

An in-depth study of PES and PES-like initiatives and Review of their institutional contexts in West Usambara Mountains, Lushoto District, Tanzania

Progress report – January - February 2011

By

Selian Agricultural Research Institute (SARI)

Summary

This study was conducted in Lushoto to get an in-depth understanding of how the earlier-identified PES and PES-like mechanisms operate, determine whether they are conditional, contract or voluntary; identify challenges encountered and come up with recommendations which will facilitate fair and workable reward schemes.

The study found that all studied PES and PES-like mechanisms that are involving the district council and national authorities namely Soni gate collection centre, Cess collections, Shume forest, Lushoto Water Authority and the District Natural Resource Office use top-down processes which lack transparency and participation of all relevant stakeholders thus leading to non-motivating PES systems. On the other hand, the PES mechanisms practiced by Friends of Usambara, Vice President's Office rewarding system and the Eastern Arc Mountain Conservation Endowment Fund are more participatory whereby communities, who are the custodian of ecosystem services, are involved in the processes and decision making. As a result they are more rewarding to the communities in terms of knowledge and resources and they encourage voluntary participation in conservation activities in a sustainable manner.

The study found that none of the identified PES mechanisms are run by the communities consequently they were not part of the discussions. It is therefore recommended to hold discussions with the communities to get their perception on PES mechanisms. It was also found that the terms and applications of 'Voluntary', 'contract' and 'conditional' systems of PES are not very clear to the research team thus calling for a short training.

1.0 Introduction

A study was conducted in Lushoto Tanzania in 2009 to provide baseline information on payment for environmental services (PES) including a quick appraisal of the existing PES and PES-like mechanisms and their institutional foundations for facilitating fair and workable reward schemes in Lushoto district. The study identified some PSE and PES-like mechanisms namely Collective activities such as building and maintaining roads and irrigation canals whereby villagers provide their labour to improve the environmental services, tax collection centres by the district council (eg at Soni), Ecotourism, participatory forest management in Korogwe and cess collection from sisal, tea and coffee. The district council collects some taxes on crops and forests products that are transported out of the district and it was reported that part of these taxes is returned to the communities to improve social services in the respective areas. Some villages such as Shashui, Baga, Kibaoni and Longoi have ecotourism sites and part of fees accrued from the tourist is sent back to improve and maintain the sites. Part of cess collection from tea, coffee and sisal goes to the producing communities as well. The Participatory forest management in Korogwe which is facilitated by Eastern Arc Mountain Conservation Endowment Fund (EAMCEF) provides some funds for nature and biodiversity conservation through Korogwe district Council and the council redistributed the funds to the community in the form of material support and other community development activities.

The study also revealed that there are various potential reward systems that if instituted could enhance rewarding mechanisms and, as a result, a better environmental conservation. These are sales of water;

- Highlanders can be rewarded for their conservation efforts by the downstream water-users (town dwellers, processing factories, irrigation farms, TANESCO etc) through their water bills;

- sales of carbon - where measurement of carbon offset per farm can be used to reward the responsible farmers who have planted trees; and
- adopters of improved agricultural practices which result in enhancing water infiltration, food productivity, and the general nature conservation, the government and other international institutions could come up with mechanism for rewarding them.

Furthermore, the study identified and documented some flaws in the rewarding system and potentials barriers to institutionalization effective payment for ecosystem services.

Based on afore mentioned findings, a follow-up study was developed to better understand the identified PES and PES-like mechanisms and come up with a recommendation domain to improve the existing mechanisms, enhance wide scale out and sustain ecosystem services in Lushoto. This report highlights the progress made so far and the relevant findings.

2.0 Project General Objective:

The main objective of the study is to streamline/institutionalize the identified PES and PES-like mechanisms in Lushoto so as to facilitate fair and workable reward schemes aiming at improved management of ecosystem services in the district.

2.1 Project Specific objectives

1. To conduct an in-depth study on the identified PES and PES-like mechanisms to understand their mode of operation.
2. To formulate work plan for PWBO and water authority to implement water tax
3. Undertake inventory of knowledge adequacy of the existing data on land use mapping
4. To facilitate negotiations with big water users and upstream farmers

3.0 Methodology

In order to achieve the above-mentioned objectives, a feedback meeting with institutions which participated in PES study, including sellers and potential buyers, were held to inform them on the findings. About 30 participants from institutions were involved. Presentations included the type of PES and PES-like mechanisms found and institutions that are practicing, potential PES mechanisms and lessons.

Thereafter, visitations were done to those institutions which were found to practice PES and PES-like mechanisms in their day to day operations and held in-depth discussions with their senior officials to develop a more understanding of their PES operations. The discussions were guided by a check list (Annex 1). Offices visited and held discussions with were District Executive Director (DED), Friends of Usambara (FoU), Lushoto District Natural Resource Management Office (DNRO), Lushoto Council Water Authority (LCWA), Tanzania Electric Supply Company (TANESCO) Korogwe office, and Korogwe District Council.

The team leader started by briefing the respondent on the objective and activities of the project, and that his/her institution participated in the survey which was one of intended project activities. Respondents were also briefed on survey results – that Soni collection, ecotourism, EAMCEF, PWBO and TANESCO are the PES and PES-like mechanisms that were found in the survey. The leader ended by explaining the aim of the visit was to conduct an in-depth study of the several mechanisms identified so as to see how the identified PES systems operate, how they can be improved, packaged, disseminated and scaled out widely so as to sustain the ecosystem and improve livelihood and landscape. Findings from each institution were as follows

4.0 Findings

Activity 1.0: Harmonization of identified PES and PES mechanisms

Sub-activity 1.1: An in-depth study to be conducted on the identified PES and PES-like mechanisms to understand their mode of operation

4.1 Lushoto District Executive Director (DED). The PES-Like mechanism whose information was requested from the DED was on Cess on/from Tea, Coffee and Sisal, Soni gate taxation point and Shume forest collections. The DED, Ms Lucy Msofe, started by agreeing that there are some obvious PES mechanisms that are actively working although not in the most appropriate way as per the recently attended workshop on PES in Tanga. According to DED, the word PES was still new to her although last year (2010), together with the District Natural Resource Officer (DNRO), they attended a workshop which was organized by the Tanga Regional Commissioner and PES was honoured as one of effective ways of motivating community to manage their ecosystem. She added that since this is her second time to come across with this term, she will discuss with the DNRO on the way forward as discussed in the Tanga workshop in order to see how best PES can be participatory from the grassroots.

She also mentioned areas like forest and water as examples whereby if PES is instituted would help to motivate the communities to conserve these resources which the majority of community depend on.

Regarding the already functioning PES and PES-like mechanisms, DED explained as follows;

4.2 Cess: Fifty Tsh (50/= Tsh which is equivalent to 0.03 USD at an exchange rate of 1 USD = 1500 Tsh), is deducted from each kilogram of coffee or tea that a farmer sells. The amount collected is taken to the co-funding basket which is under the district council. The district council allocates 20% of the collected funds to the villages as top up to the developmental activities. At the same time each ward receives 50,000/= Tsh (33.3 USD) per month for their office up keeping. “For example about 44 wards and 68 villages received the above mentioned collection in the 2009/2010 financial year and this system has lasted for more than 10 years” said the Lushoto DED.

4.3 Soni Gate Taxation point is the main source of income to Lushoto district council. DED reported that it is estimated about 40 million Tsh (26,666 USD) per month is collected from this gate. The collection includes 5,000/= Tsh (3.3 USD) per tonne of vegetables and 50/= Tsh for each bag of cereals. This collection goes to the district’s co-funding basket and distributed as explained in cess collection above.

DED reported that the main challenge facing this system is lack of equity in the distribution of collections since some villages produce more than others but they get the same amount from the district council regardless of the amount they produce. On the other hand, villages are suggesting that the returned amount should be based on the quantity and quality of the service (in this case agricultural produces) taxed. Although DED admitted that their (villages) rationale is very correct and if instituted it will motivate the conservers, but it will go against the district regulations that the district should promote and support development activities to all villages equally. This has been a very sensitive area as in every meeting held by the councillors the issue

of returning 20% of this collection to the respective villages has been among the agendas but to date there is no implementation.

Analysis: The two PES mechanisms reported above, namely Cess and Soni Gate collections, are top-down whereby the district council decides on the collection rate, amounts to be returned to villages, villages to be paid and uses. This approach does not allow for negotiations between sellers (producers or transporters) and buyers (the district council). Furthermore, there are no separate returns to the villages based on the amount and quality of produces they have produced although this is clearly stipulated by the town council regulations that every village should receive 20% of the total collection from their produces.

On analysing these two PES mechanisms, four major findings are emerging

- i) The system is **conditional**
- ii) The system is not motivating to those who participate in enhancing ecosystem services as the returns are given to every village irrespective of whether they have conserved or not
- iii) There is a conflict of interest between the reality and district regulations (the case of villages demanding fair payments based on what the village has contributed to ecosystem services and district authorities denying based on regulations)
- iv) The source of returned fund is hardly revealed to the recipients thus they cannot appreciate and associate the funds to their efforts in conserving their ecosystem

4.4 Shume forest authority makes collections from forest products mainly timber and submits it to the district council. The rate to be charged is decided by the Shume Forest Management Committee (SFMC) thus making the process to be **conditional** as the buyers (timber dealers) and communities surrounding the Shume forest have no room for negotiation. In turn, the district council returns 10% of the collections to the same Shume forest for their developmental activities. The rate to be returned back to the forest is negotiated by both SFMC and the District Council. SFMC decides on how to use the funds returned back.

The challenges outlined were that SFMC is complaining that the amount returned back to them i.e 10%, is very little hence there is a need to be increased to enable sustainable running of the forest activities. On the other hand, the district council is complaining that there may be no transparency on the amount collected and therefore the collection should involve both the SFMC and the district council officers.

DED summarized challenges with the PES system in Lushoto as follows

- Generally, the decision on the taxation mechanism, amount to be collected and use of the collection is normally done by the district council. This is a top-down approach therefore there is no room for communities who are the custodians and conservers (sellers) of the resources to give their opinion.
- The amounts returned to the villages (sellers) are spent as per the village priorities which may not necessarily target issues related to the service sold - specifically environmental management. The use of collections returned to villages is strictly monitored by the respective village committee under the assistance of the district planning office. Priority areas often identified by the respective villages include building of classes, road construction, dispensaries etc.

- The collections falls far beyond what may bring significant impact to the district as the district has more than 200 villages.
- The amounts are returned to all villages equally regardless of whether they have contributed to any ecosystem service or not.
- Misuse of returned funds in some villages
- Not all existing PES-like mechanisms are tapped and some big ‘buyers’ such as sisal plantations have closed down due to various reasons including fall of sisal prices globally.
- Lack of transparency

DED finished the session by saying that the district council is designing strategies to overcome these problems which may include increasing the collection efficiency, creating awareness on PES such as labelling returned funds to indicate the source; and strong punishments for the villages which will misuse the funds allocated.

4.5 Friends of Usambara is a voluntary NGO, and is involved with the Promotion of Usambara Mountains as a tourist attraction at a nominal fee per head. The organization uses part of their generated income to protect nature and improve social services of the surrounding communities. It has established a village development fund committee (VDFC) which has the mandate of overseeing the use of the contributions which comes from tourists. Each tourist is required to pay 2,000/=Tsh (1.3 USD) per head which goes direct to the respective village. The decision on the amount to be charged and its uses is made by the management of Friends of Usambara and VDFC of the villages involved in the programme. In some cases, tourists and communities meet and negotiate how they (tourists) can support certain priority projects, in cash or materials, in recognition of what the communities are sustainably managing their environment. For example in February, 2011 a team of students from Sweden contributed 300,000/= Tsh (200 USD) for painting Kwembaga primary school. The activity was done after Friends of Usambara received request from the VDFC indicating the need of painting the primary school. All the above conditions make the system to be **Voluntary**. The Friends of Usambara reported that if they were to start it again today they would like to operate as a private company instead of NGO since under the umbrella of NGO they are not allowed to make any profit.

Constraints and suggestions by Friends of Usambara included the following;

- ✓ Some investors have constructed hotels near attractive points and charge tourist Tsh 3,000/= (2 USD) per head on business terms. Under such arrangements it is not likely that the communities and environment will benefit.
- ✓ Some tourist companies from outside Lushoto do take their tourists to the attraction points without reporting to Friends of Usambara offices thus not paying the fees.
- ✓ No enforcement of the district’s Land Use Plan which renders Friends of Usambara prone to conflicts with other stakeholders who are working in the same area.
- ✓ There is a need of awareness creation to private sectors and other stakeholders in the district on PES in Usambara Mountains.
- ✓ The council enforcement of bylaws to protect the nature is lacking

- ✓ There is a need to the district council to improve the infrastructure to the points of attraction for example construction of permanent roads, communication and accommodation
- ✓ Council should appreciate the services provided by NGOs as they are partners in development hence give them the required support.
- ✓ Participatory planning should be introduced and encourage the PES approach to enable communities to have a say in the processes of selling and buying ecosystem services.

4.6 District Natural Resource Management Office (DNRO)

The DNRO started by giving a historical background that in 2009 the office of Vice President, department of Environmental protection announced a rewarding system for winners of environmental conservation and protection in Lushoto district. The rewarding system included financial, certificates and excursion trip. Initially, it was expected that the prizes will come from the Vice President's Office but unfortunately, it was learned that the respective district councils should pay these rewards. This was a top-down approach whereby neither district council nor communities were involved in the planning. Since this was not included in the 2008/09 district's budget, to date these winners have not being rewarded apart from certificates they received. However, the district is planning to reward the candidates through their 2011/2012 budget and this system need to be a continuous process to motivate community in environmental protection and conservation issues. "The good thing is that these groups are still doing their environmental activities because they were doing so even before being involved in the rewarding system" said the DNRO.

The winners who were from 5 groups and their prizes as decided by the Vice President Office are as outlined below;

1. Individual: - Julius Sheshanga was supposed to be rewarded 2 million shs (1,333 USD).
2. Village: -Nyasa village was supposed to receive 3 million (2,000 USD)
3. Group: - Mwangaza group from Sunga were supposed to be rewarded 3 million
4. Institution: - Montesori Training centre was supposed to be rewarded 3 million.
5. Ward:- Sunga ward was supposed to be rewarded 3 million

Based on the conditions attached to this system, this is a **contract** system as sellers enter into an agreement to conserve and the buyer to reward them in terms of cash.

4.7 Lushoto Council Water Authority

Lushoto Council Water Authority (LCWA) is responsible for water in Lushoto town whereas every village with water source in the district has Water User Association (WUA) which are supposed to be officially registered and with clear constitution. Each of LCWA and WUAs are supposed to establish public water points, local connections, rates and mechanism of collecting bills, plan on how to use collections, maintain the water infrastructures and responsible for conserving the source(s). Ten villages are in the process of registering their WUAs and Mtae village is already registered and operating. Other villages are learning from them. WUAs do pay 40,000/= Tsh (26.7 USD) as water permit to the council annually and an annual fee of 5shs/100 cubic metre (m³) to Pangani Water Basin Office (PWBO). The authors find the latter rate to be extremely low therefore there is a need to triangulate this information with other authorities specifically the district council and PWBO.

Almost all water sources in Lushoto originate from the forest reserves hence in order for any organisation to tap water from these sources it should pay 1,000,000/=Tsh (666.7 USD) to the Ministry of Natural Resource and an annual fees paid to PWBO. The LCWA officer reported that his office has proposed to PWBO to initiate a system of returning certain percentage of these collections to the respective villages which have water sources, but there has not been any response so far. These are among pertinent questions to discuss with PWBO when the team will visit them.

Challenges: The LCWA reported the system to be confronted with the following challenges:

- ✓ Some water sources are not known by the either PWBO or Ministry of Natural Resources. This creates difficulties in the follow up of collections from users
- ✓ Forest encroachment for farming and wood for energy and building, is on the increase thus resulting into environmental destruction and decrease in the rate of water discharge. This has resulted into increased conflicts between the communities and authorities over water and forest products.

The authors found this system to be **‘conditional’** because the PWBO and LCWA, who appear as sellers, decide on the rates which the WUAs (buyers) have to abide to and, as a result, the system is not motivating to the communities who are the custodians and conservers of this ecosystem service (water and the associated soil and forests). If negotiated PES agreements, between communities and authorities, are instituted together with awareness creation on the modalities, benefits and beneficiaries; will enhance the understanding, internalization and motivate the communities and become more responsible of the environment and the ensuing services.

4.8 Korogwe District Council

For more than seven years, the Eastern Arc Mountain Conservation Endowment Fund (EAMCEF) has been providing funds for projects aiming at nature and biodiversity conservation and community development activities for communities surrounding the Eastern Arc Mountains. The EAMCEF call for proposals which are targeting the specific institutions and activities as follow;

1. To sustain forests, improvement the status of Amani and Nilo natural reserves.
2. Research institutions especially Mlingano Agricultural Research Institute for sustainable agriculture in collaboration with Korogwe district agricultural and livestock office (DALDO), Sokoine University of Agriculture (SUA) and TAFORI to research on natural resource related human activities done outside and inside these forest reserves
3. Community development projects outside the forests to identify alternative technologies for improving their livelihood instead of depending merely on forest and by so doing reduces pressure on the forest. Last financial year 2009/10 for example, bee keeping project got about 5 million, 7 million went to groups that keep chicken, 13 million to Amani Wananchi Group while Nilo forest development projects received about 15 million.

The authors find this to be a **‘contract’** system as the parties negotiation, agree on modalities and assign roles based on the comparative advantage of each partner.

The district has also established the Participatory Forestry Management approach (PFM) which supports small scale projects like vegetable growing, soil and water conservation, and other improved agricultural technologies which suits to the areas. This is practiced in the areas where EAMCEF projects are not operating. The DALDO office attached one extension staff to the areas for technical assistance, provide guidance, and link the communities with other stakeholders for marketing, new technologies and information sharing.

Regarding the financial collections from natural resources, there are agents who are assigned to collect 10 million Tsh per month through taxes from agricultural produce and other natural resource products and submit to the district council every month. Twenty percent (20%) of the collection is returned to respective villages to support their development projects. The respondent concluded the discussion by saying that PES is an appropriate approach as it rewards the custodians of the ecosystem service in question.

Challenges and Recommendations/; the respondent from Korogwe highlighted the following challenges and recommendations

- ✓ The money allocated for community development activities by the EAMCEF is relatively small and there is delay in the disbursement of this fund.
- ✓ Most of district councils depend on donor to conserve and protect her forest as funds from the central government are not adequate and it is always tagged for pre determined activities not necessarily to support natural resource. It was recommended that the district should be more innovative to raise funds from her resources such as establishing PES system.

4.9 Tanzania Electric Supply Company (TANESCO) Korogwe

Unfortunately, the regional spokesperson for the TANESCO was out of office hence no authentic information was available. However, according to one of TANESCO workers who didn't want his name to be disclosed, informed the team that the company has been offering such PES rewards to stakeholders who are in one way or another helping in conserving and protecting water sources. Information from this office will be collected once an appointment is fixed with the company's spokesperson.

5.0 Future activities Work plan

Due to the country's elections campaigns from September to October followed by recuperation from the elections in November, the project implementation was very much delayed. Field activities started in mid January 2011 and only those activities in red (table below) have been done and their completion is awaiting discussions with the communities to get their perception on the PES mechanisms they are practicing either consciously or unconsciously. In this respect, the research team has come up with the following workplan for the remaining activities (in black).

Activity	Mar	Apr	May	June
1.0 Harmonization of identified PES and PES-like mechanisms				
An in-depth study to be conducted on the identified PES and PES-like mechanisms to understand their mode of operation				
Hold feedback meeting with institutions that participated in PES study and potential buyers				
Document the existing PES mechanism whether they are conditional, contract or voluntary				
Hold discussions with the communities and the prize winners of environmental protection to get their perception on PES				
2.0 Institutionalization of PWBO on PES and PES mechanisms				
Formulation of work plan for PWBO and water authority to implement water tax				
Keep tracking on development and testing of PES mechanisms by other organisations to build collaboration with them in the future (e.g. WWF and CARE project on water payments)				
Consultation with PWBO in team with CARE and WWF				
Quarterly progress report				
3.0 Undertake inventory of knowledge and adequacy of the existing data on land use mapping				
Record the knowledge and adequacy of the existing data on land use mapping				
4.0 To facilitate negotiations with big water users and upstream farmers				
Hold negotiations with big water users and upstream farmers				
Publication and reporting				

Annex 1:

Check list for an In-depth understanding of PES and PES-like mechanisms in Lushoto

The facilitator will start by briefing the respondent on the purpose/objective of the project, that the project has already conducted a survey where his/her institution participated. Brief him/her on the survey results – that Soni collection, ecotourism, EAMCEF, PWBO, TANESCO, etc are the PES-like mechanisms that were found in the survey. Hence the aim of this visit is to conduct an in-depth study of the several mechanisms involved so as to see how this system can be packaged, disseminated and advocated widely.

Checklist

- ✓ Your institute was one of many that were mentioned to have PES-like mechanism in that it collects -----taxes/fees/ -----etc and returns a portion of it back to the communities- It is true?
- ✓ How did it start (what pushed the establishment of such mechanism)
- ✓ Who decide on the type and amount to be collected or charged?
- ✓ Who decide on the use of the collections?
- ✓ Currently what is the use of the collections?
 - Is there any amount that goes back to the sources?
 - **If YES** when did this start, who decides on the use, how organized and monitored
 - **If NO** is the respondent seeing any need to institutionalize this system?
- ✓ How do the communities (sellers) and buyers meet to decide on the amount to be charged, portion to be paid back, how to use it? What problems/challenges have you encountered in this system?
- ✓ Has this system been documented anywhere?
 - If YES can we have a copy?
- ✓ Is the PES mechanism conditional, contract or Voluntary
- ✓ If you were to start it again today how would you have started it?
- ✓ What other areas do you think if PES is instituted would help to motivate the communities to conserve their resources upon which the majority of them depend?
- ✓ What other institutions you know to be implementing such a PES-Like mechanism?
- ✓ Is there any question would you like to ask us?
- ✓ Any improvement so far

After field work, the research team will analyze the data collected and write a report including picture and annex of grey literature.