

**MINUTES OF TRIPLE L 2ND INITIATIVE WORKSHOP HELD AT KITALE VI-
AGROFRESTRY STATION CONFERENCE HALL ON 18TH-20TH NOVEMBER, 2013.**

DAY 1 (18TH NOVEMBER 2013)

Present

1. Fred Marani
2. Magnus Jirstrom
3. Gert Nyberg
4. Ingrid Oborn
5. Mohammed Said
6. Anders Malmers
7. Polly Ericksen
8. Aggrey Thuo
9. Mikael Egberth
10. Ulrik Ilstedt
11. Anke Hermann
12. Emelie Zonabend
13. Eike Luedeling
- 14. John Nyaga (Secretary)**
15. Per Knutsson
16. David J. Otieno
17. Peter Mwangi
18. Shem Chege Kitugo
19. Stephen Mureithi
20. Joy Isabel
21. Vera Karmback
22. Rashid Diis
23. William Makoha
24. Lornah
25. Martha
26. Regina Waiganjo

Welcome by Fred Marani (Project manager Vi-Agroforestry).

He gave a brief introduction of Vi-Agroforestry, the starting, activities/programme, working area, and vision/mission

- Land rehabilitation in W.Pokot that started in 1983-1998. The challenge was land degradation then but now the major challenges how to manage the rehabilitated land.
- Transformations in W. Pokot are on improved livestock, crop farming, and introduction of horticulture.
- Challenges: scaling up (due to lack of finances), sustainability based on markets and profits, low implementation by partners.

Gert Nyberg Triple L Coordinator: The West Pokot Transformation Saga

- The changes from 1987 as depicted by pictures. The naming of Triple L initiative: Land, Livestock and Livelihood.
- The enclosures instances have a bearing on development at Chepareria and not in Kongelai division. In Kongelai the Vi agroforestry extension was less intensive and had shorter duration.
- Changes in tenure systems, infrastructure, mobile telephones, land use ecology, production, soils, enclosures, intensified land use, number of cows, animal health, & cattle market. How do these changes inter link or what are the drivers- processes- consequences.
- Proposal of multidisciplinary study with cooperation from individual disciplines.
- Partners- SLU, JKUAT, KARI, ICRAF, LU, GU, CRP 7, CRP 1.1, UON, ILRI, Vi-Agroforestry
- First planning activity in Jan 2013.
- Introduction to Triple L so far:
 - ✓ Planning funds (Agri4D)
 - ✓ Workshop in January 2013
 - ✓ 1 MSc Human Ecology GU
 - ✓ 2 MSc Soil science SLU
 - ✓ 1 MSc Vegetation ecology
 - ✓ 2 MSc Economics LU & UoN
 - ✓ Student project on Remote Sensing SLU
 - ✓ 1 Research application Soil Science (Sida/VR)
 - ✓ 1 Research application Animal husbandry (Sida/VR)
 - ✓ 1 Platform application (Sida/VR)
 - ✓ "Expert group" application (SIANI)
 - ✓ "Multidisciplinary research coordination" (Focali)

- ✓ *PhD course Restoration Nov 2014 SLU*
- ✓ *WAC presentation*
- ✓ *State of the art ms.SLU*
- ✓ 1 CRP 1.1/ILRI funding
- ✓ 2 writeshops
- ✓ Workshop November 2012 (CRP 1.1)
- Changes in Livestock management is of great importance as Livestock keeping is a major activity in Kenya
- There is a rapid population increase that may be a cause to changes to land use practices. Though compared to other part of Kenya, the population is still low.
- 'The fattest bull comes from Pserum' a saying at local market which is an indicator of the livestock health.

Polly Ericksen: Dryland systems

Highlights

- Managing risks vs. sustainable intensification
- Discussion about CCAFS (climate change: agriculture, food security)
- Pastoral production systems
- Drivers and disturbances of pastoral production systems
- Pastoral livelihood systems are adaptive to adverse conditions
- Ideas about decision making 'tree'. Decision making should be most important entry point for intervention for achieving resilient and sustainable landscapes and livelihood

Questions/comments

Ingrid: What levels should we be working on e.g. farmers, land, group or county?
Available good maps should be utilized as a source of data

Thuo: Data to be used: shift from oriental data collection to community based approach to initiate co-learning

Gert: How would you go about testing ground? Answer: Know critical grounds or main drivers and changes to expect in future then develop a successful pastoral management programme to answer them.

Eike: Identify decisions and where to get them.

Ingrid: County level is interesting to work at. It attracts a lot of attention.

Mureithi: County level good level to work in as the governors are prioritizing the entry points in development for each county. A good entry point.

What if the administrator at county level does not understand the land management practices? Why not use farm-level entry: **Eike:** Decision at County level will be made whether informed or not. Identify knowledge gaps with policy makers or without.

Magnus: Some developments are missing in concept note. The study has taken new shape whereby one group should look at history and the other look for future (Scaling-up)

Mohammed: There exists enormous decisions for Member of Parliament and therefore there is need for provision of scientific knowledge/ evidence/ advice to these policy makers

Emilie: Work with county and farmers. Farmers need to feel they own the project for success. Also makes the adoption of technology or results easily.

Magnus: There is need for the model to understand the future scenarios. We need to be open so as to understand the drivers and we need to understand variation in W. Pokot why some areas are doing better than others. Why has this happened?

Mohammed Said: What can we see from space; and how to link it to data and statistics?

- The use of remote sensing platform
- Satellite use-airplane photo surveys-ground survey
- Data and scale of information: water resource (through satellite use)-land cover (use aerial photos)-wildebeest distribution (use of ground survey).
- History of satellite imaging
- Uses: landcover changes mapping, monitor length of growing seasons, normalized vegetation index etc.
- Free access of majority of satellite data that can be used in the current work in W. Pokot

Land covers change detection:

- Bush encroachment vs. elephant poaching
- Land cover analysis possible

Habitat use and landuse changes

- Can we see the past and predict the future?
- Expansion of agriculture lead to loss of wildlife corridors

Research opportunities

- RS assessment of changes in vegetation cover
- Describe enclosures, trees, vegetation (et clear picture of veg cover)
- Correlate physical with demographic info, cattle information, and other incident eg socio-economic.

Process: Data gathering-synthesis-planning-action

Questions/comments

Mureithi: Ground truthing to assess what is beneficial or not?

Do a divisional analysis or locational so as to allow better understanding of the processes.

Gert: WAC manuscript

An oral presentation requested

The publication data to be discussed later

Inclusion of livestock and population data in the manuscript

Rashid Diis: Kenya Pastoralist Consortium

- Grass root mechanism to mitigation and reducing vulnerability to climate change for pastoralists communities in Kenya
- Climate change has greater impact on pastoralists due to their vulnerability related to food insecurity, lack of water
- Pastoralists most researched people but with disconnect with policies.
- There is need to have connection between researchers, policy makers so that there can be an improvement of livelihood of the pastoralists communities.
- Upscale the voice for indigenous communities in response to adaptation to build resilience to climate change.
- Pastoralists usually are marginalized people in Kenya: health, water, infrastructure.
- They derive livelihood from natural resources eg water, livestock and land.
- Drought and competition for scarce resources (pasture and water) has resulted to increased conflicts
- Pastoralists also compete with wildlife especially in migration corridors.
- There is environmental degradation due to the pastoralists activities
- Measures to cushion the communities from negative climatic impacts e.g. destocking
- 'Nothing about them without them'. The need to involve the communities.
- The women and children bear the biggest blunt of food insecurity
- Stakeholder need to realize rangeland need attention due to their potential to sustainably support livelihood.

Thematic area of the Consortium

- ✓ Lives and livelihood
- ✓ Education
- ✓ Health
- ✓ Food security
- ✓ Policy
- ✓ Marginalization
- ✓ Infrastructure
- ✓ NRM

Eike: What policy should that researchers should address to allow researchers meet the community need?

- ✓ Use of county government as opposed to central governments
- ✓ Share information with communities and policy makers

Stephen Mureithi: Effect of enclosures on restoration of degraded semi-arid rangeland in L. Baringo Basin, Kenya.

- ✓ Any intervention directed to arid and semi-arid areas important as Kenya is predominantly arid and semi-arid lands.
- ✓ Several degradation threatening ASALS

Conclusion on use of enclosures

- ✓ Improved livelihood
- ✓ Diversified income generating activities
- ✓ Need for markets
- ✓ Enabled adaptive capacity

Questions/comments

Magnus: What is bull day?

Taking a bull for one day grazing translates to a one bull day

Joy and Vera: Linking Vi-Agroforestry data to Triple L initiative

Data from 2001 and 2007

How data can be analyzed for Triple L initiative

Land size, land utilization, demographic and production of crops in the area

The available questionnaires are distributed as follows; 2001 = 318 for Chepareria and 143 for Kongelai, 2007 = 44 for Chepareria and 50 for Kongelai.

- ✓ 2001 Land tenure was private (70%) and 28% communal. In both division the ownership was private in 2001
- ✓ Only about half of owned land is cultivatable and only half of that is cultivated
- ✓ 15 to 4.5 acres ownership from 2001 to 2007
- ✓ Land sizes smaller in Chepareria than Kongelai

Questions/Comments

Is there any data collected on livestock? Yes, the data is available in SPSS.

There was no repeated sampling (re-interviewing). But GPS information is available for 2007 data collection.

Mohamed: Land size can be explained by population increase

Land tenure can be captured by cartographic maps

Production or food insufficiency maybe as a result of increased population or due to shift from crop production to livestock keeping

Eike: Use data distribution in showing averages rather than the mean.

Per Knutsson: Perception and land use changes in Chepareria (Julia MSc work)

- ✓ To analyze social aspects of land use changes and conflicts
- ✓ Reduction in migration (internal and external)
- ✓ Distribution of knowledge is within Chepareria boundary
- ✓ There are increased boundaries within Chepareria.
- ✓ Agricultural and livestock production has increased the exchange between Pokot and Turkana. There is less conflict between the two communities.
- ✓ Changed boundaries for women as connected to change in land use change. More girls go to school.
- ✓ Differences exist in communities on the adoption level, time etc.
- ✓ Though there maybe common knowledge, there are differences in technologies in availability of knowlwdge.
- ✓ Historically people were adopting to drought but now to economic pressures e.g. school fee
- ✓ Population pressure. There is need for more money with less land
- ✓ More conflicts in areas with higher land demarcation

Conclusion

- ✓ There is interaction of local and external dynamics in landscape changes
- ✓ There are insights on the function of social structures in human-environment interaction

Gert Nyberg (Sara and Anna's MSc work)

- ✓ The study surveyed young and old enclosures to check on infiltration
- ✓ No big differences have been reported in infiltration data. Soil analyses are ongoing at ICRAF, Nairobi, to reveal soil C content and to correlate to and explain infiltration data. Analyses to be ready this year and final report early 2014.
- ✓ GPS coordinates were collected
- ✓ They noted management differs a lot though enclosures may look the same. The results will include how management of these enclosures is carried out.

Peter Mwangi: Impacts of enclosures on range health in W Pokot

- ✓ Enclosures and agroforestry used in the area for over 30 years.
- ✓ In other areas studies show a decline in forage, livestock and wildlife with subdivision
- ✓ To understand the mechanism behind the success in W Pokot and not in other areas (Kajiado). This to be the next study and will answer the following research questions:
 - Is degradation the cause in the difference? Is introduction of agroforestry a reason to success? Which are the common vegetation species?
 - Succession species for rehabilitated areas to be shown?
 - Forage quality?
 - What is the optimum enclosure for better livelihood?

Questions

Mureithi: Differentiation in the student doing soil and vegetation? How to you capture the impact with time? Answer: Impact on productivity

David Otieno emphasized the need to integrate socio-economic aspects. These could be e.g. 1) quantification of economic values that communities attach to various forest products
2) Analysis of community/household perceptions and preferences for conservation and different approaches of conservation
3) Assessment of community willingness and trade-offs associated with adoption of conservancies as livelihood diversification strategy

4) Review of lessons arising from various policy and institutional arrangements that have successfully worked in other areas.

Magnus Jirstrom: Multidisciplinary Questionnaires, possibilities, limitations and need for streamlining.

- ✓ Questionnaires may be misleading; and are only useful if they are statistically representative
- ✓ The importance of baseline data to allow seeing and quantifying change.
- ✓ Why only include Cheperaria and Kongelai? To attract policy makers, there is need for scaling up to the larger W. Pokot.
- ✓ Diffusion of technology; is it spreading out of Chepareria or within the division. We would expect this to be the case.
- ✓ Study can be at different level. Intra households, households, village, division
- ✓ There should be research questions and objectives for the overall study.
- ✓ Income questionnaires should be well discussed before administering
- ✓ Care should be taken in getting memorable information: validity and reliability would be compromised based on individual memory

Variables possible at Village level

- Fencing data
- Data on education
- Data on land tenure
- Village level ruling/ Is there a change
- Market accessibility at village level
- Price of land changes

Variables possible at division level

- Rainfall
- Diseases
- Non Farming activities
- Cattle price changes
- Diffusion of technology

National level variable

- Is West Pokot normal or isolated case?
- GDP dynamics and relation to changes in W. Pokot
- Any change in national policy?
- What are value addition policies that are coming up (Slaughter house)?

'There is need to look back as well as looking forward', Magnus. There should be integrated research questions approach so as to understand and explain the various researches that are carried out.

Eike: Is there a possibility of expanding the study to other places to enable generalization of results as a scaling up approach?

Mureithi: Agreed with Eike as partners in Baringo are interested in Triple L initiative

Eike: We need not to be constricted to the available data on deciding the areas to expand to.

Magnus: There is a great drive from CGIAR to show impacts of change.

Gert: Maybe we have a gradient in level/ intensity of management. We need to go up and abroad in understanding the changes and why there are some failures in other areas.

Magnus: A good baseline should be developed.

Ingrid: Tomorrow programme should start with research question so as to allow development of small research programme from it.

Ingrid proposal was agreed by all

DAY 2 (19TH November 2014)

Polly explained outcome-output and impacts approach adopted by CGIAR.

Outcome- (achievable in 5-10 years)-e.g. West Pokot officials will adopt the policy on enclosures

Output- e.g. journal papers, policies draft (research work outputs)

Impacts- improve livelihood, food security (May not be achievable in a life of a project but helps in its realization)

3 subgroups formed to allow further discussion of important issues at Regional (ASAL), county and local levels

1. ASAL group members
 - Regina
 - Peter
 - Stephen
 - Mohamed

- Gert
 - Rashid
2. West Pokot county group members
 - Eike
 - Aggrey
 - Ingrid
 - Shem
 - Peter
 - Shem
 3. Local group members
 - Anders
 - Mikael
 - Magnus
 - Göran
 - Lonah
 - Vera
 - Joy William

Please find refer to results of group discussion in separate documents shared by Gert

John Nyaga to do list as assigned by local group!

1. Government information about census
 - How far down does it get? District? Division?
 - Are there questionnaires?
 - What information can you share?
2. The rainfall information
 - Is the rainfall data available for W. Pokot?
 - Is it an average for the district or for division?
 - How far back can we get?
 - Cost?

Mohamed: The possible use of different tools as a suggestion to County level group as to a way of helping make better and sustainable decision.

Magnus: What is timing of proposed model? **Eike:** Depend on our ability to make sense out of data collected and the model. Few processing steps maybe involved.

Eike: What form are results? Is it easy to understand? **Eike:** Probabilistic model can be made which would be easier to interpret.

Shem: The Model will help in getting the research questions.

Overall group work results discussions

1. What are benefits and trade-offs of various intensification processes in ASAL? (ASAL group)
2. What are the drivers of observed differences in welfare in W. Pokot? (Local group)
3. To find out what the research question is? Under what conditions do enclosures work? (County group)

Magnus

Is there place to get information about welfares from the district?

What social economic data is there about the area?

Per

What is the change? Is it the enclosures?

There is need to test success in W. Pokot then compare with other ASAL management practices?

Aggrey

There is evidence material to show the cause of change? There is need to explore availability of material pointing that there is change in the area.

Magnus

I would like to see figures, data to show why the poorest district in Kenya is now getting out of poverty as an entry point to the current research.

Mohamed

The National Bureau of statistics would have some information that can be useful. Students should be tasked to check on available information.

DAY 3 (20TH NOVEMBER 2013)

Team members present

Magnus

Anders

Gert

Mohamed

Per

Goran

Mikael

John (Secretary)

The rest of the group went for field visit in Chepareria.

Proposition of MSc Topics

Mikael and Mohamed:

1. the need for aerial photographs for time series of the area and develop half page concept note on that
2. If present, there is a need for image analysis and to see land cover changes in the large W. Pokot area. Then come down to evidence of enclosures and tree changes over time on a smaller geographical scale. The bigger map is to identify hot spots.
3. Then analyze the fragmentation using SPOT high resolution images and coupled with cartographic map and this is for the smaller area of interest.

Availability and quality of aerial photographs of the area should be checked. Parts, or all, of 1-3 could be carried out by Swedish PhD student (Mikael) based at ILRI for some (short) time. Funding for at least some of the work in 1-3 is secured.

Magnus: Get village variables for enclosures. Shem would help to mark these villages and develop maps for the same. Then Vera and Joy would assist in mapping the questionnaires on the developed map.

Magnus: A file cabinet to be obtained to store the questionnaires safely. This is to be placed in a safe place at Vi- Centre.

Per and Goran:

4. A place based study of tenure, i.e. how land tenure is now and how it has changed over times in some villages. Social issues and questionnaires on that.

5. To try and identify draughts in the past e.g. environmental and check on the reaction of the community. Farmers would then be asked on how they would handle such draughts in future in the light of enclosures.

Funding for 4-5 is secured.

6. The conflict with establishment of private/enclosures and the associated economics. The disruption of livestock corridors or communal pastoralist system

Study 6 will, if funding is secured be tightly linked to 4 and 5. The students are to use participatory mapping method with help of Kenyan students. Vi-Agroforestry will offer technical assistance. Understand land tenure system. Who owns what and how. Mark communal and private land, cadastral maps needed.

7. Management of enclosures. 1-2 MSc students to describe and analyze the different management strategies of enclosures encountered in Chepareria.

The above numbering, 1-7, is also a priority list (in timing), meaning that 6 and 7 are still pending funding. In all the above it is important to avoid repeated respondents to prevent fatigue. Get detailed information on management of enclosures

Magnus: What can be seen from satellite from the enclosures? There is a need to show progression which will enable analysis on the same. This will also allow the team to see the speed and magnitude of the enclosure development.

Mohamed: Remote sensing can be done then followed by ground-truthing. It is possible to see live fence with satellite images rather than artificial fencing.

Gert: Analyze the management of enclosures. No traditional management of enclosures exists. The new/introduced technologies need to be analyzed. There may be a difference in agricultural related and livestock related enclosures. There is also new form of economic dynamic whereby farmers can now sell their grazing rights to fellow villagers within their enclosures.

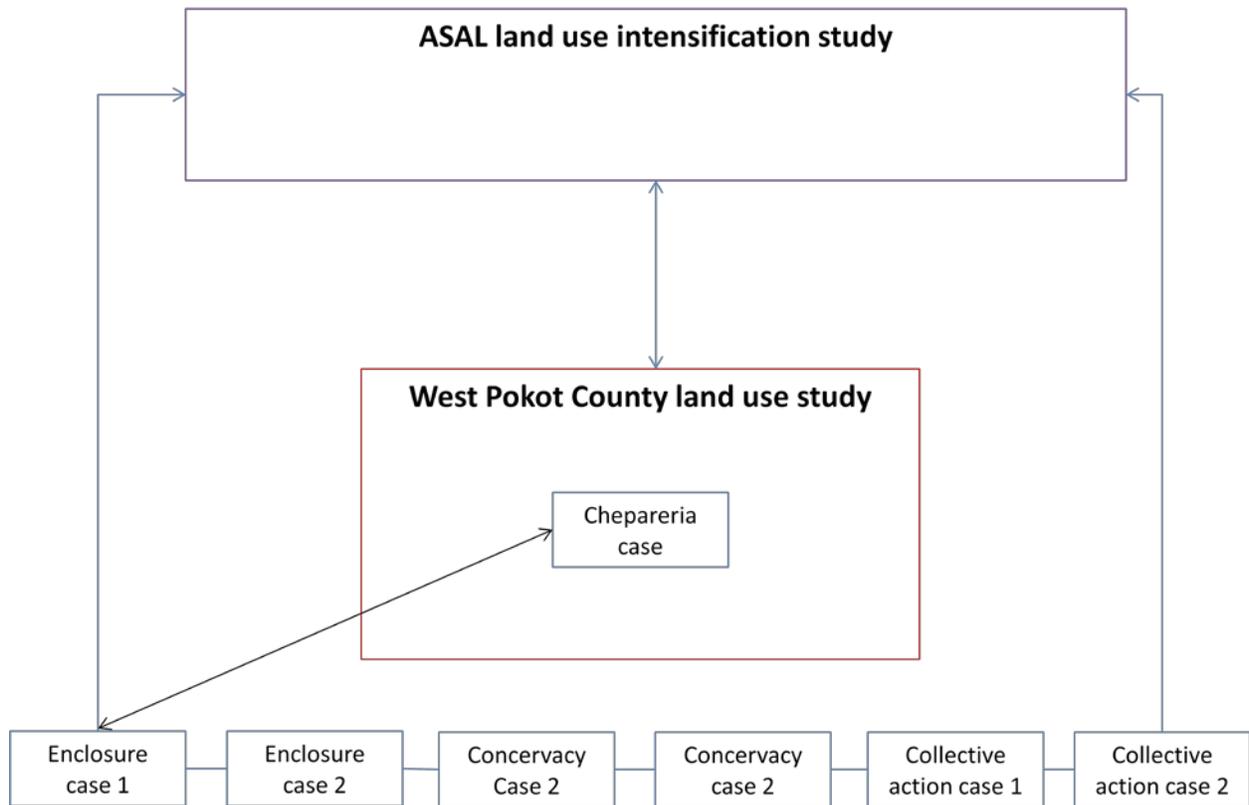
Proposition of research proposals

Anders proposed that we could apply for a research school (PhD training). This idea is great, but we don't know possibilities for funding; Anders and Gert will investigate.

There is a relevant EU call coming up (call in December and dead line in February). However time is short and the call is initiated/dominated by other European universities. So, even if chances to get into the first phase are not great we should investigate possibilities both for this first phase and especially for later phases. Anders will investigate and keep us updated.

There will be (at least) 5 applications to Swedish research councils 2014, one platform application (1) and 4 research applications, 3 to VR/U-forsk (2-4) and one to Formas (5). VR/U-forsk applications are max around 650 000 US\$ and Formas applications can be 1 million US\$.

1. The platform application of this year will be improved and re-submitted, if those kinds of applications are invited also next year (likely). Size around 100 000 US\$ per year for three years. This year's application (not granted) included funds for networking and facilitation (including 1 months' salary for a coordinator) and a number of MSc student projects + some funding for workshops.
2. The not granted application *Landscape Restoration for Improved Livelihoods - Trees, Carbon and Water in West Pokot, Kenya* will be improved and repeated 2014. Gert suggested the inclusion of Sentinel (ICRAF concept) sites in Chepareria and Kongelai in this application. Applicants Anders Malmer and Gert Nyberg. Village/landscape scale – county scale.
3. The fattest bulls come from Pserum! -Impacts of Landscape Restoration on Livestock and Livelihood in West Pokot, Kenya, by Ewa Wredle will also be improved and repeated. This application includes animal husbandry and gender role changes. Village/landscape scale – county scale.
4. Per Knutson will lead an application on livelihood changes (biophysical and socio-economic), household-village scale. This application could/would include a post doc position from Kenyan university to SLU-ILRI (shared).
5. There will be a multi-disciplinary and multi-scale application to Formas. This one will hopefully include 3-4 PhD students (Kenyan) for joint degrees between Swedish and Kenyan universities and address the scales ASAL, County (West Pokot), village/sub-county/case study, household and maybe also intra-household, see draft framework. Anders Malmer will be main applicant and Magnus Jirström will coordinate the application writing.
Per Knutsson will apply for some seed money (around 10 000 US\$) from Gothenburg university to facilitate a writeshop for this proposal in Sweden.



Draft frame-work Formas multidisciplinary application

Sections proposed for FORMAS proposal application

The Formas application has a format of max 8 pages, + max 2 pages of figures. The following is a tentative distribution of headlines and text extent. Names in bold are proposed to take on responsibility for the writing of respective section. Anders will be main applicant and Magnus will coordinate the application writing. Dead line early April.

1. Aim and specific hypothesis (0.75 pages) (**Magnus**)
 “There is research gap and we want to understand. The aim is to synthesize and further study and explore different practical approaches used by farmers and livestock farmers in the area. Simply to penetrate deeper into several, so far, existing approaches to counter land degradation and quality in arid and semi-arid area. Understanding local, regional effort taken and to see how they play out, impacts and efficiency in countering development. We need to explain what potential the approaches have, the condition for being successful and the impacts they have where they have been carried out. To understand changes in landscape in dry area, what drive changes in local, and landscape and management effort to improve resource management”, Magnus.

- Landscape changes in arid and semi-arid area have been driven by many factors such as increased population, governance, education etc. and this is affecting local people livelihood.
- What are tradeoffs in analyzing different intervention methods?
- The potential to tap the challenges of the future like increasing population. Also, get the numbers of people relying on arid and semi-arid landscapes.

2. Overview of research area + theory (1.5 pages)

(Gert, Anders and Mohamed)

Paper should be utilized and show what is happening with people in combination to biophysical changes. How they interact? Impacts of people on landscape and viceversa. Combine references from natural and social scientists. Concrete and narrow results to do research and should end with research questions. And also, what theories will the project make contribution to?

3. Project description (Get the nested approach diagram and also organizational approach) (2 pages) (Per)

Explain what the project will do relating to different levels i.e. ASAL-county-sub county-village

- i. National level, gather data on dryland development and change using remote sensing and GIS.
- ii. Then, Synthesize that data into new form of synthesized data and also include other secondary data.
- iii. County level, collect and compile existing data at W. Pokot level including socio economic data and physical/environmental data e.g. rainfall, production, cartographic in order to have overview and compare with other selected study areas.
- iv. Sub-county/village level. Existing organizations operating there, proximity to markets, infrastructures, local decision makings, conflicts etc. Quantitative questionnaires and qualitative (group discussions).
- v. A) Household level/household surveys plus qualitative data collection, survey plus qualitative data collection.
b) Case studies
- vi. Up scaling with GIS and others
- vii. Stakeholder/policy dialogue on findings.
- viii. Scenarios. Different pathways, stages of interventions, what can government should do or what should not be done?

Work Package	Objective Number
1	i, ii,
2	iii,iv,v
3	vi,vii,viii

4. Methods and implementation (1.25 pages) (**Goran**, Mikael and Mohammed)
 - ✓ We should avoid disintegrated theories in terms of social studies and physical.
 - ✓ It is important to show coherent, how many ideas fit together in a multidisciplinary study.
 - ✓ There should be no divisions but synthesizes from different groups.
 - ✓ More details on enclosures
 - ✓ Also using RS/GIS to show the study at different level
 - ✓ How do we make quantitative data on local scale speak at regional level (more methodological theory)
5. Scientific deliverables (0.25 pages) (**Magnus**)
6. Communication with stakeholders and end users (0.5 pages) (**Gert**)
7. Societal value of the research (0.25 pages) (**Polly**)
8. Gender (0.25 pages) (**Polly**)
9. Existing equipment, national and international collaboration relevant to them (0.5 pages) (**Magnus**)
10. Reference (0.75 pages).