERMAN Regional Coordinator/Sociologist African Highlands Initiative	P.O. Box 26416 Kampala, Uganda Tel: 256-712-220600 Fax: 256-41-223242 E-mail: l.german@cgiar.org
Ahmed KHAN Research Manager Department of Water Affairs	Private Bag X4390 Cape Town, RSA, 8000 Tel: 27 21 4412729 Fax: 27 21 425 7880 E-mail: ahmed@dwaf.gov.za
Aichi J KITALYI Country Representative - Tanzania World Agroforestry Centre (ICRAF)	P.O. Box 6226 Dar es Salaam, Tanzania Tel: 255 748542616 Fax: 255 222700090 E-mail: a.kitalyi@cgiar.org
James B KUNGU Senior Lecturer Dept. Environmental Sciences Kenyatta University	P.O. Box 43844 00100 Nairobi, Kenya Tel: 254 20 811622 Ext 223 Fax: 254 20 810575 E-mail: kungu_james@yahoo.com
Samuel Mwangi MACHARIA Research Scientist KENRIK-NMK	P.O. Box 40658-00100 Nairobi, Kenya Tel: 254 20 3741673/0734 717903 Fax: 254 20 3741424 E-mail: smwangi@kenrik.org
Yashiro MAKIKO Associate Programme Officer UNEP-DEC	P.O. Box 30552 Nairobi, 00100, Kenya Tel: 254 207625135 Fax: 254 20762 3926 E-mail: Makiko yashiro@unep.org
Paul Gitau MUNGAI Research Officer Kenya Wildlife Service	P.O. Box 40241 Nairobi, Kenya Tel: 254 20-600800 Ext 2161 E-mail: emu@kws.org
Luis A NAVARRO Senior Program specialist International Development Research Centre (IDRC)	P.O. Box 62084, Nairobi, Kenya Tel: 254-20-271-3160 Fax: 254-20-271-1063 E-mail: Lnavarro@idrc.or.ke
Elvin NYUKURI Research Fellow African Centre for Technology Studies (ACTS)	P.O. Box 45917-00100 Nairobi, Kenya Tel: 254 7224703 Fax: 254 7224701 Email: e.nyukuri@cgiar.org

Benson OCHIENG Director Institute for Law and Environmental Governance (ILEG)	Westlands Road, Opposite Mt. Kenya Court P.O. Box 9561 - 00100 Nairobi, Kenya Tel: 254 20 3755593/4 Fax: 254 20 3755594 Mobile: 254 721840154/733640099 Email: b.ochieng@ilegkenya.org
Makuli OGELI Community Facilitator ILRI/WF	P.O. Box 177 Kitengela , Kenya Tel: 254 721-563926 Fax: 254 45 22085 E-mail: ogelimakui@yahoo.com
Brian OTIENDE Research Assistant African Centre for Technology Studies (ACTS)	P.O. Box 45917-00100 Nairobi, Kenya Tel: 254 7224708 Fax: 254 7224701 Email: b.otiende@cgiar.org
Tom OWINO Executive Director Environmental Cost Management Centre Ltd	P.O. Box 10135 00100 GPO Nairobi, Kenya Tel:254 20 3001661/ 720788032, 733619841 Fax: 254 20-2722738: E-mail: ecmcentre@wananchi.com , tipsstd@wananchi.com
Alan RODGERS Regional Advisor UNDP-GEF	P.O. Box 30552 Nairobi, Kenya Tel: 254-20-7622451 E-mail: alan.rodgers@undp.org
Luis C RODRIGUEZ ILRI	P.O. Box 30709, Nairobi, Kenya Tel: 254 20 4223159/4223000 Fax: 254 20 4223001 E-mail: l.c.rodriguez@cgiar.org
Alice RUHWEZA LEAD Agency Coordinator/Consultant National Environment Management Authority	NEMA House, plot 17 Jinja Rd P.O. Box 22255 Kampala, Uganda Tel: 256-752-780020 Fax: 254-312-271635 E-mail: arnhweza@nemaug.org
Rachel RUMLEY Assistant Coordinator Global Scoping Study on CES World Agroforestry Centre	P.O. Box 30677-00100 , Nairobi, Kenya Tel: 254 -20 7224130 Fax: 254-20-722 4001 E-mail: r.rumley@cgiar.org
Wahida SHAH Research Associate World Agroforestry Centre	P.O. Box 30677 Nairobi ,Kenya Tel: 254 20 7224295 Fax: 254 20 7224001 E-mail: w.shah@cgiar.org
Yusuf ole Petenya SHANI Secretary Shompole Community Trust	P.O. Box 42-Oloika Magadi 00205, Kenya Tel: 254 20 892067/891360/0722-564059 Fax: 254 20 891751 E-mail: yuspet@yahoo.com

Brent SWALLOW Principal Scientist and Theme Leader for Environmental Services World Agroforestry Centre (ICRAF)	P.O. Box 30677 Nairobi, Kenya Tel: 254 20-7224000 Fax: 254 20-7224001 E-mail: b.swallow@cgiar.org
Sandra J VELARDE Programme Associate ASB/World Agroforestry Centre (ICRAF)	P.O. Box 30677 GPO 00100 Nairobi, Kenya Tel: 254-722 4264 Fax: 254-7224001 E-mail: s.velarde@cgiar.org
Msafiri P. WAMBUA Environmental Coordinator Nairobi Water and Sewerage Company	P.O. Box 30659-00100 Nairobi, Kenya Tel: 254-020-557131/552109 Ext 152: 254 725-847441 Fax: 254 2052126/552133 E-mail: msafiri7@yahoo.co.uk
Stephen O WERE Research Associate Bureau of Environmental Analysis International	P.O. Box 15953 00100 Nairobi, Kenya Tel: 254 20 631174 Fax: 254 20 632074 Cel: 254 720 909313 Email: sooko@beainternational.org
Wilson K YABANN Dean School of Environmental Studies Moi University	P.O. Box 3900 Eldoret, Kenya Tel: 254-53-43013 Fax: 254-53-43149 Cel 254 722-433079 E-mail: deanses@mu.ac.ke , wkyabann@yahoo.com
Thomas YATICH World Agroforestry Centre (ICRAF)	P.O. Box 30677, Nairobi Kenya Tel: 254-20-7224000 Ext 4195 Fax: 254-20-7224001 E-mail: t.yatich@cgiar.org

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29. Essai d'analyse de la prise en compte des systemes agroforestiers pa les legislations forestieres au Sahel: Cas du Burkina Faso, du Mali, du Niger et du Senegal.

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Who we are

The World Agroforestry Centre is the international leader in the science and practice of integrating 'working trees' on small farms and in rural landscapes. We have invigorated the ancient practice of growing trees on farms, using innovative science for development to transform lives and landscapes.

Our vision

Our Vision is an 'Agroforestry Transformation' in the developing world resulting in a massive increase in the use of working trees on working landscapes by smallholder rural households that helps ensure security in food, nutrition, income, health, shelter and energy and a regenerated environment.

Our mission

Our mission is to advance the science and practice of agroforestry to help realize an 'Agroforestry Transformation' throughout the developing world.