Report on the Final K:TGAL Workshop

Held at

Clarion Hotel, Copenhagen

7 December 2009, 13.00 – 19.00
The Kyoto: Think Global Act Local research and capacity building project (K:TGAL), which is concerned with assessing the potential for community forestry under climate change policies, and particularly under REDD+, started in 2003 and reached the end of its 4th and final phase on 31.12.09.

A final workshop was planned to take place during the period of the CoP at Copenhagen so that results could be presented to a wide audience of professionals involved in REDD. Information about the workshop and invitations to attend were widely disseminated beforehand through relevant listservs (Climate-L, ClimFor) as well as directly to individuals known to be interested in this topic. About 60 people attended. Special provision was made to sponsor from developing countries 8 persons who were not yet connected with the project, but who have been working with community forestry and who could use the project findings to promote community forestry under REDD in their own countries (Appendix 1). These individuals were provided in advance with some of the project’s main research findings and reports and were asked to comment critically on these in panel sessions. They were also provided with access to the CoP itself, so that they could observe the international policy making process in action, and take part in other side events of interest.

Agenda

The formal agenda is presented in Appendix 2. The first part of the workshop was devoted to short presentations of the results of the project and questions from the audience about this.

The second part was devoted to panel discussions involving the 8 invited panelists, on the following topics:

1. What is the scope for community forest management in developing countries under REDD+ (Panelists: H. Banik, Graciela Tajeda, Robert Bakiika, Gustavo Ramirez, Ashish Tewari)

2. What is necessary to promote monitoring of carbon stocks by communities themselves, and how could it be combined with monitoring of other environmental services? (Panelists: Leon Theron, Graciela Tajeda, David Elungat Odeke, S.P. Singh, Robert Bakiika)

3. What are the opportunities for monitoring and combating degradation of forests as opposed to deforestation? (Panelists: David Elungat Odeke, H. Banik, Gustavo Ramirez, Leon Theron)

The third part consisted of open discussion and suggestions from the audience.
The presentations
Presentations for the final workshop
Copenhagen, 7 December 2009

Kyoto: Think Local Act Global project
- Research and capacity building
- From 2003: financed by Netherlands Development Cooperation
- Consortium of research institutes: UT, ITC, ENDA, Sokoine U, ICIMOD, CHEA, Silvestrum.
- Working in: Senegal, Mali, Guinea Bissau, Tanzania, Nepal, Uttarakhand (India), Papua New Guinea.

Presentations
- An overview of six years of project achievement
- Data requirements for community forestry under REDD+
- Methods and techniques for community monitoring of carbon stocks
- Our experience in Tanzania
- Our experience in West Africa
- Our experience in the Himalayan region
- Our experience in Papua New Guinea

The mission of the project
- Is there a role for community forest management (CFM) under international climate change policy (first CDM, later REDD+)?
- What is needed if communities are to benefit from such policy?
- Support to policy in countries entering into REDD
- Policy advocacy at international level
- Working with communities who were already practicing CFM

An overview of six years of project achievement
Presented at the CoP 15 Workshop:
"Kyoto: Think Global, Act Local"
Copenhagen, 7 December 2009

1. Self-monitoring of carbon stock changes by communities
- Why?
  - To reduce the transaction costs
  - To strengthen the community ownership of the carbon, through ownership of the data
- How?
  - Standard IPCC forest inventory methodology
  - Small scale hi-tech equipment: PDAs with GPS and ArcView GIS: later Smartphones with Cybertracker software
2. Dynamics of carbon stock change under CF management

- Carbon changes measured in 32 sites under community management
  - India - 6 years
  - Nepal – 5 years
  - Senegal, Mali, Tanzania – 4 years
  - Guinea Bissau – 3 years
  - PNG – 2 years

3. Impacts in terms of CO₂

- This translates as 1.8 to 20.7 tons CO₂/ha/year
- But this represents only the forest enhancement, that is to say the increments in the stock
- In addition there is the degradation or forest loss that has been avoided
  - This is difficult to estimate accurately
  - If we assume a conservative estimate of 1 ton biomass loss in absence of CFM: total carbon impact of CFM = 3.6 to 22.5 tons CO₂/ha/year
- But clearly in most cases the forest enhancement is more important than the avoided degradation in terms of carbon credits

Typical growth rates:

- Of 28 sites in which data can be compared
  - 2 had net losses (up and down)
  - 1 had no change
  - 25 had overall increases, mostly steady
- Increases ranged from 1 to 11.5 tons biomass/ha/annum
  - Savanna and dry woodlands 1 to 11.5
  - Temperate (Himalayan) 3 to 10 tons
  - Humid tropical forest 7 to 9 (2 sites only)
4. Reliability of community measurements

- Comparison with professional measurements in 5 sites (in India, Nepal and Tanzania) shows that:
  - Difference between professional and community estimates of mean carbon stock is less than 5% in 4 sites, and is 7% in 1
  - Size of the confidence interval reflects the sampling density (size and number of plots)
  - Need to take seriously the implications of wide confidence intervals: what they mean for carbon credit claims
  - Annual measurements preferred: gives trend, allows anomalies to be spotted, people don’t forget how to do it

5. Costs of community measurements

- Requires an intermediary organization for technical support
- Costs are very strongly related to size of forest (economies of scale)
- Much heavier in initial years (training, setting out the permanent sample plots)
- On average, would be from one quarter to one third of costs of professional forest inventories

6. Why international CC policy should take CFM and community forestry monitoring seriously

- CFM tends to combat degradation rather than deforestation
- Degradation emissions particularly in dry forests have probably been underestimated by IPCC
- They are low intensity emissions but spread over very large areas: dry forests more populated than rainforests
- CFM is easier to implement than stopping deforestation in high value forest. First step to REDD+
- Ground based data is essential to calibrate and complement remotely sensed data, particularly for the case of degradation
- Community monitoring is a natural answer to this need
Data requirements for community forestry under REDD+

Presented at the CoP 15 Workshop: “Kyoto: Think Global, Act Local”
Copenhagen, 7 December 2009

How community forestry ties in to the National REDD Program

- REDD has many requirements that call for advanced data management and analysis
  - Create maps of the forest estate
  - Record measurements of area and biomass made in the field
  - Record activities aimed at reducing deforestation and forest degradation
  - Monitor deforestation and forest degradation
  - Report changes over time
  - Verify changes over time
  - Distribute benefits to stakeholders

Spatial data for REDD

- Spatial data management and analysis can play an important role in REDD in at least four areas
  - Stratification of the forest – Reduce effort required for measuring carbon
  - Monitoring of effectiveness of the National REDD Program – Direct efforts to combat deforestation and forest degradation
  - Management of measurements – What is measured where, when and by whom?
  - Verification of national emission reduction claims – Using RS to validate claims

Monitoring the National REDD Program

- The UNFCCC has repeatedly mentioned a national monitoring system for REDD
  - Functions of the system are not well specified
- Monitoring systems have already been developed for other purposes
  - Forest resources assessment and inventory
  - Environmental management, hydrological management
  - Agriculture and cadastral systems
- Existing techniques can be applied for REDD

Data management for REDD

- UNFCCC National
- Data management, analysis, quality assurance, reporting
- Executive agencies
- Local
- Forest inventory data
- Emission reduction claims
Verification of emission reduction claims

- Verification is ideally done with remote sensing
  - Avoid too many expensive field visits
  - Verification should validate the claim of emission reduction, not repeat the carbon measurement
  - Verification can be done on a sampling basis, using statistically proven methods that are acceptable by the UNFCCC
  - In order to capture reduction in forest degradation, high resolution data sources must be used

Source: Diana Chavarro, ITC

How community forestry ties in to the National REDD Program

- Community forestry can make REDD a success
  - Profitable for the government and stakeholders
  - Much more data than would otherwise be possible
  - Data management and analysis procedures should be designed around the basic data that communities can provide

Source: Diana Chavarro, ITC
Methods and techniques for community mapping & monitoring of carbon stocks

Presented at the CoP 15 Workshop: "Kyoto: Think Global, Act Local"
Copenhagen, 7 December 2009

Methodology

- Community Inclusion & Reducing Transaction Costs
  - so that it becomes economically viable
  - for the community members to be as responsible as possible [... willing and able ...]
  - to develop the protocols and mechanisms (and associated training) so that the measurements can be acceptable in a formal carbon finance mechanism.

Methodology

- The mapping and monitoring activities include:
  - determining the project boundaries,
  - measuring initial carbon stock,
  - estimating baselines
  - monitoring carbon sequestration rates in areas
  - mapping forest conditions and community management mechanisms.

Methodology

- Using mobile GIS
  - Starting with new technology (2003)
  - Anticipating cost reduction of technology
  - Benefit of data recorded in GIS environment
    - Location information
    - Mapping options
    - Verification possibilities
  - Developing user friendly and low cost alternatives

Field Guide for Measurements

A Field Guide for Assessing and Monitoring Reduced Forest Degradation and Carbon Sequestration by Local Communities

- Part 1: for communities
- Part 2: for trainers
- Part 3: for policy makers
Field Guide Contents (part 2)

- The project methodology
- What to use?
- How to collect data?
  - Selection of the local community trainees and training
  - Getting started with Mobile GIS
  - Training on measurement of forest stock
  - Main steps for carbon assessment
- How to analyze and report the data?
- How to implement?

www.communitycarbonforestry.org

Get the Field Guide

- www.communitycarbonforestry.org
  - Full version or separate parts downloadable

- Take a hardcopy:
Participatory mapping and Information Technology:

Using free ware to support communities in mapping and acquiring spatial data for CFM and CS activities

Communities can learn to collect basic data at local level

Poor availability of friendly & freeware for working at community-level

Need to develop user friendly tools based on accessible IT

- Methodology for producing basic spatial information
- Based on the use of free software: GIS (ILWIS) and databases (CyberTracker)
- Free images from Google Earth
- Use of IPAs, GPS and Smart Phones for the acquisition of geo-referenced data

CyberTracker Software Features

Free Software that can be used in an IPAQ or smart phone for collecting several types of data

Some screen features that support (geo-referenced) data capture

Panels to post reminders useful for the data capture process and direct collection of information

Saving geo-referenced information for point location (i.e. centre of plot, individual trees)
Delimitation and participatory mapping of forest type and management strata

Collection of geo-referenced data on DBH, species, tree features, using Smart Phones

Storing/displaying plot/tree data on Cybertracker

Geo-referencing of community and CFM infrastructure (roads, ecological routes and fire breaks)

Mapping of activities contributing to forest degradation – illegal felling, fires, grazing, etc. and conflicts

Summarising the Methodology - I

- Local Participation in Measurements and Mapping

  The mapping and monitoring activities include:
  - determining the community and project boundaries,
  - measuring initial carbon stock in carbon areas,
  - estimating baselines
  - monitoring carbon sequestration rates in areas
  - mapping forest conditions and community management mechanisms,
  - supporting verification procedures.
Summarising the Methodology - II

- Benefits for capacity-building and management and planning initiatives by the communities:
  - skills development and capacity building with the community;
  - better dealing with the carbon professionals;
  - ownership of the data produced;
  - heightened community ‘ownership’ of the carbon project
  - using the mapped data for applying for other PES
  - utilising participatory techniques for other community purposes,

Summarising the Benefits

- P mapping & PGIS is economic, efficient, effective, user-friendly tools, easily-learnable
- Using 21 century technology such as PDA or Smart phones
- It promotes participation & increases empowerment
- Transparent, Local ownership of information
- Potential to extend to other forest environmental services
Commentary on presentations

The presentations were well received and there were only a few comments and questions:

1. Why did KTGAL measure only carbon and not the other environmental services provided by CFM?

Response: KTGAL’s mandate was to assess the potential for CFM under REDD. However, the impact on different services (including forest products such as firewood and fodder) has received attention in many of the sites. The need to consider the interactions between carbon and other services should be a priority for further research.

2. How did KTGAL address differences in capacities of different communities as regards monitoring?

Response: In all cases, there were intermediary organizations involved first in training and then in supporting the community monitoring efforts. In some sites, more educated persons were involved, but in the African sites in particular the participants had no more than a few years of primary education. However, even people with very low levels of education were found to be able to handle the equipment and make reliable carbon estimates. The function of the intermediary organizations was more to maintain the equipment (loading basemaps, re-charging batteries etc).

3. How did KTGAL address leakage?

Response: Leakage is difficult to address, and we acknowledge that it may have played a part in at least some of the sites. We did have control sites in most locations, the idea of which was to estimate the ‘business as usual’ or losses of biomass due to non-management, but these may in some places have been ‘infected’ by leakage. However in some places, particularly in Nepal, there is clearly no leakage because all the forest in the area is under community management (and uses of the forest are all local/subsistence).
Our experience in Tanzania

Presented at the CoP 15 Workshop:
‘Kyoto: Think Global, Act Local’
Copenhagen, 7 December 2009

STEPS IN CARBON ASSESSMENT

Carbon assessment involves six steps:

i. Forest mapping/stratification

ii. Pilot survey to estimate variance and number of sample plots

iii. Locate the sample plots on the ground

iv. Measure the trees

v. Set out the sub-plots for the grasses, herb and litter data

vi. Take soil samples randomly within the plot

DATA ANALYSIS

The following trees stand parameters were computed:

- Density i.e. the number of stems per ha (N)
- Basal area per hectare (Dominance) (G)
- Volume per ha (V) and
- Dry biomass / carbon (tones per ha)

Trees volume and biomass were computed using tested local existing allometric functions for the areas.

Computation were fitted on Ms Access database

WHAT COMMUNITIES CAN DO

<table>
<thead>
<tr>
<th>Step for Carbon Assessment</th>
<th>Description</th>
<th>Assistance needed</th>
<th>Availability of assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Mapping</td>
<td>Able to make use of the user manuals</td>
<td>Processing and printing the maps</td>
<td>All technicians</td>
</tr>
<tr>
<td>Pilot survey to calculate variance</td>
<td>Able to collect data on trees</td>
<td>Pre-designed database</td>
<td>The data base was developed</td>
</tr>
<tr>
<td>Locate permanent sample plots on ground</td>
<td>Able to use the user manuals</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Taking measurements from a plot</td>
<td>The local trainers were able to take data on trees</td>
<td>Handling data on litter herbs and soil for biomass estimation</td>
<td>Not available at local level</td>
</tr>
<tr>
<td>Data punching and computation</td>
<td>Done by the staff from supporting organization</td>
<td>Computational of forest stand parameters</td>
<td>Data analysis tool was developed</td>
</tr>
<tr>
<td>Retrieval of the permanent plots for other years assessment</td>
<td>The local trainers were able to use the user manuals to re-locate the permanent sample plots</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

RESULTS

<table>
<thead>
<tr>
<th>Village</th>
<th>Management type</th>
<th>Vegetation type</th>
<th>Size of forest (ha)</th>
<th>Annual carbon benefit (CO2/ha/yr)</th>
<th>Total annual carbon benefit (CO2/yr)</th>
<th>Mini-PES (USD equiv) (TShs 1,300 = 1 USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ayasanda</td>
<td>CBFM</td>
<td>Miombo</td>
<td>550</td>
<td>2.5</td>
<td>1300</td>
<td>1,969 (USD)</td>
</tr>
<tr>
<td>Rudewa</td>
<td>CBFM</td>
<td>Lowland forest</td>
<td>28.5</td>
<td>8.1</td>
<td>230</td>
<td>769 (USD)</td>
</tr>
<tr>
<td>Gwata (SUA)</td>
<td>CBFM</td>
<td>Miombo</td>
<td>420</td>
<td>-1.3</td>
<td>-462</td>
<td>-</td>
</tr>
<tr>
<td>Gwata (Kimunyu)</td>
<td>CBFM</td>
<td>Miombo</td>
<td>420</td>
<td>-1.3</td>
<td>-462</td>
<td>-</td>
</tr>
</tbody>
</table>
**COSTS OF CARBON MEASUREMENTS**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Carried out by Professionals</th>
<th>Cost (£)</th>
<th>No. of Days</th>
<th>Cost (£)</th>
<th>No. of Days</th>
<th>Cost (£)</th>
<th>No. of Days</th>
<th>Cost (£)</th>
<th>No. of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1st Year</td>
<td>2nd Year</td>
<td>3rd Year</td>
<td>4th Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Pilot Planning / Training</td>
<td></td>
<td>3</td>
<td>426</td>
<td>30</td>
<td>1,510</td>
<td>100</td>
<td>755</td>
<td>50</td>
<td>300</td>
</tr>
<tr>
<td>2. Field Assessments</td>
<td></td>
<td>2</td>
<td>620</td>
<td>30</td>
<td>1,510</td>
<td>100</td>
<td>755</td>
<td>50</td>
<td>300</td>
</tr>
<tr>
<td>- Gwata (S/ha)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Gwata (@/ha)</td>
<td></td>
<td>6</td>
<td>872</td>
<td>6</td>
<td>906</td>
<td>576</td>
<td>415</td>
<td>315</td>
<td>215</td>
</tr>
<tr>
<td>- Control</td>
<td></td>
<td>5</td>
<td>810</td>
<td>5</td>
<td>755</td>
<td>425</td>
<td>315</td>
<td>215</td>
<td>155</td>
</tr>
<tr>
<td>3. Data analysis</td>
<td></td>
<td>30</td>
<td>1,500</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Consult Fees</td>
<td></td>
<td>34</td>
<td>4,080</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Institutional Fees</td>
<td></td>
<td>9,018</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>34</td>
<td>10,349</td>
<td>30</td>
<td>6,481</td>
<td>2,716</td>
<td>1,823</td>
<td>651</td>
<td></td>
</tr>
</tbody>
</table>

Cost per hectare: 10,349 - 6,481 - 2,716 - 1,823 - 651

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**USE OF ACCRUED FUNDS**

**Village One**
- Built two classrooms
- Strengthened forest management through patrols and boundary clearing

**Village Two**
- Reinstalled power for village flour mill by paying outstanding electricity bill
- Strengthened forest management through patrols and boundary clearing
- Started beekeeping project

**Village Three**
- Started putting up walls for a dispensary
- Strengthened forest management through patrols and boundary clearing

**Village Four**
- No report
- Suspect embezzlement of funds by village government

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**CHALLENGES**

- Forest enhancement was rewarded in the monitored forests. How about reduced degradation and avoided deforestation?
- How do we account for same efforts put in management but less or more carbon stock gain due to unfavourable or favourable climate?
- Which is the minimum size of forest to be eligible for payments?
- Which proportions of benefit sharing should be recommended in the case of joint ownership?
- Should money be given to individuals, villages or districts?

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**A MINI PES ANALYSIS**

**Payments for Ecosystem Services (Carbon)**
- Interested to find out how villagers would manage carbon fund
- Criteria used to administer mini PES
  - Payments were based on forest enhancement rather than avoided deforestation or degradation
  - Minimum payment was set at TShs 1,000,000/= (USD 769)
  - Money was deposited in Village bank account, controlled by village government
Involvement of local communities results in reduced forest degradation
Local communities can be trained to monitor carbon in their forests at low costs
Carbon money may help implement important socio-economic projects
More studies needed to answer questions of:
- How about reduced degradation and avoided deforestation
- How to reward low carbon sequestration due to unfavourable climate
- Minimum size of forest to be eligible for payments
- Which proportions of benefit sharing should be recommended in the case of joint ownership
- Who should administer carbon money individuals, villages or district?

CONCLUSION

Our experience in West Africa

Partners

Sénégal: Progede
Mali: Malifolkecenter (MFC)
Guiné-Bissau: UNFCCC Focal Point

The training

Guiné-Bissau: Villagers trained in measuring carbon (20)
Mali: MFC participants (5) Villagers (30)
Sénégal: Progede participants (5) Enda participants (3) Villagers (17)

The results:
In terms of Activities generating Income
- Charcoal making
- Honey harvesting training and practice
- Pastoralism
- Agriculture (Vegetables; Fruits)
- Vegetables conditioning and transformation
- Livestock production
- Wood harvesting
- Better NTFP harvest
- Poultry production

Presented at the CoP 15 Workshop: ‘Kyoto: Think Global, Act Local’ Copenhagen, 7 December 2009
The results

In terms of Forest management

- Techniques to prevent forest fires
- Forest inventory
- Management plans
- Management committees
- Early warning fires
- Occupation of spaces Map (tool)
- Activities of monitoring (slots)

In terms of carbon measured

- Mali: Evolution of carbon-tons per ha/y (2005-2008)
- Sénégal: Evolution of carbon per ha (2005-2008)

Recommendations

- Needs to train more villagers in carbon measurements
- Need to enrich forest by new species
- Need to teach the techniques of measurements in schools
- Modify the software and integrate pictures to help better identify the different places to fill in, in the form
- Villagers/local communities to be involved in carbon talks

Other

- Sénégal: a PIN has been made
- Guiné-Bissau: a PIN is under development
- Mali: data gathering for a project
Hindu Kush – Himalaya

Different land uses within a watershed

Biomass trend in three sites (t/ha) over 5-year period

Our experience in the Himalayan region

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Locals can train other professionals

Our experience in the Himalayan region

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Locals can train other professionals
Annual variation in biomass (t/ha) over 5-year period

Cost of carbon sequestration
- CFUGs derive greater non-monetary benefits than monetary benefits from managing community forests; and these benefits are the economic rationale for them to manage and conserve their forest at present.
- For the local CFUG members, carbon trading is only attractive when forest resources are permitted under where gains from carbon management are additional to gains from CFM.
- Benefits from sustainable management keeps costs down.
- Size of the area of forest is a major variable determining net benefit level and the break-even price for tCO₂. The larger the area the less the relative cost in managing the forest.

Major learning outcomes
- There is an interest from communities to participate in carbon trading (with conditions)
- Communities have the capacity to perform forest inventory and carbon inventory (locate points on GPS, record dbh data)
- Education level plays a critical role
- Migration is also important
- Solution to forest degradation lies in sustainable forest management by local communities
- Community forest entails high social returns than monetary, opportunity cost is high.
- Incentives from REDD need to be high for voluntary participation

NORAD REDD sites in Nepal Himalaya

Baseline Assumption

Take home message
- Adaptation options in the LULUCF sector are linked with mitigation measures and vice versa when viewed under the sustainable development framework.
- By strengthening the functions of natural resource base, it builds the resilience capacity of local populations who’s main source of livelihoods depend on LULUCF sector.
- Such mitigation measures are actually a spin-off benefit of implementing adaptive measure and does not cost extra.
- Many adaptation activities lead to effective and long-term mitigation pathways and many mitigation actions support adaptation measures.
- REDD in Himalaya is about Ecosystem-based Adaptation for the most the vulnerable populations.
Our experience in Papua New Guinea

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Community involvement in Payment for Environmental Services in Papua New Guinea

main results of the work of the Community Carbon Forestry-PNG Project
Part of the Kyoto: Think Global, Act Local (K:TGAL) Project
July 2007 - December 2009

Activities CCF-PNG project divided in two sections

Section 1
Development & implementation PES management at community level

Section 2
Development of a PES system for PNG

Maximum involvement & ownership of communities
- Climate change likely to heavily impact rural PNG communities
- No trust in PNG government
- Forests already provide Environmental Services to communities

Implementing PES for communities
- Communities plan own sustainable land use
- PES one income generating option
- Communities establish legal trading entity & decide on use benefits
- Shortest link from PES f
cancer to community

Section 1: PES management at community level

Trial forest carbon inventories
- Community inventory teams inventor and monitor own forest
  (3 communit es)

Community PES management preparations
- Awareness & discussions with communities
  (5 communit es)
- Capacity building communities for PES management
  (2 communit es)

“I just printed these carbon credit certificates to see what they would look like”

CARBON TRADE: MILLIONS OF

“I'm going to cut my forest to plant those trees that catch the wind and then sell them”
Section 2: Draft PES system for PNG
Developed by Expert Consultation Group
Group of concerned Papua New Guinean experts

Proposed Payment for Environmental Services system:
- Gives outline for transparent operational PES framework
- Ensures maximum benefits reach local communities
- Contains major aspects of practical transparent & equitable PES system

No finished or final system
Proposal offered for consideration and discussion

Conclusions CCF-PNG
To make potential long term income from PES a reality we need:

- Transparent PES system guaranteeing maximum long term benefits reach actual providers environmental services: the local communities

- Community Land Use Planning by genuine landowners and maximum involvement & ownership PES management by local communities

Stop talking Carbon Trade &
Start assisting communities in Sustainable Land Use Planning
with PES as one of their resource management options

- Improved livelihood, prepared for climate change impacts & contribute to global climate change mitigation effort
Panel discussions

1. What is the scope for CFM under REDD+?

Speakers: H. Banik, Graciela Tejada, Robert Bakiika, Gustavo Ramirez, Ashish Tewari

CFM is particularly suited to dealing with degradation rather than deforestation, but definitions are needed. It is important that carbon payments are made is such a way to enhance social and human capital, and it is important that not only the leaders but also ordinary community members are involved. It is not clear how the money flows will be handled under REDD, and this is a concern. CFM could be applicable in a wide variety of forest types, such as mangrove swamps and hill forests in Bangladesh.

However, payments under a CFM regime may start to stem the loss of forest to shifting agriculture and fires, and carbon sequestration could act as a proxy for ownership, which is a major problem in most places (lack of tenure over forests). CFM coverage is small in many countries, which might limit the extent to which it could be part of national REDD programmes. The question was raised as to which types of forest should be prioritized: those that are already degraded, or those that are not yet damaged.

There are some technical problems, such as absence of appropriate allometric equations and expansion factors. There is also the question of whether CFM is additional, since it is already existing. But under REDD, additionality it taken care of using a national baseline or reference scenario, so any decreases in emissions or increases in stock should still be additional, even if the project was already in place. Leakage however will definitely have to be taken into account somehow.

Not all governments want to go for carbon markets (e.g. Bolivia), but there could be other payments systems.

2. Community monitoring of other environmental services in combination with carbon

Panelists: Leon Theron, Graciela Tajeda, David Elungat Odeke, S.P Singh, Robert Kakiika

Carbon is relatively easy to measure: it is more difficult to measure other services. Carbon services could be used as a proxy? There is a need to look at the potential for provision of services (carrying capacity), particularly firewood, fodder etc and design the CFM accordingly. More
efficient fodder delivery systems are urgently needed in the hill forests of India. So we should not just see environmental services in terms of biodiversity, water, pollination services etc but also in terms of the forest products used by local communities for subsistence.

A problem in some countries (Uganda) is that the deforestation is not occurring in community forest areas but by private land owners (formal or informal private ownership). So a community approach to monitoring may not be relevant.

There is a need to convince scientists that communities are able to make reliable measurements. KTGAL should publish their figures on this. One of the advantages of a community approach to monitoring (of carbon or other services) is that it can be done cheaply and therefore repetitively, and the more replicates there are of the data, the greater the scientific reliability. This is a point which has not been acknowledged yet in the debate on community monitoring.

There will be trade offs regarding transaction costs of payments for environmental services. These need to be assessed for systems which could pay per ton, per ha, per family etc.

There is a need for systems in which landowners can register that they are complying with conservation and increasing environmental services.

There is a problem for communities in how to reach buyers for their environmental services.

3. Monitoring and combating degradation as opposed to deforestation.
Panelists: David Elungat Odeke, H. Banik, Gustavo Ramirez, Leon Theron

Degradation is easier to control than deforestation, e.g. in Uganda. It is however difficult to construct a baseline (possibly this could be done with gain loss methods?), and there are different types of degradation in different places and the drivers may not be the same as for deforestation. It is important to distinguish between large scale degradation (e.g. as a result of logging in the Amazon) from small scale degradation caused by communities.

Degradation may involve things like lopping of branches for fodder. Apart from other considerations, this raises problems for assessing stock (allometric equations are needed which allow for such lopping).

Degradation should be seen as a management practice.
Appendix 1: List of sponsored participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Country</th>
<th>Position/organisation</th>
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<tbody>
<tr>
<td>Elungat Odeke David</td>
<td>Uganda</td>
<td>Coordinator Forest Inventory Surveys, National Forest Authority</td>
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<tr>
<td>Graciela Tejada Pinell</td>
<td>Bolivia</td>
<td>Scientific Asst., RED Fundación Amigos de la Naturaleza</td>
</tr>
<tr>
<td>Robert Bakiika</td>
<td>Uganda</td>
<td>Exec. Director, Environmental management for Livelihood Improvement, Bwaise Facility</td>
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<tr>
<td>Dr. Ashish Tewari</td>
<td>India</td>
<td>University of Kumaun, Nainital</td>
</tr>
<tr>
<td>Haradhan Banik</td>
<td>Bangladesh</td>
<td>Conservator of Forests, Ban Bhaban, Dhaka</td>
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<tr>
<td>Gustavo Ramirez Santiago</td>
<td>Mexico</td>
<td>Director, Red Nacional Organizaciones sociales y comunitarias (REDNOSOC)</td>
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<tr>
<td>Leon-Jacques Theron</td>
<td>South Africa</td>
<td>Peace Parks Foundation</td>
</tr>
<tr>
<td>Mohammad Aman Amanyar*</td>
<td>Afghanisan</td>
<td>Head of Forest Dep., Min of Agriculture, Kabul</td>
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</table>

* This participant met with difficulties in entering Europe, was diverted in Switzerland and had to travel instead via Turkey, and unfortunately arrived only the day after the Workshop took place. However he participated in the CoP itself.
Appendix 2: Agenda

Agenda for the Kyoto:Think Global, Act Local (K:TGAL) Workshop:

December 7, 2009: 13.00-17.00
Clarion Hotel Copenhagen, Room TBA, Moletien 11, 2450 Copenhagen

Part 1: Presentation of project results by K:TGAL team members

13.00 Opening and welcome
13.10 Brief introduction to the K:TGAL project
13.25 Data requirements for community forestry under REDD+
13.35 Methods and techniques for community monitoring of carbon stocks
14.00 KTGAL experience in Tanzania
14.15 KTGAL experience in West Africa
14.30 KTGAL experience in the Himalayan region
14.45 KTGAL experience in Papua New Guinea

15.00 Short break

Part 2: Panel discussions: feedback to the K:TGAL project

15.15 The scope for CFM under REDD+
15.35 Challenges for national carbon payment systems
15.55 Combining carbon payments with payments for other environmental services
16.15 What is necessary to promote monitoring of carbon stock by communities themselves
16.35 Monitoring and combating degradation as opposed to deforestation
16.45 Round up