Investing in rural people

Executive Board
148th Session
Rome, 15 September 2026

President's memorandum
Proposed additional financing to
Republic of Kenya
Kenya Livestock Commercialization Project

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Action: The Executive Board is invited to approve the recommendation for the proposed additional financing contained in paragraph 46.

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Financing summary

Initiating institution:	IFAD
Borrower:	Republic of Kenya
Executing agency:	State Department for Livestock Development
Total project cost:	US$144.89 million
Amount of original IFAD loan 1 (performance-based allocation system [PBAS]):	US$27.4 million (equivalent to approximately EUR 23.105 million)
Terms of original IFAD financing 1:	Blend
Amount of original IFAD loan 2 (performance-based allocation system [PBAS]):	US$27.4 million (equivalent to approximately EUR 23.105 million)
Terms of original IFAD financing 2:	Highly concessional
Amount of additional IFAD loan (PBAS):	US$54.776 million
Terms of additional IFAD financing:	Blend: 25 years, including a grace period of 5 years, with a service charge of 0.75 per cent and an interest rate of 1.25 per cent per annum in special drawing rights (adjustments for single-currency loans)
Cofinancier(s):	Participating financial institutions providing credit lines to project participants
Amount of cofinancing:	US$4.55 million
Terms of cofinancing:	Credit lines
Contribution of borrower:	US$18.9 million
Contribution of project participants:	US$11.85 million
Amount of original IFAD climate finance:[1]	US$22.9 million
Amount of additional IFAD climate finance:[2]	US$23.266 million (US$1.646 million of which is a climate top-up)
Cooperating institution:	IFAD

[1] EB 2020/130/R.22.
[2] Ibid.

I. Background and project description

A. Background

1. The Executive Board approved the Kenya Livestock Commercialization Project (KeLCoP) on 18 September 2020.[3] The financing agreement between IFAD and the Government of the Republic of Kenya was signed on 5 March 2021 and became effective on that date. From the outset, the project experienced delays in meeting the conditions precedent to the first disbursement. This was largely due to the protracted process in establishing a functional project management and coordination unit (PMCU). KeLCoP's total costs were estimated at about US$93.5 million over a six-year implementation period. The project is being financed by: (i) an IFAD loan of US$54.8 million under the performance-based allocation system (PBAS) cycle for the Eleventh Replenishment of IFAD's Resources (IFAD11); (ii) a government contribution of US$18.97 million, comprising taxes and duties, in-kind contributions and cash contributions; (iii) a Heifer International grant of US$3.39 million (which has since been recorded as a financing gap due to the Government's withdrawal of Heifer International from the programme); (iv) participating financial institution (PFI) credit lines of US$4.55 million to project participants; and (v) project participant contributions of US$11.85 million (cash and in-kind). KeLCoP's original completion date is 31 March 2027, and the financing closure date 30 September 2027.

2. KeLCoP is being implemented in 10 counties (Elgeyo Marakwet, Baringo, Marsabit, Samburu, Busia, Bungoma, Kakamega, Siaya, Nakuru, and Trans Nzoia), and in four wards per county, for a total of 40 wards, with a target outreach of 110,000 households. The State Department for Livestock Development of the Ministry of Agriculture and Livestock Development is the lead implementing agency and has delegated the day-to-day coordination and management of KeLCoP to a PMCU located in Nakuru. The midterm review (MTR) was conducted during the period 5 to 23 May 2025.

3. In April 2026, the Government requested additional financing in the amount of US$54.776 million, with a four-year extension of the project implementation period. The proposed additional financing would be provided as blend financing from the IFAD13 PBAS, and its objectives are to fill the financing gap created by the withdrawal of Heifer International from the project and to replicate, strengthen and scale successful interventions in participating counties.

B. Original project description

4. KeLCoP's development objective is to improve rural incomes of rural poor livestock and pastoralist households by increasing their output and value addition, access to markets, and resilience to economic and climate risks. It has three components: (i) climate-smart production enhancement for small livestock, which seeks to work with the various stakeholders to put a holistic and self-sustaining production enhancement system in place for the targeted small livestock; (ii) support to livestock market development, which aims to boost the commercialization and profitability of small ruminant, poultry and apiculture value chains through value addition and improved market access; and (iii) project management and coordination, which has the dual role of: (a) creating a conducive environment for KeLCoP implementation through policy support and institutional strengthening; and (b) providing project support services. The resulting outcomes are: (i) enhanced poor rural people's production capacities; (ii) strengthened environmental sustainability and climate resilience of poor rural people's economic activities; (iii) enhanced poor rural people's benefits from market participation; and

[3] EB 2020/130/R.22.

(iv) service delivery by stronger government and rural institutions, and policy environment for project activities improved.

II. Rationale for additional financing

A. Rationale

5. Since effectiveness, KeLCoP has established a robust operational footprint across the 10 participating counties, delivering support to producers' groups, strengthening market infrastructure, rolling out digital extension services and opening up commercialization pathways in the target commodity value chains. KeLCoP implementation has thus far laid a firm foundation for the achievement of its goal and development objective. Implementation performance has consistently been rated moderately satisfactory or higher, with marked strengths in community mobilization, value chain entry point identification, county ownership and integration of climate-smart livestock practices. However, the existing financing gap is making it hard to effectively implement planned activities aimed at sustainably contributing to the commercialization agenda. The financing gap is the result of: (i) failure by Heifer International to meet its cofinancing commitment; and (ii) under-costing of many activities during the original design. This shortfall reduces the project's ability to fully operationalize its commercialization and value chain strengthening pathways at the intended scale. Thus, while KeLCoP has demonstrated strong community uptake and evidence of early commercialization gains, structural constraints that require a more in-depth and coherent package of support are still present. These constraints include inadequate structuring of producer–market linkages; uneven livestock production capacity across counties; limited private sector participation in both input and offtake markets; and vulnerability to climate and market shocks that continue to affect smallholder productivity and market reliability. The additional financing will therefore contribute to consolidating gains made under the original financing while responding to growing demand for targeted livestock commercialization support.

6. The additional financing will also be used to scale up key successful activities, including the provision of water points, especially in the counties with arid and semi-arid lands (ASAL counties) and breed improvement programmes. The financing will also expand outreach, either by reaching more households in the originally targeted wards or by expanding into new wards.

Special aspects relating to IFAD's corporate mainstreaming priorities

7. In line with IFAD's mainstreaming commitments, the project has been validated as:

☒ Including climate finance

☒ Nutrition-sensitive

☒ Youth-sensitive

☒ Gender-transformative

8. At design, KeLCoP was validated as championing the above four mainstreaming themes. These mainstreaming priorities will be maintained for the additional financing.

B. Description of geographical area and target groups

9. Under the additional financing, the number of counties will remain unchanged (see section I.A). However, the number of wards is expected to increase from the original 40 to at least 50. The selection of additional wards will follow a strategic cluster approach aimed at strengthening commercialization, value chain development, and access to markets and essential services. At the same time, ward selection will continue to be guided by poverty and vulnerability indicators, the inclusion of marginalized and underserved populations and the feasibility of

integrating households into viable value chains. The exact number of additional wards will be determined by balancing the need to allocate sufficient resources for delivering a coherent commercial support package with the objective of scaling up successful interventions across more wards.

10. In terms of outreach, and given the higher number of wards, the additional financing will increase the target by 50,000 households, bringing the total outreach to 160,000 households. Targeting within wards will follow a structured approach centred on "smart households", namely vulnerable rural households with the potential to transition into commercially viable production systems. These households will be supported by access to subsidized inputs (including e-vouchers), participation in producers' groups and cooperatives, opportunities for employment and service delivery along value chains and pathways into enterprise development. Particular attention will be paid to strengthening the inclusion of persons with disabilities, with improved tracking and reporting in the results framework.

C. Components, outcomes and activities

11. The project structure will remain the same with respect to the original components/outcomes, as described under section I.B. The additional financing design has identified the activities to be supported by component. For component 1 (climate-smart production enhancement for small livestock), the additional financing will build on existing support and ensure the timely availability of the needed inputs to support the productivity enhancement agenda of the targeted small livestock so as to meet the quality and quantity requirements for commercialization.

12. For component 2 (support to livestock market development), the focus will be on consolidating and scaling up the commercialization agenda. This will be done by forging mutually beneficial private sector partnerships, and backward and forward market linkages. It will also entail the adoption of the e-voucher system as the delivery mechanism for inputs to the target participants and other digital mechanisms for efficiency gains; the construction/scaling-up of market infrastructures and slaughterhouses; and support for financing additional market-ready enterprises under the matching grant facility. These interventions will be accompanied by capacity-building. In this context, multi-stakeholder platforms (MSPs), which have already been established across all participating counties, will play a key role. The additional financing will therefore prioritize their operationalization and institutional consolidation, strengthening their governance, partnerships and market linkages so that they evolve into self-sustaining platforms anchored in county systems and driven by private sector participation.

13. The project will actively engage private sector actors across input supply, processing, finance and digital services, supported by dedicated facilitation mechanisms under the additional financing.

14. For component 3 (project management and coordination), the focus will be on providing a conducive environment for the KeLCoP commercialization agenda to take root during and after project implementation. Interventions will build on progress made with the original financing by supporting the finalization or support for the roll-out and implementation or the development of sector regulations under the relevant bills.

D. Costs, benefits and financing

Project costs

15. The combined KeLCoP incremental investment and recurrent cost for both the original and the additional financing is estimated at US$144.89 million. The IFAD allocation for the additional financing is US$54.776 million, bringing total IFAD funding (original loan and additional financing) to US$109.5 million, as summarized in table 1.

16. Components 1, 2 and 3 are partially counted as climate finance. As per the multilateral development banks' methodologies for tracking climate change adaptation and mitigation finance, the total amount of additional IFAD climate finance for this project is estimated at US$23.266 million, US$1,646,000 of which is climate top-up.

Table 1
Original and additional financing summary
(Thousands of United States dollars)

	Original financing[a]	*Additional financing*	*Total*
IFAD	54 750	54 776	109 526
Government (taxes and duties)	12 579	-	12 579
Government (in-kind)	4 925	-	4 925
Government (cash)	1 463	-	1 463
Project participants (in-kind)	9 261	-	9 261
Project participants (cash)	2 586	-	2 586
Participating financial institutions	4 550	-	4 550
Heifer International[b]	3 386	(3 386)[c]	-
Total	**93 502**	**54 776**	**144 890**

[a] See tables 1 and 2 in document EB 2020/130/R.22 for a detailed breakdown.
[b] The Heifer International financing of US$3.386 million did not materialize.
[c] Cofinancing that did not materialize is not subtracted from the total column.

Table 2
Additional financing: Project costs by component and subcomponent and financier
(Thousands of United States dollars)

	Additional IFAD loan		*Total*	
Component/subcomponent	*Amount*	*%*	*Amount*	*%*
1. Climate-smart production enhancement for small livestock				
1. Integrating vulnerable households into value chains	7 060	100	7 060	13
2. Breed improvement	19 183	100	19 183	35
3. Climate-resilient production systems	2 775	100	2 775	5
4. Animal health improvement	1 117	100	1 117	2
5. E-extension services	497	100	497	1
2. Support to livestock market development				
1. Market infrastructure and capacity development	6 686	100	6 686	12
2. Building inclusive value chains	9 195	100	9 195	17
3. Value chain management information systems	133	100	133	0.2
3. Project management and coordination				
1. Policy and institutional support to national government	1 556	100	1 556	3
2. Project management and coordination unit support	4 047	100	4 047	7
3. Knowledge management and learning	2 528	100	2 528	5
Total	**54 776**	**100**	**54 776**	**100**

Table 3
Additional financing: Project costs by expenditure category and financier
(Thousands of United States dollars)

	Additional IFAD loan		Total	
Expenditure category	*Amount*	*%*	*Amount*	*%*
Investment costs				
A. Civil works	19 581	100	19 581	36
B. Equipment, goods and vehicles	7 499	100	7 499	14
C. Technical assistance	16 532	100	16 532	30
D. Grants and subsidies	5 834	100	5 834	11
Total investment costs	**49 446**	**100**	**49 446**	**90**
Recurrent costs				
A. Salaries and allowances	5 291	100	5 291	10
B. Operating costs	38	100	38	0.1
Total recurrent costs	**5 330**	**100**	**5 330**	**10**
Total	**54 776**	**100**	**54 776**	**100**

Table 4
Project costs by component and project year (PY)
(Thousands of United States dollars)

	PY1		PY2		PY3		PY4		PY5		PY6		PY7		PY8		PY9		PY10		Total	
Component	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*	*Amount*	*%*
1. Climate-smart production enhancement for small livestock	4 820	6	11 895	14	13 918	17	12 329	15	7 749	9	1 187	1	11 487	14	10 178	12	6 099	7	2 868	3	82 529	57
2. Support to livestock market development	178	0.5	3 243	8	7 795	20	7 263	19	3 681	9	968	2	9 651	25	3 560	9	1 481	4	1 323	3	39 141	27
3. Project management and coordination	4 629	20	1 714	7	2 436	10	1 821	8	1 857	8	2 634	11	2 888	12	1 998	9	1 787	8	1 458	6	23 221	16
Total	**9 627**	**7**	**16 852**	**12**	**24 148**	**17**	**21 412**	**15**	**13 287**	**9**	**4 789**	**3**	**24 026**	**17**	**15 735**	**11**	**9 366**	**6**	**5 648**	**4**	**144 891**	**100**

Financing and cofinancing strategy and plan

17. The project is financed through multiple sources. The original financing from IFAD amounts to US$54.75 million, with anticipated additional IFAD financing of US$54.78 million. Domestic financing from the Government is estimated at US$18.97 million, consisting of both cash and in-kind contributions.

18. The contribution from the target participants was initially estimated at US$11.85 million (in cash and in-kind). Financing from PFIs and Heifer International was projected at US$7.9 million (US$4.55 million and US$3.39 million, respectively). No disbursements have been made to date under these financing arrangements. The project will report on the PFIs' contributions once the participants begin engaging with them. The US$3.39 million that was supposed to come from Heifer International will be covered by the additional financing. As to the participants, the project needs to establish a structured framework for defining, measuring, monitoring and reporting their in-kind contributions. The additional financing, therefore, not only addresses these confirmed financing gaps but improves the enabling environment for domestic and private cofinancing to materialize during the extended implementation period.

Disbursement

19. The disbursement arrangements for the additional financing are the same as those approved at project design. Funds will continue to be disbursed in accordance with the existing financing agreement and applicable IFAD disbursement procedures.

20. There will be no changes in the flow-of-funds arrangements in the original financing. The additional IFAD financing will flow through the designated account and the operating account already open at the Central Bank of Kenya for KeLCoP. Disbursement will be based on quarterly interim financial reports, which will be submitted to IFAD within 30 days of each quarter's end.

Summary of benefits and economic analysis

21. The economic and financial analysis has been updated to reflect: (i) current market prices for both inputs and outputs; (ii) changes in farm yields since inception; (iii) actual costs already incurred and the expected costs for the remaining implementation period; and (iv) incremental benefits attributable to the additional financing. The analysis has also been updated to align with actual logical framework results and projected achievements by completion.

22. Despite the positive results of the economic and financial analysis, the updated economic internal rate of return of 26 per cent is lower than the 29 per cent envisaged at design and the 28 per cent at MTR, primarily due to implementation delays, incomplete delivery of input packages and slower realization of benefits, particularly in market development, financial inclusion and commercialization pathways. In addition, weak private sector engagement and delays in operationalizing key instruments (e.g. matching grants and e-vouchers) have constrained the pace and efficiency of benefit generation.

Exit strategy and sustainability

23. KeLCoP's sustainability rests on productivity gains, commercialization of livestock enterprises, improved market access, private sector engagement and institutional ownership. Specific activities being implemented to ensure continuation of the flow of benefits include: (i) Gender Action Learning System and enterprise mentorship; (ii) expansion of market access from 333 to about 11,000 households; (iii) county livestock sale yard bills for co-management and revenue sharing between counties and livestock market associations; and (iv) climate resilience embedded through the implementation of an Environmental and Social Management Plan, climate management plans, community action plans, training in adaptation and mitigation, and catchment protection measures. The remaining risks have been identified, and the additional financing will address them by operationalizing county MSPs,

boosting private sector linkages through a value chain specialist, finalizing sale yard bills and rangeland policies, expanding digital advisory and insurance linkages and consolidating group support for market and financial access. The exit strategy centres on institutional integration into the Ministry of Agriculture and Livestock Development, county ownership, community market governance, private sector linkages, transformation of market groups into cooperatives, and continuation of youth service providers and MSP coordination. To secure and scale KeLCoP's gains, additional financing support must also include exit plans negotiated with stakeholders (including elite breeders) and strengthen the MSPs, elite breed schemes and enterprise groups that will drive long-term commercialization and replication.

III. Risk management

A. Risks and mitigation measures

24. As reflected in the integrated project risk matrix, KeLCoP's key risk areas include the country context, the environmental and climate context, institutional capacity for implementation and sustainability, sector strategies and policies, and project financial management. The other areas are generally considered to be of moderate-to-low risk.

25. The highest-risk areas related to the additional financing that could affect implementation and the achievement and sustainability of development outcomes are as follows:

(i) **Fragility and security.** This is more relevant for some counties than others. Security threats, such as ethnic clashes, social conflicts and terrorist attacks, remain an inherent risk. To mitigate this risk, KeLCoP is not implemented in counties known to be impacted by terrorism. In one or two ASAL counties, there is the likelihood of the threat of low-level tribal feuds. Concerted efforts were made to select wards that are secure for project implementation, and the necessary security measures are adhered to. The same approach will apply when selecting new wards for additional financing.

(ii) **Governance.** County governments continue to have limited resources and have downsized. They face financial and personnel capacity constraints in exercising their mandates in areas such as the livestock sector. As a mitigation measure, KeLCoP provides support to counties to develop capacity for strategic planning and implementation and modernize the provision of extension and market information through the deployment of digital technologies and e-extension models. KeLCoP is also facilitating links with the private sector and encouraging private sector investments.

(iii) **Project budgeting.** Project budgets are adequately detailed, but budget absorption remains low due to delays in the initiation of procurement by user departments and the late approval of the County Governments Additional Allocations (CGAA) Bill. These issues will be mitigated by facilitating user department efforts to begin procurement at the start of the financial year. Regarding the CGAA Bill, reforms are ongoing and are expected to reduce legislative bottlenecks, increase absorption rates and improve the overall efficiency of project implementation across counties.

(iv) **Project vulnerability to climate change impacts.** Some project implementation areas are increasingly exposed to climate variability and/or extreme climate events, which is adversely impacting food and nutrition security, agricultural productivity, access to markets, value chains, infrastructure and/or the incidence of pests and diseases, resulting in greater vulnerability or a deterioration in livelihoods and ecosystems. Mitigation measures include application of Social, Environmental and Climate Assessment Procedures (SECAP), an environmental, social and climate management framework (ESCMF) and an in-depth climate risk analysis. Community action plans for county-level adaptation will also be put in place to minimize risks.

B. Environment and social category

26. Based on 2017 SECAP guidance, KeLCoP was classified as category B. Applying the 2021 SECAP guidelines, the additional financing has been screened and categorized as moderate for environmental and social risk; it remains consistent with a category B-type profile. The additional financing scales up activities such as community water infrastructure (boreholes, water pans, spring protection, troughs and reticulation), rangeland rehabilitation and fodder support schemes. These activities may generate moderate, localized environmental and social risks, including construction-related issues, erosion/sedimentation, localized habitat disturbance, pollution and waste risks, and community health and safety risks around works, water points and the management of livestock waste and run-off.

27. The SECAP review note and the ESCMF have been updated; however, based on SECAP 2021, these risks are screened, avoided where feasible and mitigated to acceptable levels through: (i) clear eligibility/exclusion and siting criteria; (ii) standard good practice measures in construction for environmental management; (iii) strengthened community health and safety measures for works and operational water points; (iv) improved livestock waste and run-off management practices integrated into producer group support; (v) invasive species prevention through appropriate species selection and site hygiene; (vi) strengthened contractor/community environmental, social, health and safety clauses, supervision and reporting; (vii) site-specific environmental and social impact assessment/ environmental, social and climate management procedures, and social inclusion plans; and (viii) expanded inclusion initiatives, including Indigenous Peoples' action plans and Free, Prior and Informed Consent-related measures.

28. Positive impacts include improved access to water and services that support livelihoods and better natural resource management. Adverse risks are expected to be mainly localized, particularly in arid counties such as Marsabit and Samburu, and concentrated around infrastructure sites and rangeland production systems. Key risks include: (i) soil erosion and water quality risks at water points; (ii) localized biodiversity disturbance and potential human–wildlife interactions near water points; (iii) inconsistent waste management and localized pollution in livestock systems; and (iv) social risks such as resource access and governance tensions, elite capture and labour, and sexual harassment/sexual exploitation and abuse risks, if not proactively managed.

29. The SECAP review note, the ESCMF, the integrated pest management plan and the climate vulnerability assessment have been revised to ensure full compliance with the SECAP 2021 guidelines and to address the scope of the additional financing, the moderate environmental and social risk rating, the substantial climate risk rating and the required adaptation measures. The following documents will be also be prepared as required:

- Site-specific environmental, social and climate management procedures;
- Indigenous Peoples' action plan and Free, Prior and Informed Consent procedures; and
- Sustainable rangeland management plan.

C. Climate risk classification

30. The original project was categorized as high for climate risk. However, subsequent to further screening, the additional financing risk is now categorized as substantial. Field visits to Marsabit and Samburu confirmed prolonged drought conditions and,

in the Maikona ward in North Horr, high water salinity is already constraining household water use and vegetable production. The additional financing remains highly exposed, because it scales up water-related investments and rangeland and pasture measures that are sensitive to drought, extreme heat and intense rainfall. If not climate-proofed, these investments could increase vulnerability by concentrating livestock and people around water points and increasing pressure on fragile rangelands.

31. To address this, the additional financing strengthens climate adaptation through climate-resilient design standards for water and market infrastructure, drought-tolerant fodder and feed systems, improved rangeland governance and management, climate information services, early warning systems and diversification towards livestock species and value chains that are more heat- and drought-resilient.

32. An in-depth climate risk analysis was undertaken for the original financing, and the climate risk and vulnerability assessment will be updated for the additional financing. This will ensure that each water investment is properly sited and designed for droughts and heavy run-off, including practical sediment control, where needed. It will also introduce grazing and rangeland management measures that prevent pressure build-up around new water points and provide indicators to track resilience results.

D. Debt sustainability

33. The latest World Bank–International Monetary Fund Debt Sustainability Analysis rates Kenya’s risk of debt distress as high, though public debt remains sustainable. Debt dynamics have worsened due to weaker revenue and exports, and growing sensitivity to shocks. Kenya accessed international markets in February 2024 to manage liquidity ahead of the June 2024 Eurobond maturity. The outlook depends on better policies and continued multilateral support. Ongoing debt service pressures underscore the need for prudent fiscal management and consolidation.

IV. Implementation

A. Compliance with IFAD policies

34. No changes have been made to KeLCoP’s original objectives or outcomes.

35. The additional financing is fully aligned with IFAD’s Strategic Framework 2016–2025, as well as the country strategic opportunities programme (COSOP) 2020–2027 to strengthen selected value chains and ensure that poor rural people participate in and benefit from them, using inclusive, climate-resilient and pro-poor approaches that boost Kenya’s productive potential for future generations. The COSOP has the following strategic objectives: (i) climate-resilient and sustainable community-based natural resource management is improved; (ii) access to productivity-enhancing assets, technologies, rural finance and services is improved; and (iii) sustainable access to improved post-production technologies and markets is enhanced.

B. Organizational framework

Management and coordination

36. KeLCoP’s implementation arrangements will be adapted to manage the expanded scope, including the addition of technical support teams. The management structure will be strengthened to increase efficiency, integration and overall implementation effectiveness. This will entail: (i) enhanced monitoring, structured review processes and clearer accountability pathways to support smoother execution of interventions; (ii) minimization of transfers of county project staff, as such transfers tend to affect continuity and momentum; and (iii) establishment and strengthening of rangeland management committees in ASAL counties to guide

community-based rangeland planning, foster controlled grazing systems and promote sustainable land management.

Financial management, procurement and governance

37. The financial management arrangements for the original financing will continue for the additional financing. The PMCU has all the required financial management staff and the project's financial management arrangements were evaluated as satisfactory by the MTR. Internal controls over expenditure and cash management were found to be sufficient.

38. **Procurement.** Procurement under KeLCoP takes place within a decentralized framework aligned with Kenya's devolved governance structure. The PMCU is responsible for national-level procurement oversight and the counties undertake procurement at the local level and within request-for-quotations thresholds. The additional financing will be subject to the same arrangements. However, a significant increase in procurement volume is expected across goods, works, services and grant financing, including expansion to additional wards. Accordingly, the additional financing will introduce improved aggregation strategies, clearer threshold matrices, enhanced contract management controls and reinforced capacity-building measures to ensure the efficiency and effectiveness of the process.

39. **Governance.** KeLCoP implementation will continue to benefit from the project team's experience and capacity built over the years at the county and national levels. The multisectoral project steering committee, which has been active in its oversight function, will continue to provide policy oversight and strategic guidance. The project governance modalities used in implementation during the original project will continue to apply during the additional financing implementation phase.

C. Monitoring and evaluation, learning, knowledge management and strategic communication

40. **Monitoring and evaluation.** KeLCoP has a comprehensive monitoring and evaluation (M&E) system anchored in an M&E plan and covering multiple administrative levels. It is supported by a management information system (MIS) for data management. However, the system is currently limited in terms of performance monitoring and the linkage of targets to results. Under the additional financing phase, the MIS will be reinforced by updating the M&E plan to emphasize results monitoring, deploying performance monitoring tools and conducting annual outcome surveys and thematic studies. Accordingly, more resources have been allocated for field supervision, upgrading of the MIS and its linkage to digital platforms (e-extension, digital climate advisory tools, e-voucher, e-marketing), the streamlining of participant profiling tools, the enhancement of data quality checks, the promotion of participatory community monitoring via farm record books, and the training of infrastructure and rangeland management committees.

41. **Knowledge management, learning and strategic communication.** KeLCoP has a functional knowledge management (KM) system guided by a KM strategy and plan. KM activities are budgeted for and well implemented. Success stories are documented and shared through the multimedia channels used by the project. Project events are well documented and communicated at strategic levels across the participating counties and nationally. However, the KM system is weak in innovation despite dedicated budget support for innovations targeting youth. In addition, there is a weak linkage to the M&E system and hence limited learning and policy advocacy. The additional financing will enhance the effectiveness of the KM system in disseminating project achievements and capturing and reporting lessons learned by: (i) strengthening KM monitoring; (ii) developing and disseminating knowledge products; (iii) sharpening the focus on learning; (iv) strengthening advocacy for major policies that would enhance project impact; and (v) increasing the use of digital platforms. Improved KM will support evidence-based planning,

promote replication of successful approaches and position KeLCoP to contribute more effectively to the national discourse on livestock development and commercialization.

D. Proposed amendments to the financing agreement

42. The financing agreement will be revised in terms of the amount IFAD will be contributing, as per table 2, in accordance with the category allocations outlined in table 3. The completion and closing dates will be extended by 48 months. Heifer International will be excluded from the KeLCoP financing plan as a cofinancier, since its contribution did not materialize as anticipated at the design of the original financing. There will be no other changes to the financing agreement.

V. Legal instruments and authority

43. A financing agreement between the Republic of Kenya and IFAD will constitute the legal instrument for extending the proposed financing to the borrower/recipient. The signed financing agreement will be amended following approval of the additional financing.

44. The Republic of Kenya is empowered under its laws to receive financing from IFAD.

45. I am satisfied that the proposed additional financing will comply with the Agreement Establishing IFAD and the Policies and Criteria for IFAD Financing.

VI. Recommendation

46. I recommend that the Executive Board approve additional financing in terms of the following resolution:

> RESOLVED: that the Fund shall provide a loan on blend terms to the Republic of Kenya in an amount of fifty-four million seven hundred seventy-six thousand United States dollars (US$54,776,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Alvaro Lario
President

Updated logical framework incorporating the additional financing

Results Hierarchy	*Indicators*						*Means of Verification*			*Assumptions*
	Name	*Baseline*	*Midterm*	*Original Target*	*AF Target*	*Final revised End Target*	*Source*	*Frequency*	*Responsibility*	
Outreach	**1.b Estimated corresponding total number of households members**						PMCU MIS quarterly reports	Annually	PMCU	Project initiates its activities on expected timelines, and all approvals and implementation arrangements are in place
	Household members - Number of people		148500	495000	225000	720000				
	1.a Corresponding number of households reached						PMCU MIS quarterly reports	Annually	PMCU	
	Households - Households		33000	110000	50000	160000				
	1 Persons reached by project-supported activities						PMCU MIS quarterly reports	Annually	PMCU	
	Males - Males		15000	50000	22750	72750				
	Females - Females		18000	60000	27250	87250				
	Young - Young people		9900	33000	15000	48000				
	Total number of persons receiving services- Number of people		33000	110000	50000	160000				
Project Goal Contribute to the Government's agriculture transformation Agenda of increasing rural small-scale farmers' incomes, food and nutrition security	**Increase in income of the targeted households**						Third Party household surveys, poverty/gender studies	Baseline, Midline & End Line	PMCU	Households' incomes increase due to increased production/productivity and better market access / Continued political and economic stability
	Percentage - Percentage (%)	0	25	35	35	35				
Development Objective: Increase incomes of 160,000 poor livestock and pastoralist HHs, especially youth and women, in an environmentally friendly manner, in selected project areas of the 10 participating counties.	**Beneficiary households reporting increase in income**						Baseline asset survey, mid & end line survey	Baseline, mid-term & completion		Poor rural people are willing to adopt innovative technologies. Private sector engaged in the project implementation through SMEs. Both local and regional markets remain stable
	Percentage - Percentage (%)	0	20	60	60	60				
	IE.2.1 Individuals demonstrating an improvement in empowerment						Surveys by the project baseline/ mid-term/ completion	Baseline, mid-term & completion	PMCU	
	Total persons - Percentage (%)		10	25	25	25				
	Total persons - Number of people		3300	27500	12500	40000				
	Females - Percentage (%)		6	15	15	15				
	Females - Females		1800	15000	1875	16875				
	Males - Percentage (%)		4	10	10	10				
	Males - Males		1500	12500	1250	13750				
Outcome1: Enhanced poor rural people's production capacities	**1.2.2 Households reporting adoption of new/improved inputs, technologies or practices**						Project baseline/ mid-term /completion Surveys	Baseline, mid-term & completion	PMCU	Financial sources will be available to the households to enhance adoption. Poor rural people are willing to adopt innovative
	Total number of household members - Number of people	74250	103500	346500	63000	409500				
	Households - Percentage (%)	15	21	70	70	70				

Results Hierarchy	*Indicators*						*Means of Verification*			*Assumptions*
	Name	*Baseline*	*Midterm*	*Original Target*	*AF Target*	*Final revised End Target*	*Source*	*Frequency*	*Responsibility*	
	Households - Households	16500	23000	77000	14000	91000				technologies. Households willing to increase consumption of other sources of foods/Community customs facilitate women empowerment
	1.2.4 Households reporting an increase in production						Project baseline/ mid-term /completion Surveys	Baseline, mid-term & completion	PMCU	
	Total number of household members - Number of people	0	99000	297000	37800	334800				
	Households - Percentage (%)	0	20	60	60	60				
	Households - Households	0	22000	66000	8400	74400				
	1.2.8 Women reporting minimum dietary diversity (MDDW)						Surveys by the project baseline/ mid-term /completion	Baseline, mid-term & completion	PMCU	
	Women (%) - Percentage (%)	4.76	30	50	50	50				
	Women (number) - Females		18000	30000	2457	32457				
	Households (%) - Percentage (%)		37	63	63	63				
	Households (number) - Households		40700	69300	4914	74214				
	Household members - Number of people		183150	311850	22113	333963				
Output 1.2: Improve access to agricultural technologies and production services.	**1.1.3 Rural producers accessing production inputs and/or technological packages**						PMCU records	Annual	PMCU	Poor rural people are willing to adopt innovative technologies Availability of improved breeds
	Males - Males	460	6900	23000	9200	32200				
	Females - Females	540	8100	27000	10800	37800				
	Young - Young people		4500	15000	6000	21000				
	Total rural producers - Number of people	1000	15000	50000	20000	70000				
Output1.3: Improve access to inclusive financial services	**1.1.5 Persons in rural areas accessing financial services**						PMCU records	Annual	PMCU	Financial service providers are available to support project engagement with FIs. Farmers and other value chain actors are willing to take up financial services from banks
	Women in rural areas accessing financial services - savings - Females		810	1959	0	1959				
	Young people in rural areas accessing financial services - savings - Young people		450	1088	0	1088				
	Men in rural areas accessing financial services - savings - Males		690	1668	0	1668				
	Men in rural areas accessing financial services - credit - Males		690	1668	0	1668				
	Women in rural areas accessing financial services - credit - Females		810	1959	0	1959				
	Young people in rural areas accessing financial services - credit - Young people		450	1088	0	1088				
	Total persons accessing financial services - savings - Number of people	250	1500	3627	0	3627				

Results Hierarchy	Indicators						Means of Verification			Assumptions
	Name	Baseline	Midterm	Original Target	AF Target	Final revised End Target	Source	Frequency	Responsibility	
	Total persons accessing financial services - credit - Number of people	250	1500	3627	0	3627				
	Volume of credit advanced to project beneficiaries by the financial institutions						PMCU records	Annual	PMCU	
	Amount - Money (USD' 000)		2400	9400	0	9400				
Output1.4: Improve nutrition of vulnerable households	**1.1.8 Persons provided with targeted support to improve their nutrition**						PMCU Records	Annual	PMCU	
	Total persons participating - Number of people		11550	38500	7800	46300				
	Males - Males		5313	17710	3588	21298				
	Females - Females		6237	20790	4212	25002				
	Households - Households		11550	38500	7800	46300				
	Household members benefited - Number of people		51975	173250	35100	208350				
	Young - Young people		3465	11550	2340	13890				
Outcome 2: Strengthen the environmental sustainability and climate resilience of poor rural people's economic activities.	**3.2.2 Households reporting adoption of environmentally sustainable and climate-resilient technologies and practices**						Outcome surveys	Baseline, mid-term & completion	PMCU	Communities are willing to adopt environmentally sustainable and climate resilient technologies and practices such as rangeland governance
	Total number of household members - Number of people	24750	123750	297000	8100	305100				
	Households - Percentage (%)	5	25	60	60	60				
	Households - Households	5500	27500	66000	1800	67800				
Output2.1: Improved rangeland management and access to water infrastructures	**Households accessing water infrastructure**						PMCU Records	Annual	PMCU	
	Number - Number		10000	20000	30000	50000				
	3.1.1 Groups supported to sustainably manage natural resources and climate-related risks						PMCU Records	Annual	PMCU	
	Total size of groups - Number of people		1250	5000	3000	8000				
	Groups supported - Groups	15	50	200	120	320				
	Males - Males		575	2300	1380	3680				
	Females - Females		675	2700	1620	4320				
	Young - Young people		375	1500	900	2400				
	Rangeland under improved governance						PMCU Records	Annual	PMCU	
	Hectares - Area (ha)		1000	3000	6000	9000				
Outcome 3: Enhanced poor rural people's benefit from market participation	**2.2.1 Beneficiaries with new jobs/employment opportunities**						Outcome surveys at county level / Integrated Development Plans (IDPs)	Baseline, mid-term & completion	PMCU	County governments are willing to partner with project to improve market infrastructure. County Governments' tax regimes are facilitative and incentivize local traders to use market infrastructure
	Job owner - men - Males		460	1380	460	1840				
	New jobs - Jobs		1000	3000	1000	4000				
	Job owner - women - Females		540	1620	540	2160				
	Job owner - young - Young people		300	900	300	1200				
	Job owner - not young - Number		1000	3000	600	3600				
	2.2.2 Supported rural enterprises reporting an increase in profit								PMCU	

Results Hierarchy	*Indicators*						*Means of Verification*			*Assumptions*
	Name	*Baseline*	*Midterm*	*Original Target*	*AF Target*	*Final revised End Target*	*Source*	*Frequency*	*Responsibility*	
	Number of enterprises - Enterprises		15	30	864	894	Outcome surveys at county level / IDPs	Baseline, mid-term & completion		
	Percentage of enterprises - Percentage (%)		10	60	60	60				
	2.2.6 Households reporting improved physical access to markets, processing and storage facilities						Outcome surveys at county level / IDPs	Baseline, mid-term & completion	PMCU	
	Households reporting improved physical access to markets - Households	333	5000	11666	4000	15666				
	Households reporting improved physical access to processing facilities - Households	333	5000	11666	1600	13266				
	Households reporting improved physical access to storage facilities - Households	333	5000	11666	0	11666				
	Livestock offtake rate in programme targeted counties increased									
	Off take rate increase - Percentage	0	0	0	25	25	Outcome surveys	Baseline, mid-term & completion	PMCU	Production increases registered at household level
Output 3.1: Improved livestock market infrastructure	**2.1.6 Market, processing or storage facilities constructed or rehabilitated**						PMCU Records County IDPs	Annual	PMCU	County governments are willing to partner with project to improve market infrastructure Recipients of matching grants invest in processing and storage facilities
	Total number of facilities - Facilities	10	50	150	28	178				
	Market facilities constructed/rehabilitated - Facilities		15	45	20	65				
	Processing facilities constructed/rehabilitated - Facilities		20	60	8	68				
	Storage facilities constructed/rehabilitated - Facilities		15	45	0	45				
Output 3.2: Improved access to e-marketing services	**Farmer groups registered in the database and participating in the MSPs**						PMCU Records County IDPs	Annual	PMCU	Value chains actors are willing to work together through platforms and to create market linkages
	Number - Number	500	1500	3000	400	3400				
	Private sector actors participating in the MSPs (disaggregated per value chain and role in the supply chain)						PMCU Records County IDPs	Annual	PMCU	
	Number - Number	100	250	500	300	800				
	Market linkages created						PMCU Records County IDPs	Annual	PMCU	
	Number - Number	10	18	60	20	80				
Output 3.3: Diversified rural enterprises and employment opportunities	**2.1.2 Persons trained in income-generating activities or business management**						PMCU Records County IDPs	Annual	PMCU	Value chain Actor demand for training exist / Entrepreneurs are willing to
	Males - Males	230	2300	5060	0	5060				

Results Hierarchy	*Indicators*						*Means of Verification*			*Assumptions*
	Name	*Baseline*	*Midterm*	*Original Target*	*AF Target*	*Final revised End Target*	*Source*	*Frequency*	*Responsibility*	
	Females - Females	270	2700	5940	0	5940				able to access business development services
	Young - Young people	150	1500	3300	0	3300				
	Persons trained in IGAs or BM (total) - Number of people	500	5000	11000	0	11000				
	2.1.1 Rural enterprises accessing business development services						PMCU Records County IDPs	Annual	PMCU	
	Rural enterprises - Enterprises	1000	2000	8000	500	8500				
Outcome 4: Service delivery by stronger government and rural institutions and policy environment for project activities improved	**Existing/new laws, regulations, policies or strategies proposed to policymakers for approval, ratification or amendment**						Outcome surveys	Baseline, mid-term & completion	PMCU	Provisions are made for review, formulation and ratification of relevant policies /Political environment is supportive of policy reviews, formulation and amendments
	Number - Number	10	2	4	0	4				
Output 4.1: Develop Livestock Masterplan, regulations and strategies for livestock at the county level	**Policy 1 Policy-relevant knowledge products completed**						PMCU Records County IDPs	Annual	PMCU	
	Number - Knowledge Products	1	2	4	0	4				
Output 4.2: Capacity of government and community institutions enhanced	**Supported Government and community Institutions**						PMCU Records County IDPs	Annual	PMCU	
	Number of institutions				320	320				

Updated summary of the economic and financial analysis

Table A
Financial cash Flow Models

	PRODUCTION								
FINANCIAL ANALYSIS	*Models incremental income (KES)*					*Youth and Women Group model's incremental benefits (KES)*			*Water Infrastructure*
	Farm Year	Dairy goat	Sheep	Improved indigenous chicken	Annual Grass/hay	Beekeeping + candles production	Meat goats	Buck station	Water infrastructure
	PY1	-232,655	55,913	-38,477	-2,132	-12,106	-231,912	-150,047	-116,042,400,000
	PY2	28,753	73,022	15,336	4,450	556,178	29,618	12,695	16,390,700,800
	PY3	40,739	87,415	35,096	6,314	1,477,049	41,436	173,087	16,390,700,800
	PY4	51,172	96,170	35,096	7,506	1,949,589	51,245	137,448	16,390,700,800
	PY5	51,172	96,170	35,096	7,964	2,626,716	51,245	183,663	16,390,700,800
	PY6	51,172	96,170	24,513	8,177	2,654,087	51,245	183,872	16,390,700,800
	PY7	51,172	96,170	35,096	8,177	2,645,513	51,245	138,182	16,390,700,800
	PY8	51,172	96,170	35,096	7,506	2,526,287	51,245	184,029	16,390,700,800
	PY9	51,172	96,170	35,096	7,964	2,648,549	51,245	184,056	16,390,700,800
	PY10	51,172	96,170	35,096	8,177	2,621,604	51,245	138,274	16,390,700,800
NPV (KES)		93,224	202,945	162,763	44,787	13,795,772	95,411	764,786	972,544,507
NPV (USD)		717.1	1,561	1,252	345	106,121	734	5,883	7,481,112
IRR		19%	28%	46%	240%	48%	19%	69%	N/A
B/C Ratio		1.2	1.5	1.1	5.1	3.7	1.2	1.3	1.0

Table B
Project costs and Logical Framework Targets

PROJECT COSTS AND INDICATORS FOR LOGFRAME					
TOTAL PROJECT COSTS (in million US$)		**145**			
Beneficiaries	**720,000** people	4.5	Households	160,000	
Cost per beneficiary	**201** USD x person		**906** US$ x HH	**Adoption rates**	**70%**
Components and Cost (US$ million)					
A. Climate-Smart Production enhancement for small livestock				83	57.0%
B. Support to Livestock Market Development				39	27.0%
C. Project Management and Coordination Unit Support				23	16.0%

Table C
Main Assumptions and Shadow Prices

	MAIN ASSUMPTIONS & SHADOW PRICES[1]					
		Output	Price (in LC)		**Input Prices**	Price (in LC)
Financial	Dairy Goat	7,988	Eggs	16	Chicken feed (kg)	55
	Meat Goat	6,390	One-day old chick	107	Vaccines (per bird)	3
	Goat milk (lt)	160	6 weeks old chick	266	Incubators with solar panel (1000 eggs)	63,900
	Improved ind. chicken	692	Crude Honey (kg)	533	Beehive	5,325
	Local chicken	373	Semi-processed honey	533	Rural wage	373
	Rooster	746	Hay/annual grass (kg)	25	In kid doe	45,795
			Candle (unit)	53	Housing structure (shed)	15,975
Economic	Official Exchange rate (OER)			130.00	Discount rate (opportunity cost of capital)	12.5%
	Shadow Exchange rate (SER)			141.84	Social Discount rate	9.8%
	Standard Conversion Factor			1.09	Output conversion factor	1.36
	Labour Conversion factor			0.91	Input Conversion factor	0.93

Table D
Beneficiary Adopting Rates and Phasing

BENEFICIARIES, ADOPTION RATES AND PHASING	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total	Adoption rates 70%
Dairy goat	-	96	339	1,183	500	600	750	750	540	41	4,800	
Adjusted (adoption rate)	-	67	238	828	350	420	525	525	378	29	3,360	
Meat goat	-	96	339	1,183	500	600	750	750	540	41	4,800	
Adjusted (adoption rate)	-	67	238	828	350	420	525	525	378	29	3,360	
Sheep	-	96	339	1,183	500	600	750	750	540	41	4,800	
Adjusted (adoption rate)	-	67	238	828	350	420	525	525	378	29	3,360	
Improved chicken	-	2,880	10,183	35,504	15,000	18,000	22,500	22,500	16,200	1,233	144,000	
Adjusted (adoption rate)	-	2,016	7,128	24,853	10,500	12,600	15,750	15,750	11,340	863	100,800	
Beekeeping	-	32	113	394	167	200	250	250	180	14	1,600	
Adjusted (adoption rate)	-	22	79	276	117	140	175	175	126	10	1,120	
Buck station	-	-	-	-	-	-	-	-	-	-	-	
Adjusted (adoption rate)	-	-	-	-	-	-	-	-	-	-	-	
Pasture production	-	-	-	-	-	-	-	-	-	-	-	
Adjusted (adoption rate)	-	-	-	-	-	-	-	-	-	-	-	
Water infrastructure	-	-	-	-	1	-	-	-	-	-	1	
Adjusted (adoption rate)	-	-	-	-	1	-	-	-	-	-	1	
Nr of Targeted HH											**160,000**	
Adopting HH											**112,000**	

Table E
Economic Cash Flow

E C O N O M I C A N A L Y S I S	Project Year	Net Incremental Benefits - KES'000: Dairy goat	Meat goat	Improved indigenous chicken	Beekeeping + candle production	Sheep	Boreholes with solar	Total Incr. Benefits (KES'000)	Total Project Costs	Add-back Costs Included	Net Project Costs (KES'000)	Cash Flow (KES'000)
	PY1	-	-	-	-	-	-	-	*811,604*		**811,604**	**(811,604)**
	PY2	(17,675)	(17,609)	(12,178)	(18,414)	(11,205)	-	***(77,081)***	*1,393,430*		**1,393,430**	**(1,470,511)**
	PY3	(67,662)	(67,321)	(41,171)	(70,288)	(41,952)	-	***(288,393)***	*1,997,455*		**1,997,455**	**(2,285,848)**
	PY4	(257,446)	(256,057)	(145,393)	(228,790)	(158,401)	-	***(1,046,087)***	*1,760,979*		**1,760,979**	**(2,807,066)**
	PY5	(64,357)	(62,448)	89,841	145,573	(21,165)	(179,304)	***(91,860)***	*1,085,163*		**1,085,163**	**(1,177,022)**
	PY6	(211,975)	(209,283)	97,307	677,824	(106,692)	(157,869)	***89,312***	*393,690*		**393,690**	**(304,378)**
	PY7	(393,369)	(389,344)	86,287	1,127,625	(205,965)	(133,912)	***91,322***	*2,430,997*		**2,430,997**	**(2,339,675)**
	PY8	(348,552)	(342,552)	359,226	2,355,487	(147,412)	71,871	***1,948,069***	*1,592,069*		**1,592,069**	**355,999**
	PY9	(78,666)	(71,944)	860,953	4,287,961	57,397	76,915	***5,132,615***	*947,695*		**947,695**	**4,184,920**
	PY10	399,446	404,632	1,451,337	6,948,744	384,367	109,698	***9,698,225***	*571,474*		**571,474**	**9,126,751**
	PY11	399,446	404,632	1,451,337	6,948,744	384,367	165,178	***9,753,704***	*217,565*		**217,565**	**9,536,139**
	PY12	399,446	404,632	1,451,337	6,948,744	384,367	226,962	***9,815,489***	*217,565*		**217,565**	**9,597,923**
	PY13	399,446	404,632	1,451,337	6,948,744	384,367	258,485	***9,847,011***	*217,565*		**217,565**	**9,629,446**
	PY14	399,446	404,632	1,451,337	6,948,744	384,367	264,789	***9,853,316***	*217,565*		**217,565**	**9,635,750**
	PY15	399,446	404,632	1,451,337	6,948,744	384,367	264,789	***9,853,316***	*217,565*		**217,565**	**9,635,750**
	PY16	399,446	404,632	1,451,337	6,948,744	384,367	264,789	***9,853,316***	*217,565*		**217,565**	**9,635,750**
	PY17	399,446	404,632	1,451,337	6,948,744	384,367	264,789	***9,853,316***	*217,565*		**217,565**	**9,635,750**
	PY18	399,446	404,632	1,451,337	6,948,744	384,367	264,789	***9,853,316***	*217,565*		**217,565**	**9,635,750**
	PY19	399,446	404,632	1,451,337	6,948,744	384,367	264,789	***9,853,316***	*217,565*		**217,565**	**9,635,750**
	PY20	399,446	404,632	1,451,337	6,948,744	384,367	264,789	***9,853,316***	*217,565*		**217,565**	**9,635,750**

NPV@ 9,8% ('000 KES)	**21,068,606**
NPV@ 9,8% ('000 USD)	**148,537**
EIRR	**26.1%**

Table F
Sensitivity Analysis

Year (KES)		PY1	PY2	PY3	PY4	PY5	PY6	PY7	PY8	PY9	PY10			
Costs														
Project costs		**811,604**	**1,393,430**	**1,997,455**	**1,760,979**	**1,085,163**	**393,690**	**2,430,997**	**1,592,069**	**947,695**	**571,474**			
Costs +	10%	892,764	1,532,773	2,197,200	1,937,077	1,193,679	433,059	2,674,097	1,751,276	1,042,465	628,621			
Costs +	20%	973,924	1,672,116	2,396,946	2,113,175	1,302,195	472,428	2,917,197	1,910,483	1,137,235	685,769			
Costs +	50%	1,217,405	2,090,145	2,996,182	2,641,469	1,627,744	590,535	3,646,496	2,388,104	1,421,543	857,211			
Incremental net benefit														
		-	**(77,081)**	**(288,393)**	**(1,046,087)**	**(91,860)**	**89,312**	**91,322**	**1,948,069**	**5,132,615**	**9,698,225**			
Revenues +	10%	-	(84,789)	(317,233)	(1,150,695)	(101,046)	98,243	100,454	2,142,875	5,645,877	10,668,047			
Revenues +	20%	-	(92,497)	(346,072)	(1,255,304)	(110,232)	107,174	109,586	2,337,682	6,159,138	11,637,870			
Revenues +	50%	-	(115,621)	(432,590)	(1,569,130)	(137,789)	133,967	136,983	2,922,103	7,698,923	14,547,337			
Revenues -	-10%	-	(69,373)	(259,554)	(941,478)	(82,674)	80,380	82,190	1,753,262	4,619,354	8,728,402			
Revenues -	-20%	-	(61,665)	(230,715)	(836,869)	(73,488)	71,449	73,058	1,558,455	4,106,092	7,758,580			
Revenues -	-50%	-	(38,540)	(144,197)	(523,043)	(45,930)	44,656	45,661	974,034	2,566,308	4,849,112			
Delay 1 year lag			-	(77,081)	(288,393)	(1,046,087)	(91,860)	89,312	91,322	1,948,069	5,132,615			
Delay 2 year lag				-		(288,393)	(1,046,087)	(91,860)	89,312	91,322	1,948,069			
Revenues delays for 3 years					-	(77,081)	(288,393)	(1,046,087)	(91,860)	89,312	91,322			
Revenues delays for 4 years						-	(77,081)	(288,393)	(1,046,087)	(91,860)	89,312			
Net cash flow												**ERR**	**NPV (KES)**	**NPV(USD)**
Base project costs		(811,604)	(1,470,511)	(2,285,848)	(2,807,066)	(1,177,022)	(304,378)	(2,339,675)	355,999	4,184,920	9,126,751	26.1%	21,068,606	148,537
Costs +	10%	(892,764)	(1,609,854)	(2,485,594)	(2,983,164)	(1,285,539)	(343,747)	(2,582,775)	196,792	4,090,150	9,069,603	24.8%	20,200,403	142,416
Costs +	20%	(973,924)	(1,749,197)	(2,685,339)	(3,159,262)	(1,394,055)	(383,116)	(2,825,875)	37,585	3,995,381	9,012,456	23.7%	19,332,200	136,295
Costs +	50%	(1,217,405)	(2,167,226)	(3,284,575)	(3,687,555)	(1,719,604)	(501,223)	(3,555,174)	(440,035)	3,711,072	8,841,014	20.7%	16,727,592	117,932
Revenues +	10%	(811,604)	(1,478,219)	(2,314,687)	(2,911,675)	(1,186,208)	(295,447)	(2,330,543)	550,806	4,698,181	10,096,573	27.4%	24,043,669	169,512
Revenues +	20%	(811,604)	(1,485,927)	(2,343,527)	(3,016,283)	(1,195,394)	(286,516)	(2,321,411)	745,613	5,211,443	11,066,396	28.6%	27,018,733	190,487
Revenues +	50%	(811,604)	(1,509,051)	(2,430,045)	(3,330,109)	(1,222,952)	(259,722)	(2,294,014)	1,330,034	6,751,227	13,975,863	31.6%	35,943,923	253,411
Revenues -	-10%	(811,604)	(1,462,803)	(2,257,009)	(2,702,457)	(1,167,836)	(313,309)	(2,348,807)	161,192	3,671,658	8,156,928	24.7%	18,093,543	127,562
Revenues -	-20%	(811,604)	(1,455,095)	(2,228,169)	(2,597,849)	(1,158,650)	(322,240)	(2,357,940)	(33,614)	3,158,397	7,187,106	23.1%	15,118,479	106,588
Revenues -	-50%	(811,604)	(1,431,971)	(2,141,651)	(2,284,023)	(1,131,093)	(349,034)	(2,385,336)	(618,035)	1,618,612	4,277,638	16.8%	6,193,289	43,664
Revenues delay 1 year		(811,604)	(1,393,430)	(2,074,535)	(2,049,373)	(2,131,249)	(485,549)	(2,341,685)	(1,500,747)	1,000,373	4,561,141	23.0%	17,030,618	120,069
Revenues delay 2 years		(811,604)	(1,393,430)	(1,997,455)	(1,760,979)	(1,373,556)	(1,439,776)	(2,522,857)	(1,502,758)	(856,374)	1,376,595	20.4%	13,407,391	94,524
Revenues delay 3 years		(811,604)	(1,393,430)	(1,997,455)	(1,760,979)	(1,162,244)	(682,083)	(3,477,084)	(1,683,929)	(858,384)	(480,152)	17.9%	10,007,653	70,556
Revenues delay 4 years		(811,604)	(1,393,430)	(1,997,455)	(1,760,979)	(1,085,163)	(470,770)	(2,719,390)	(2,638,156)	(1,039,555)	(482,162)	15.6%	6,960,743	49,074

Updated Project Theory of Change Diagram