



SNV Kenya - Terms of Reference

Study of the Forage sub-Sector for Ruminant Livestock in Narok, Kajiado and Taita Taveta Counties

Integrated & Climate Smart Innovations for Agro-Pastoralist Economies and Landscapes Kenya's ASAL project

I. SNV Kenya / Netherlands Development Organisation

SNV Netherlands Development Organizations is an international development organization supporting communities to achieve social and economic development through agriculture, renewable energy and improved water and sanitation systems. SNV Kenya's agriculture program focuses on enhancing market systems of agriculture products through stimulating commercialization of smallholder farming that is market-led, employs good agriculture practices, and observes climate smart and environmentally friendly practices. Projects in the agriculture program aim to improve access to market through improved product quality, increased yield and enhanced food, nutrition and water security. The global objective is to reduce poverty and improve livelihoods through innovative solutions that address food and nutrition security, sustainable markets, climate smart agriculture, and equality of opportunity for women and youth in employment and business, while ensuring systemic change across value chains.

II. Integrated & Climate Smart Innovations for Agro-Pastoralist Economies and Landscapes in Kenya's ASAL project

SNV Kenya (SNV) and Kenya Agriculture and Livestock Research Organisation (KALRO) - in collaboration with County Governments - are implementing the "Integrated & Climate Smart Innovations for Agro-Pastoralist Economies and Landscapes in Kenya's ASAL" project or action. The project's lifetime is from 1 January 2021 – 31 December 2023. The project works in the Counties of Narok, Kajiado and Taita Taveta and is funded by the European Union and the Government of the Kingdom of the Netherlands.

The project's objective is to apply research towards building more resilient and market-based solutions for improved forage production and livestock husbandry, through climate smart innovations and sustainable landscape management in the three Counties referred to above. The project aims to mainstream gender with a focus on women and youth.

Work package 2 of the project has two outputs of intervention areas:

- (1) To validate and promote amongst livestock and forage value chain actors, commercially viable drought resilient feeding innovations and business models, based on trials and demos for improved forage grasses and legume forage crops, and effective dissemination strategies that include women and youth.
- (2) To facilitate and support SMEs (including women and youth enterprises/self-help groups), cooperatives, ranches and conservancies, to adopt improved forage seed varieties and practices and establish forage plots, feedlots and grazing areas, for use by own cattle and/or for sales as fresh or preserved forages.

III. Mapping and analysis of the feed and forage value chain and scope of the study

The project wishes to initiate a feed and forage value chain study to identify opportunities and constraints for a market-led/based intervention (as described under (1) and (2) above), in Narok, Kajiado and Taita Taveta Counties. Forage is defined for the purpose of this study as including pastures or pasture grasses, fodder crops (including grasses) produced for cut and carry and preservation, and forage trees and shrubs. Feeds in form of concentrates will only be considered in the study in case of supplementary feeding, for example in beef finishing systems or intensified dairy farming. The focus of this study therefore on forages and has the following scope:

A. Livestock farming and feeding systems

- 1) Carry out a quick scan of ruminant livestock (cattle, goats, sheep, and camel if applicable) farming systems in the 3 Counties, feeding practices, feed supply and feed security (quantity and quality), and feed information access, with a focus on pastures, fodder crops for cut and carry or conservation, and concentrates in case of supplementation (types, sources, beneficiary livestock species, costs).
- 2) Determine predominant pasture and forage cultivars (genus, species and varieties) present and used in the livestock farming systems in the 3 Counties.
- 3) Inventorise feeds and forages (fresh or conserved) traded and used by small- and large-scale dairy-meat production systems to supplement and complement rations. This can be year round, seasonal or during periods of severe drought and scarcity and may include agro-industrial by-products suitable and used in the beef finishing chain (high protein, high energy content).

B. Stakeholder analysis

- 4) Consolidate the stakeholder inventory by SNV County Technical Advisors in the forage value chain for ruminant livestock in the 3 Counties, which includes input suppliers, forage producers, distributors, and buyers/consumers and their markets (e.g. dairy, beef, small ruminants).
- 5) Inventorise and analyse the issues identified by these stakeholders that hinder efficiency, profitability and upscaling of their business, for example access to suitable seeds, knowledge/skills, access to finance, markets/ market information, policies, regulation, gender norms.
- 6) What do they see as opportunities for propelling their business?
- 7) What are the County Governments doing to improve the availability and quality of forages (pastures, fodder crops, rangeland rehabilitation) in their County? Whom do they partner with?
- 8) Which other “forage” initiatives/projects supported by donors, central government and development partners are present in the Counties. Describe the key interventions and results.

C. Market for forages and price-setting

- 9) How is the market for forages (fresh or conserved) organised, what are the current market outlets and which price mechanisms are in place (used)? Give an indication/qualitative description of the differences between the feed and forage markets in the 3 Counties as regards buyers, structure and pricing?
- 10) Are the Counties net importers or exporters of conserved forages (hay, silage) and who are the main trading partners (which Counties and/or enterprises).
- 11) Does quality differentiation exist in the forage market and if so, what is the perceived quality and the quality-price relation by the farmers (how do they differentiate/based on which criteria)?
- 12) What is the actual price-quality relation (price related to nutritive value)?
- 13) How do farmers – including women and youth - get access to information about the forage market for ruminant livestock (origin, prices, volumes and quality)?
- 14) What/when is the trigger for livestock keepers to buy forage in the market, e.g. land shortage, reduced access to grazing areas, drought and seasonality, cost of production (forage buying is

cheaper than growing it oneself), non-availability of the required type of forage, opportunity costs, shortage of (skilled) labour, etc.

- 15) Can the market for fresh and conserved forages be quantified? How big is the demand based on an estimate of the actual size of the market and the catchment (e.g. based on the number of animals per county, livestock mortality, or other proxy-indicators).
- 16) Identify any existing trading agreements/collaborations in the forage value chain and are they working? If not, why and how can they be improved or initiated?
- 17) What are the weak (gaps) and strong points in the forage market the way it is currently operating? How does this disadvantage or present opportunities to women, youth enterprises and cooperatives?

D. Forage seed market

- 18) Identify the stakeholders - including women and youth - in the formal and informal seed market (e.g. seed breeders, seed bulkers, seed harvesters, seed distributors and buyers), who supply and purchase forage seeds for ruminant livestock in the 3 Counties. List suppliers, seed material, prices, availability, suitability, accessibility, sources, etc.
- 19) What are the opportunities for investors - including women and youth - in commercial forage seed production and sales?
- 20) What is the likely interest and adoption rate by the value chain actors of improved forage seed technologies, such as those promoted by KALRO and other parties? Can the interest and adoption rate be differentiated?
- 21) Map suitable and scalable seed technologies/varieties for the 3 Counties, available or being trialled in Kenya by KALRO and other research organisations (e.g. CIAT, ILRI) and private sector (e.g. Kenya Seeds/Simlaw, Advantage Crops, Corteva, Leldet Seeds, Barenbrug SA). Investigate and report on their suitability (e.g. climate, yields and management), availability, registration status and cost.

E. Climate Risk Analysis of the livestock/forage value chain

- 22) Based on existing data on climate change and trends for Kenya and the 3 Counties, what are the risks for the livestock and forage supply chain and the expected impact?
- 23) What are suitable and recommended mitigation strategies based on (inter-)national best practice?
- 24) How are these risks perceived by the County Governments and by the agro pastoralist communities and what are mitigation strategies currently used or promoted by both?

F. Recommendations

- 25) Present a SWOT analysis of the forage (and forage seed) markets in the 3 Counties that includes women and youth.
- 26) Give concrete hands-on recommendations/strategies to enhance the forage and forage seed value chain through engagement with the private sector and County Governments, to ensure affordable, efficient and sufficient seed supply.
- 27) As part of this – and in addition to the seed technologies introduced by the project - what concrete innovations can be considered in terms of mechanisation, irrigation, product valorisation, feeding or any other (scaled) technologies that would fit in the local context and production systems, to increase productivity per land and livestock unit?
- 28) What specific recommendations are there to cope with climate change trends (see E.23)?
- 29) What specific recommendations are there for improved participation of women and youth in the forage value chain?
- 30) List potential investors in the forage market, their products, business model and (targeted) markets and identify/map their needs.

IV. Methodology

The consultant(s) is expected to use the following data collection methods:

- (i) Literature/desk review of relevant documents and publications for this study.
- (ii) Stakeholder interviews and consultative meetings (incl. KALRO and SNV) with help of a structured questionnaire. This will include:
 - ✓ Field visits and group discussions with agro pastoralist communities, cooperatives, conservancies, commercial forage producers, ranches, SMEs and seed suppliers.
 - ✓ County Governments/Departments and relevant donor funded projects at County level.
 - ✓ Development partners.
 - ✓ Other relevant parties.
- (iii) Presentation and validation of the study report for each County in a Multi Stakeholder Forum.

V. Consultancy deliverables

The following deliverables will be achieved:

- (i) A draft report for each County – or a consolidated report with a separate section for each County - covering the scope of works described (see Chapter II above) - and a power point summarizing the main findings and recommendations of the County studies.
- (ii) A final-draft report or reports after incorporating feedback from SNV and KALRO on the first draft report(s) (i).
- (iii) A multi stakeholder validation workshop in each County with presentation of the final draft report and discussions. The feedback shall be included in the final report(s) as workshop proceedings.
- (iv) A final report or reports edited and presented as per the requirements and standards of SNV Kenya and the donors (i.e. the European Union and the Government of the Kingdom of the Netherlands).

VI. Lead consultant's qualifications/expertise

A. Education

A degree from a University of applied sciences in any of the fields of livestock management, ruminant nutrition, forage management and farm economics.

B. Work experience

- (i) Minimum ten (10) years of experience in relevant positions in Kenya related to the ruminant livestock sector (preferably also in semi-arid areas), farm and forage management, farmer training, forage demos and private sector engagement in the forage value chain.
- (ii) Good networks with and understanding of the roles and contributions of private sector, farmers and agro-pastoralists, conservancies, ranches, national and county governments, regulatory bodies, research and knowledge institutes, and international donors in developing the forage sub-sector or value chain.
- (iii) Good understanding of climate smart agriculture and sustainable livestock production systems, and of relevant policies and strategies at national and international level, including initiatives for climate funding.
- (iv) Specific knowledge and hands-on expertise of the forage seed sector, pasture management, fodder production / preservation, mechanisation and scaled technology, ruminant nutrition, and farm and forage economics.
- (v) Proven expertise in carrying out technical and financial assessments and evaluations, feasibility studies, sector studies, strategy and policy papers for the forage sub-sector in Kenya and/or East Africa.
- (vi) Knowledge and experience as regards inclusion of women and youth in the livestock and forage value chains.

C. Additional requirements

- (i) Good verbal and written communication skills.
- (ii) Excellent report writing and presentation skills.
- (iii) Practical and hands-on attitude/experience as regards implementation of good forage management practices, dissemination and adoption of forage technologies by farmers.
- (iv) Sensitive and committed to gender equity and the role of youth.

VII. Timelines

This assignment is expected to take place between March 2021 and May 2021, approximately 8 weeks.

VIII. Requirements in response to this TOR

The following is required from the consultant in response to these terms of reference as a basis for evaluation and choice of the suitable consultant:

- (i) A technical and financial proposal.
- (ii) A tentative work plan of the planned activities and the number of professional days for the consultant(s).
- (iii) CVs of the lead consultant and any other consultants to be engaged.
- (iv) Reference list of previous consultancies and relevant reports.