

## **Minutes for day one Triple L workshop**

The welcoming remarks were made by Gert who welcomed the participants to the workshop. He gave an overview of the achievements and challenges faced by triple L in the year 2015.

### **The highlights:**

It has been a good year for triple L

- i. Three articles have already been published with another article already accepted for publication
- ii. Between 2-4 papers are coming up for publication in the near future.
- iii. Five Msc thesis have already been published
- iv. Two posters have been presented at conferences.

The programme currently has four Msc students doing their research. Two of those students are Kenyans while the other and two are from Sweden. A Call for new Msc students from biophysical, social economic and humanity sciences to do their field work in the programme.

Inspite of those success narratives by Triple L, there has also been challenges in the year 2015 chief among them is the availability of funding. Three applications were made for funding but were rejected though with feedback. The plan is to improve the proposals and resubmit them to be considered for funding.

Due to lack of funds, the programme relied more on students' bursaries and will continue to work with Msc students plus also seeking for proper funding.

Giving feedback and Presentation of research findings to communities has been an important part of Triple L interaction with the community.

A new Triple L website has been established. Participants were invited to visit the web and make suggestions for improvement of the web.

Scenario workshops have also been held with aims of getting a platform for getting information on pertinent research issues as identified by land users, policy makers- county and national

agencies and from academia. Next year the workshop will rely more on NGOs, county administration and other stakeholders to suggest the study areas.

### **Self Presentation by Participants**

The participants briefly introduced themselves by name and institutions they were coming from.

### **Presentation by the regional director of VI agro forestry Arne Andersson**

VI agro forestry regional director welcomed participants and retaliated their support and appreciation to the participants availing themselves for the workshop. He briefed the participants on the history of VI agro forestry who VI is, how it started and the motivation of its starting. The founder of VI **Sten Lundgren** visited west Pokot and was concerned about the degraded landscapes devastated by soil erosion and the subsequent effects on livelihoods and the resultant poverty. Upon return home he called on well wishers to fund for restoration of the eroded land in West Pokot. His clarion call was “Why don’t you plant trees in Africa instead of buying flowers for birthdays, funerals etc.?” Today the funding of VI is raised from well wishers and readers of VI magazine.

### **Achievements by VI**

- Trees were planted leading to restoration of degraded lands.
- Farmers participate through by establishing tree nurseries.
- Training farmer trainers so that the project does not rely on VI staff only.

Other components were added as the programme went on. Those included

- More farmers involved in establishing of tree nurseries.
- Village savings and loaning self help groups
- Group training
- Training school children who are the future farmers, policy makers and implementers.

### **Achievements of Vi agro-forestry 2014**

- 517 school kitchen gardens to train school children who are the future farmers
- 42,470 used methods to control soil erosion
- 47,566 households trained on crop varieties

- 3,327 saving and borrowing groups established
- 618 organisations trained in HIV and AIDS
- 21,025 used alternative energy
- 11,350 water collection systems

In the pipeline is the plan to start agro forestry net work to act as a practical assistance with scientific institutions and academia. Its base will be universities in Sweden.

### **Why establish the network**

- Because we can
- Strengthen and maintain VI Since there is need for such network, if we don't do it someone will take the initiative and that will water down VI position.
- Vi has produced visible results in under 30 years
- There is a movement now - we want to be part of

### **Purpose of the network**

- To be the natural meeting place for international agroforestry in Sweden.
- To be a clear forum for linking practical assistance and scientific institutions.
- To attract more attention to fund our operations.
- Have a strategic ambition to expand our operations in Africa.
- To provide a base for the universities in Sweden as well as in our countries of operations

### **Way forward- 2016**

- Focus more on farm enterprises development
- Have a gender focus
- IT solutions in sharing information, data sharing and communication
- Strengthen partnerships and linkages
- Seek to broaden funding IT-solutions for collecting data, communicating with farmers and staff
- develop New strategy for post 2016
- Urban agroforestry

NB: Some ambassadors for VI from Sweden and Ajuma from Kenya.

### **Dennis Garrity Presentation**

Was not able to attend physically and sent a video which the participants watched.

### **Highlights**

- Noted interesting development in other dry areas that could be /compared equated to West Pokot, e.g. Ethiopia has is using enclosures
- Noted Global efforts in restoration of degraded lands
- Land restoration has become a global development theme
- Target for Africa restorative initiative –Kenyan government has taken initiative and prepared a document to be presented in Paris climate change forum expressing the investment and commitments to restoration of degraded lands
- Vi and triple L could make a contribution towards Kenya’s effort- taking advantage of experience and knowledge- form linkages with other agencies e.g. Northern Rangeland Trust to share experiences.

### **Wille Östberg (SU) Presentation**

- It was not in Pokots culture to plant or even protect trees. Only sacred trees were protected. Yet trees have many uses for the Pokot people. As indicated by one resident in West Pokot “when cattle were far grazing and we didn’t have food we eat trees”.
- Efforts at land conservation in western Pokot started during the colonial times. E.g. a cut off drain was reported to have made but silted due to lack of maintenance. There was also an attempt to create protected grazing blocks without success. The Pokot community too had tried to create grazing blocks especially during the dry season but it was not successful.

### **Highlights were;**

- For Pokots livestock were a necessity since no crops were being grown. Cattle have more than 20 uses in Pokot including paying dowry, paying fines etc. They also formed the bases of many relationships.

- Participatory checking (giving feed back to communities)- going back to communities with results findings. Go through graphs, maps, and pictures.

**Why?**

- its good manners
- people learn and get motivated to do something about their situation
- feedback to policy makers motivate them to strategise
- NB: feedback can enter one into the political processes. There is suspicion in many governments that NGOs and researchers are not committed to the national Agenda. They are always looking for hidden cards or foreign agenda.

**Ending first day of Triple L workshop**

The chairman appreciated various contributions made by the different presenters and participants.

## **Minutes for Triple L Meeting held on 25<sup>th</sup> November 2015 at Kitale Office**

Gert welcomed the group and informed them that Oliver Wesonga was not able to come.

Officials from Machakos and West Pokot will today give their presentations. The newcomers will also give a brief on their areas of research and their research interests that fit into the Triple L.

### **Presentation by Prof Jesse Njoka**

He gave a recap of the success stories that were highlighted yesterday. He gave insights to the fact that the process of development requires learning. The Prof is from African Dry lands Institute for Sustainability.

His first encounter with West Pokot was in 1998.

His presentation was on socio ecological changes taking place in West Pokot.

He presented the dry land development challenges.

Pokot is a semi-arid area with 50-85% aridity. The rainfall is spatially and temporally variable.

The land has become degraded and productivity is continuously increasing. Drought is becoming prolonged. Drought lowered GDP by an average of 2.8% per annum and this needs to be addressed.

The livestock sector was most affected with 4.5 million people affected by drought in 2011.

We are losing the ecological resilience because of drought.

90 billion USD was given as aid and Kenya lost Ksh 64 billion worth of livestock.

The GDP is related to the weather and when rainfall is low, the growth is low.

We cannot depend on donor funding always. The number of people affected by drought is continuously increasing.

The number of people receiving relief food is increasing in spite of development projects set up.

ASALs Policy framework

1. New Asal Policy
2. Climate Policy
3. Climate change response strategy
4. New governance
5. Rain fed and Irrigated Agriculture

6. Peace building policy
7. Humanitarian relieve

### **Institutions Dealing with Drought Issues**

Drought management Authority

National Environment Management Authority

Meteorological department for early warning systems

Ministry of Environment Natural Resources and Water.

Agriculture sector development

The government is committed to ending drought

He presented a model for expansion of action space of dry land human-ecological systems which includes:

Risk assessment.

Upgrading knowledge base.

Local knowledge

Resilience climate

Building socio capital

### **Livestock Challenges**

They are a major source of livelihoods

The demand for livestock products is high we normally import livestock. Livestock accounted for a major port anon of GDP and African countries have a problem competing in the world markets.

Most livestock comes from the pastoral areas.

Development challenges

Low population densities

Linking poor pastoralists to national economy

Opportunities for research

1. Increasing need to provide more people with food
2. Livestock mobility to access key resources , pasture and water or alternative livestock production systems
3. Improving extension services for pastoralists
4. Improving resilience of pastoral and agro pastoral systems in response to Climate change

5. Risk management such as index based livestock insurance
6. Building market infrastructure
7. Co generation and co sharing of knowledge information
8. Building local capacity and institutions and facilitating community based initiatives especially indigenous management of resources
9. Strengthening food safety nets

Mixed herding can create resilience, however, it poses the following challenges:

- Competition
- Disease management
- Challenge of higher level management
- Mobility challenges

He highlighted what he is doing for Pastoral risk management strategy through IGAD

Project: Building resilient and sustainable livelihoods.

#### OBJECTIVES

Pastures introduction

Improved market access

Capacity building for improved natural resource management best practices

Livelihood diversification: Capacity building is very important for productivity pillar, livelihoods and ecosystems

Use of appropriate technologies e.g. solar water pumping, irrigation, water conservation.

Rice growing in TURKANA

Hay growing

Aloe farming

### **Presentation by Gert**

He indicated that there are Multidisciplinary PhD Courses run in the programme, sponsored by Ministry of Foreign Affairs –Sweden. There are international lecturers. The course was made possible by Cooperation between SLU and JKUAT. This involved actual contact hour, online courses and field trips to Chepararia and Kongelai, Baringo and Bogoria.

The students were paired. There were interviews for presentation and write-ups

The outcome of field trip was learning experiences. It allowed students to conceptualize their study problems.

### **Presentation by John Wairore**

Influence of enclosure management systems on rangeland rehabilitation in Chepararia, West Pokot. This was an Msc Project. He used diverse methods since the study had social economic aspects and ecological resources. He looked at reasons for adoption and adaptation of enclosure.

Customary enclosures existed in the communities for confinement of young cattle, calving mothers and the sick cows. The reasons for enclosures include:

Increase flexibility of land management

Increase fodder

Increase livestock

Management is an assemblage of different mechanisms for influencing pasture health.

Households that can access income from other sources are more like to manage their livestock.

Land tenure; if there is individual land ownership; this is an incentive to have a management system as opposed to communal land.

### **Benefits of enclosures**

Livestock production

Crop production

Ecosystem benefits

Income generation and livelihoods diversification

Communal grazing land is changing thus getting reduced

**Conclusion:**

Heterogeneity of management systems- intensify

Particularism of local constraint

**Solutions**

Flexibility in design

Participation/involvement of local people

Policies

**Future studies**

Model existing grazing systems

Detailed Cost Benefit Analysis of enclosure systems

Rangelands enclosures: Are they non climatic stressors

**Governing livestock; Governing livestock managers**

By Julia Wernersson (*PhD Fellow*)

Julia seeks to illuminate on the structure and agency in change; governance and governmentality; and contextualization of social and biophysical aspects in West Pokot. Specifically, the study will focus on among others, border insecurity, environmental disasters and marginalization

Her results will include among others, markets and knowledge; breeds and resilience, social welfare and devolution vacuum.

Participants suggested that the study should examine, among others:

- \_the paradox that is increased flexibility with enclosures and tilia
- \_whether the study delve into the livestock value chain?
- \_on devolution, how the delivery of services in the new government structures are being hindered by the status quo (the old governance structures)
- \_ demystifying the dilemma that is: Increasing small stocks vs. reducing cattle herds
- \_on border security, consider livestock routes and their effects on access to markets

## **Assessing the impact of change in human population densities on land use and agricultural practices in Pserum, West Pokot County**

By Rebecca Karaya

This study assessed how changes in human population densities affects land use and agricultural practices using a variety of methods. Results indicated that population has increased by 5% due to: Better nutrition, better health care and sedentarization, among others.

Agricultural practices have also changed due to: sedentarization, livestock densities per area, crop acreage has increased, agricultural intensification, crop diversification, livestock improvement, use of enclosures for grazing management. On the other hand, Livestock populations have gone down due to a variety of factors ranging from: reduced land acreage, less labour, school fees, sedentarization. 72.4% of respondents agree that family planning is necessary. However, only 11% of them are using family planning. Some of the reasons that hinder adoption of family planning techniques include: religion and illiteracy.

### **Moving from Communal to Private**

The institutional dynamics of land tenure change in West Pokot, Kenya

By Laura Saxer and Per Knutsson

Land privatization in Chepareria presents a complex land tenure system. The study seeks to explore the institutional dynamics with on-going transformations in land tenure systems in the area. This research is based on the principle that institutions are dynamic and change through the discursive as well as physical practices.

The study proposes to use the institutional bricolage to highlight institutional change, embedded daily practices and institutional legitimacy. Using evidence from Chepareria, the study will examine:

- \_privatization through demarcation of land as a traditional practice (old & new)
- \_the role of community elders (Old & new; formal & informal)
- \_land registration and administration (formal & informal; embedded tenure)
- \_communal and private tenure (embedded tenure)
- \_land market (new institution)

\_conflicts (legitimacy; contestations and negotiations)

\_entitlement and social inequality

\_the agency of nature

It was recommended that within this framework, this study should consider the dynamics of what is really changing in pastoral and agro-pastoral rangelands-resource tenure or land tenure?

### **Agroforestry extension and dietary diversity- an analysis of the importance of fruit and vegetable consumption in West Pokot, Kenya**

By Goran Bostedt

This study seeks to analyze the importance of fruit diversity using existing household data sets from the survey collected and organized by Vi Agroforestry. Results indicate evidence of malnutrition. While most individuals have access to cereals, access to fruits is severely limited. Farmers who had received advice from Vi Agroforestry tended to have a dietary diversity score compared to those with information from other sources.

Regression statistics were used to determine the effects of household characteristics, geographical variation and counseling by Vi-AF on number of food groups available and dietary diversity score. Some of the factors that influenced dietary score and food groups included: Education, counseling by Vi-AF. As such, areas of action would include would include financial assistance to pro-poor farmers to adopt better nutrition. However, access to information (in this case advice by nutritionists and extension officers) is more crucial.

#### **Access to finance**

Access to affordable financial services is key to empowering local people, particularly women. Results indicated that while respondents save (55.7%) most of them are saving using unconventional methods such as under mattresses. This significantly influences their access to credit from financial institutions. Saving options were highly influenced by advice/counseling by Vi-AF which was found to influence individuals into saving in banks, Saccos and VLSA

## **County Government of West Pokot**

### **Message by Her Excellency, Mrs. Evelyn Kosgei, the County Executive of Agriculture, West Pokot County**

She started with a brief history of the administrative, biophysical and socio-economic characteristics of Chepareria. Of importance, the main types of land tenure are: private, public and communal. Notable changes include reduced forest cover, increased crop land, reduced pasture availability due to overgrazing, increased soil erosion and reduced arable land owing to increased human population.

She indicated that commonly cultivated crops in West Pokot County include drought tolerant (sorghum, millet, cassava, sweet potatoes, green grams and dryland beans) and cash crops (tea, cotton, coffee, pyrethrum, and fruit such as mangoes, pawpaw).

The county government is committed to supporting farmers and other value chain actors in Chepareria. She noted that some of the areas in which the county government is committed to providing assistance include:

- Agribusiness: the county is committed to linking farmers to markets, value addition, credit facilities and development of farm business plans
- Soil and water conservation: river bank protection, tree nurseries, tree planting in conjunction with Kenya Forest Service (KFS), terraces, water harvesting, soil fertility management
- Livestock: improved rangeland management-pasture establishment, reseeding; improved breeds; disease control
- Agriculture: Conservation agriculture, manure composting, agroforestry, water harvesting and supply for domestic and livestock use, pasture establishment and conservation, reseeding and
- Value addition (Nasukuta meat factory)

She also indicated that the county government of West Pokot has established collaborations with:

- KALRO collaboration on: sweet potatoes, disease free cassava, Marcia sorghum

- Moi University: Land rehabilitation in Senetwo
- Drought resilience sustainable livelihood project: development of irrigation schemes
- KACCAL: promotion of Climate-Smart technologies
- ASDSP: goat meat, honey and local poultry value chains
- Egerton University: Dryland cereals

Moving forward, the executive noted that the County is facing various challenges in the delivery of services. These challenges included: insecurity, illiteracy, land degradation, land tenure system, inadequate and poor storage of produce (at both household and market level), up-grading of local breeds, especially goats and the unregulated roaming of livestock during the dry season which tends to destroy pasture enclosures. It was proposed that the county government should propose areas of research to the Triple L Research Initiative.

### **Development in Machakos**

**By Nicodemus Nzombe, Deputy Director of Agriculture, Machakos County Government**

He started with a brief history of Machakos County ranging from its geographical location in Kenya, demographics and land use. He observed that land size has significantly decreased introducing changes in livestock production practices such intensive livestock production, pasture production and silos. Some of the county programmes includes: the tractor service, indigenous poultry programme, pasture establishment and market driven agriculture.

Participants sought to understand, among others; the effects of sand harvesting in Machakos, whether the County government is aiming to have its own database, the major changes in Machakos County and what can we learn from these developments and how the governments is addressing the social, cultural and spiritual bottlenecks of education and adoption of among others, SLM?

## **Integrated analysis of land use changes and their impacts on agrarian livelihoods**

By Mutoko M.C (PhD)

Kenya Agricultural and Livestock Research Organization (KALRO)

Land degradation is a function of complex and dynamic temporal and spatial dimensions. His study seeks to facilitate scaling out/up of successful SLM practices for greatest impacts on livelihoods and landscapes. This study builds on the rationale that comprehensive studies investigating the interplay of societal ecosystem services and agrarian livelihoods are rare. The study was based in the Western highlands of Kenya, an area with a unique forest, which supports CO<sub>2</sub> sequestration and supports livelihoods. Using integrated systems analysis of dynamic human-environments interactions, the research assessed the impacts of land use change (LUC) on agrarian livelihoods in the area.

Results indicated that the drivers of land use changes are:

- \_Low uptake of SLM technologies
- \_Technological advances which were not being applied in a scale sufficient to lead to intensification
- \_Population pressure as evidenced by doubled population density

Some of the implications of LUC on agrarian livelihoods included the fact that the expansion of agric land was no longer a possibility and worsened livelihoods.

Overall, the study reiterates that land degradation is a constant challenge in rural livelihoods.

That there is need to utilize current research knowledge and better target farmers for greater impact. More so, continuous feedback on research findings to various stakeholders will be essential to generate extra goodwill concern and motivation for active collaboration.

Finally, shift to intensive, high-value farming for better returns will not only help seize the interest of the youth but will also increase benefits to farmers' overtime.

### **Albert Ituika and Caroline Kawira Student Projects:**

By Dr. Stephen M. Mureithi

Albert Ituika, a Masters (M.Sc) student at Ghent University, Belgium seeks to determine the impacts of enclosure age and management on soil organic carbon accumulation in Chepareria. This study seeks to build on recommendations proposed by Sara Svanlund and identified enclosure management systems by John Wairore in the same area.

On the other hand, Caroline Kawira, a Masters (M.Sc) student at seeks to assess the impacts of restorative land transformations on household nutrition in Chepareria. Overall, this study seeks to tie the identified land use changes to household nutrition in the area.

Dr. Mureithi also explained that there are new areas of funding under the Triple L Research Initiative which are being explored. New students will be introduced once the short-listing and final selection is completed.

### **Antonia, Ditte and Freja student projects** Presented by Ewa Wredle

Antonia's project entitled "*Transition from nomadic pastoralism to livestock based agro-pastoralism - The case of animal husbandry in West Pokot, Kenya*" sought to investigate the current animal husbandry situation in Chepareria. Results indicated that the average herd size in Chepareria is 37 animals with a large variability (7-105). Households with older enclosures had more animals compared to their compatriots with younger enclosures. Tick-borne diseases were identified as the most common livestock health problems.

### **Student manuscript and Triple L Manuscript**

By Dr. Gert Nyberg

In the absence of Vera Karmeback, Dr. Gert Nyberg presented though in brief the results of Vera's paper entitled "*Assessing gender roles in a changing landscape: diversified agro-pastoralism in drylands of West Pokot, Kenya.*" Published under Vera et al. (2015) in the *Journal of Pastoralism; Research, Policy and Practice*, the manuscript explores the changing gender roles in a changing landscape. More essentially, the paper identifies that gendered roles (boundaries and responsibilities) are increasingly less-defined with the establishment of enclosures in Chepareria.

On the main Triple L manuscript, "*Enclosures: transforming land, livestock and livelihoods in drylands,*" he noted that it was accepted for publication in the *Journal of Pastoralism; Research, Policy and Practice* and is currently *in press*. While the study examined the complexity that is rangeland enclosures, their sustainability outcomes and on-going transition towards sedentarization (market-based agro-pastoralism), he noted that more studies are required before the validity of enclosures for scaling up/out can be underpinned.