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Investing in rural people

## President's Memorandum

### Proposed Additional Financing to the Republic of Kenya for the Upper Tana Catchment Natural Resource Management Project

#### Note to Executive Board representatives

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Logical framework

## Abbreviations and acronyms

CFA	community forest association
CIG	common interest group
ESIA	environmental and social impact assessment
ESMF	environmental and social management framework
ESMP	environmental and social management plan
MTR	midterm review
M&E	monitoring and evaluation
WRUA	water resource users' association

## Recommendation for approval

The Executive Board is invited to approve the recommendation for the proposed additional financing for the Upper Tana Catchment Natural Resource Management Project in the Republic of Kenya, as contained in paragraph 31.

## Proposed Additional Financing for the Upper Tana Catchment Natural Resource Management Project

### I. Background

1. The Upper Tana Catchment Natural Resource Management Project (UTaNRMP) was approved by the Executive Board in April 2012 (EB 2012/105/R.11/Rev.1) and came into force on 23 May 2012. Its original project completion date was 30 June 2020 and it had a loan closing date of 31 December 2020. The total project cost was estimated at appraisal to be US\$68.9 million, including: US\$50 million equivalent (using the exchange rates at project approval) from the IFAD loan (SDR 21.25 million) and the Spanish Food Security Cofinancing Facility Trust Fund (Spanish Trust Fund) loan (EUR 12.8 million); US\$11.3 million from the Government of Kenya; and a beneficiary contribution of US\$7.5 million. The lead implementing agency is Kenya's Ministry of Water and Sanitation. The project is a follow up to the Mount Kenya East Pilot Project (MKEPP), which aimed to link the sustainable use of natural resources, especially water and forests, with enhanced rural livelihoods in five selected river basins of the Upper Tana catchment. This project scales up earlier activities with interventions in four river basins supported by the previous project and 24 additional basins.
2. The project goal is to contribute to poverty reduction among the target population of about 205,000 poor households living in the targeted river basins whose livelihoods revolve around the use of the natural resources in the Upper Tana catchment. The project has two objectives: (i) to enhance sustainable use and management of natural resources (land, water and biodiversity); and (ii) to increase sustainable food production and incomes.
3. This memorandum seeks approval from the Executive Board under the lapse-of-time procedure for additional financing from the 2016-2018 performance-based allocation system (PBAS) allocation in the form of a highly concessional loan in the amount of US\$13.6 million equivalent for the ongoing UTaNRMP. The additional financing will respond to the Government's request to the Fund to fill a financing gap and to consolidate and scale up successful interventions. With the additional financing, the project will require an extension of the project completion and IFAD loan closing dates by 30 months to 31 December 2022 and 30 June 2023, respectively. The Spanish Trust Fund loan does not require an extension since it is expected to be fully disbursed.
4. The project area covers six of Kenya's 47 counties, which are home to 5.2 million people. It provides water for about half of Kenya's population and most of the country's hydroelectric power. The area, which is under heavy and growing population pressure, includes the Mount Kenya and Aberdare National Parks, and surrounding forest reserves. The rationale for the project is based on the nexus between rural poverty and the health of the ecosystem in a densely populated and environmentally fragile watershed of critical significance.
5. The high prevalence of rural poverty contributes to environmental degradation, which in turn reduces sustainable livelihood opportunities, contributing to forest degradation, human-wildlife conflict and reduced availability and quality of water

for downstream users. The project is capitalizing on a number of opportunities for improving rural livelihoods in ways that are beneficial to the natural environment. It involves collaboration with the custodians of natural resources in the Upper Tana to preserve and restore the natural environment.

6. In the context of climate change, sustainable water management is among the project's major focus areas. The aim is to assist communities in coping with the negative impacts of climate change and to address socio-economic challenges arising from poverty and food insecurity. The project is already investing in a range of adaptation measures to reduce climate risks. These include: forest rehabilitation; integrated water resource management; crop diversification; drought-tolerant crops; technical assistance and capacity-building; good agricultural practices for rain-fed and irrigated cropping; fodder production and conservation; and developing community-based frameworks such as community forest action plans and sub-catchment action plans.
7. The activities to be supported by the additional financing are consistent with ongoing project objectives and will be implemented in line with the existing implementation provisions. The demonstrated capacity of the project team to achieve desired results provides an opportunity for consolidating and scaling up successes through additional financing.

## II. Justification for the additional financing

8. The midterm review (MTR) conducted from 19 to 30 June 2017 confirmed that project implementation is on track to achieve its development objectives. The review found that the scaling up of selected well-performing interventions is justified. Such interventions include enhancing matching grants to fund increasing community demand, based on their own community action plans; strengthening agribusiness activities by building the capacity of common interest groups; scaling up water-related activities such as small-scale irrigation, and civil works; broadening the application of the Gender Action Learning System to cover more irrigation schemes; and widening the scope of water and forest associations. The additional financing is expected to allow the project to cover a financing gap that is hampering implementation of project activities because of an increased number of beneficiaries. As project implementation has progressed, it has become clear that the population in the project area is larger than estimated at appraisal. A realistic target for the project is 300,000 households, while the initial target was 205,000 households. However the project lacks sufficient resources to accommodate this increased number. In addition, the costs of some project activities are higher than estimated at design, and new activities introduced at the time of the MTR have also contributed to the financing gap.
9. The additional financing will support the implementation of successful project activities in high demand by beneficiaries, such as community forest conservation, small-scale irrigation, farmer field schools, gender action learning and matching grants schemes. These initiatives receive project support through different competitive selection windows, but the project is not always able to keep up with demand because of financing constraints. The additional financing will also be used to scale up successful activities that have resulted in clear benefits, such as improved access to clean and safe water, increased forest cover, profitability of activities funded under matching grant schemes and better yields as a result of adoption of improved production technologies.
10. The proposed additional financing fully complies with the criteria for additional financing:
  - (a) The activities supported by the additional funds are fully consistent with the original design, including objectives, components and sub-components, and

will follow existing implementation arrangements, including those for financial management and procurement.

- (b) The disbursement rate for the original financing reached 81 per cent for the IFAD loan and 67 per cent for the Spanish Trust Fund loan as at August 2018. Furthermore, based on the 2018/2019 annual workplan and budget (AWPB), the IFAD loan will be almost fully (100 per cent) disbursed by the end of the current project period, while the Spanish Trust Fund loan will be 88 per cent disbursed.
- (c) The project is performing well and no problems with implementation have been reported. The most recent performance ratings were 4 for overall implementation performance and 5 for the likelihood of achieving development objectives. General financial management of the project is rated as 4.
- (d) The economic and financial analysis has been updated using information available at the time of the MTR and incorporating the additional financing. Drawing on data from implementation, the analysis found that the project remains economically and financially feasible and that the activities included in the analysis continue to be viable.

#### A. Project implementation performance

- 11. The project is in its fifth year of execution. Although a project coordination team was appointed in February 2013, project startup was delayed until April 2014 due to challenges associated with provisions in the new constitution on the management of project funds in the context of devolution. However, implementation has been accelerated and significant results achieved. The project has been rated as moderately satisfactory on overall implementation and satisfactory on the likelihood of achieving the development objectives. The project team has acquired good planning and management capacity, and is committed to meeting the project objectives in the stipulated time.
- 12. Specific achievements through the project include the following:
  - (a) Impressive outreach with adequate attention to gender. As of November 2017, the project had reached 94 per cent of the original target of 205,000 households. Approximately 50 per cent of beneficiaries are women.
  - (b) Through the adoption of the Gender Action Learning System (GALS), the project, as of June 2018, has trained 66 community champions and 39 officers in the GALS methodology, and an additional 684 members (348 men, 336 women) have been reached by multiplier effect. Another 268 technical officers have been trained in gender mainstreaming and group dynamics. This methodology will be scaled up through the training of additional champions from other groups funded by the project. Ongoing support will be provided to those already trained.
  - (c) Youth action plan and outreach. The project has pursued affirmative action by requiring that no less than 30 per cent of all approved proposals are prepared by youth, women and vulnerable people. About 20 per cent of the members of the groups receiving matching grants are youth. An estimated 220 youth were trained on fence construction and maintenance, resulting in short-term employment. Under the completed 60 km wildlife control fence, 15 youth were hired by the Kenya Wildlife Services. The additional financing will enable the project to undertake more youth-targeted sensitization activities, notably through the provision of a special funding window for proposals submitted by youth groups.
  - (d) Clear progress in realizing outputs and outcomes. The recently completed MTR noted that implementation of most project activities is on

track and significant milestones have been achieved for each component. In particular: (i) 1,379 income-generating activities by common interest groups have been financed (85 per cent of the midterm target) with farmers reporting improved incomes especially from livestock-related activities such as dairy and poultry farming; (ii) 36,900 people have been given access to clean drinking water; (iii) 3,880 households have benefitted from the 12 completed irrigation schemes; (iv) water-quality testing facilities are now available at 90 monitoring points in the project area; (v) 18 new participatory forest management plans have been developed and 13 have received funding, resulting in the rehabilitation of 1,543 hectares of degraded forest areas (118 per cent of the target); (vi) 60 km of solar-powered wildlife control fence have been constructed (100 per cent of the target); (vii) significant yield improvements have been registered for the following crops: beans from 8.2 bags/ha (90 kg) to 9.2 bags/ha; green grams, 8.4 bags to 9 bags/ha; (viii) for the livestock sector, milk production per cow per day has increased from 4 to 15 litres and for poultry, egg production per chicken has increased from 100 eggs per year to 200 eggs as a result of adoption of improved technologies promoted by the project; and (ix) 341 farmer field schools have been established, resulting in the introduction of farmer field school technologies to 38.2 per cent of farmers in the project area (85.4 per cent of whom reported adopting them).

- (e) Impact of project interventions. Regarding improvements in livelihoods, it is estimated that the poverty level in the project area decreased from 34 per cent at baseline to 27.14 per cent in 2017. The proportion of households living in temporary housing (based on the type of roofing used) dropped from 11 per cent at baseline to 4.2 per cent in 2017. While this may not be solely attributed to the project, it has certainly contributed to these achievements. In addition, 17,565 households (against a midterm target of 20,000) have access to safe, reliable and affordable water for drinking and irrigation. Within the project area, 70.6 per cent of residents can access water within less than 1 km and 16.9 per cent have reported that the available water is of very good quality (compared to 12.7 per cent in 2014). Respondents of a recent impact survey indicated that in the previous three months, only 5.5 per cent of their family members had gone hungry due to lack of food (compared to 12 per cent at baseline). Targeted communities also reported strengthened community cohesiveness and improved community capacity and awareness as a result of project activities.
- (f) Strengthened public and local institutions. The project implementation approach supports decentralization to the county and sub-county levels. The use of inclusive participatory bottom-up processes allows communities to prioritize their needs, plan and operationalize investments in a variety of individual, group-based and communal initiatives – both income-generating activities and those for the public good. In doing so, the project serves as an instrument to strengthen and support both common interest groups (CIGs) and grassroots natural resource-based organizations such as water resources users associations (WRUAs) and community forest associations (CFAs). The project has also cooperated with and provided institutional capacity to national institutions in charge of managing and protecting natural resources, including the Kenya Wildlife Service, Kenya Forest Service and Water Resources Management Authority.

## B. Description of activities and expected benefits

13. While the overall objective, geographic coverage, components, organization and management of the project will remain unchanged, the additional financing will be used to cover the financing gap that is hampering implementation due to the increased number of beneficiaries, higher-than-expected activity costs and

additional activities introduced at the MTR. The additional financing will be used both to support and to scale up successful project activities. The breakdown of the activities to be supported by the additional financing per component is listed below.

14. Component 1: Community empowerment. The additional financing will support new activities identified during the MTR or budget lines for number of activities in component 1 that were underestimated. These include: (i) capacity-building of CIGs in governance and management skills; (ii) community workshops; (iii) gender mainstreaming through GALS; (iv) updating sub-catchment management plans for WRUAs; (v) capacity-building for WRUAs and CFAs; (vi) environmental studies; (vii) support for school greening programmes; and (viii) support to implementation teams.
15. Component 2: Sustainable rural livelihoods. The additional financing will support the following activities in component 2.
  - (i) Activities to be scaled up: The additional funding will be used to scale up competitive matching grants to support income-generating activities.
  - (ii) Activities identified during the MTR or underfunded activities: These include: (a) the establishment of a plant tissue culture laboratory at the Kenya Agriculture and Livestock Research Organization to meet increasing demand; (b) soil and water conservation using an innovative catchment approach; (c) participatory scenario planning and dissemination of weather information; and (d) agricultural production and marketing support for irrigation schemes.
16. Component 3: Sustainable water and natural resource management. The additional financing will support the following activities in component 3:
  - (i) Activities to be scaled up: Implementation of the sub-catchment management plans by WRUAs and participatory forest management plans by CFAs will be supported through the competitive grants window. In addition, the competitive grants window will support introduction of water-saving irrigation technologies. Solar wildlife protection fencing will also be supported.
  - (ii) Underfunded activities: Community water development and management, water quality monitoring, and support to implementation teams.
17. Component 4. Project management and monitoring and evaluation (M&E). The additional financing will emphasize knowledge management and dissemination, and follow up on implementation of activities that require an Environmental and Social Impact Assessment (ESIA) as per the Social, Environmental and Climate Assessment Procedures (SECAP). It will also include activities identified in the MTR such as preparation of an exit strategy. In addition, the additional financing will support salaries and other operating costs during the extension period as well as activities such as impact assessments and closure workshops.
18. Benefits. The additional financing will contribute to improving livelihoods and conserving natural resources. A revised financial and economic assessment was prepared for the most important investments being financed under the project (including the proposed additional financing), yielding direct quantifiable benefits. The financial analysis of a sample of project interventions indicates that a number of options generating positive financial returns are being readily adopted by farmers as a result of the matching grant scheme. Considering the value of economic benefits generated by these initiatives, such as soil water conservation, income-generating activities and water-saving irrigation technologies (but excluding the less easily quantifiable benefits to downstream water users), the project is expected to generate an overall economic rate of return of 20.4 per cent. The sensitivity analysis shows that the results are robust against the major risks of



cost increases, reduction of benefits and implementation delays, even if these three events occur simultaneously.

### C. Social, Environmental and Climate Assessment Procedures

19. A SECAP review note was prepared as a requirement for additional financing of the project. At its design stage (in 2011), an ESIA and a strategic environmental assessment were undertaken, and potential negative environmental, social and climate-related impacts were identified.
20. The original ESIA recommended reclassification of the project from Category A to Category B. Consequently, an environmental and social management framework and an environmental and social management plan (ESMP) were developed, including a monitoring plan. IFAD endorsed the reclassification to Category B, as reflected in the related President's report of April 2012 (EB 2012/105/R.11/Rev.1). The activities foreseen under the additional financing are similar to those in the original design and therefore will maintain the scope and scale of the activities required by the Category B classification. Project interventions thus far have addressed environmental, climate and social issues in line with Kenya's intended nationally determined contributions.
21. In line with IFAD's procedures, the project is undertaking an environmental and social audit to assess the extent of implementation of the original ESMP and its monitoring plan, identify areas for improvement and evaluate how climate and adaptation measures are being mainstreamed to manage climate change risks. The audit outcomes will directly inform the revision of the existing ESMP, which will be based on lessons learned and emerging environment, climate and social issues. The successful completion of the audit and its review by IFAD are a pre-condition for the first disbursement from the additional financing.
22. The climate risk classification of the project is judged as moderate.

## III. Monitoring and evaluation

23. The MTR noted that the M&E system has substantially improved, but data collection and analysis of outcome and impact indicators require further strengthening through development and use of robust data collection tools, at sub-county level. This will involve initial analysis and online transmission to the project coordination unit for further analysis, documentation and reporting. Adjustments in the results matrix have been made to reflect updated targets from the MTR and the proposed additional financing. The logical framework was updated in line with the new IFAD guidelines on logical frameworks. The updated logical framework (see appendix) will be used in the project monitoring system. The project has set up a knowledge management and learning strategy, which focuses on the development, refinement, storage and dissemination of knowledge from project-financed interventions. This includes the use of a value chain approach to knowledge management and strategic partnership to promote the project's goals and achieve results more efficiently.

## IV. Project costs and financing

24. The original cost of the project, considering fluctuations in the exchange rate over time, is approximately US\$61.48 million, consisting of: (i) IFAD and Spanish Trust Fund loans totalling US\$45.36 million equivalent (IFAD loan of SDR 21.25 million and Spanish Trust Fund loan of EUR 12.8 million); (ii) a Government contribution of approximately US\$8.34 million adjusted for fluctuation in the IFAD and Spanish Trust Fund loans due to exchange rates; and (iii) a similarly adjusted beneficiary contribution of approximately US\$7.78 million.
25. Considering the proposed additional financing of US\$13.60 million equivalent and the corresponding Government and beneficiary contributions of US\$2.35 million and US\$2.56 million respectively, the revised total project cost is US\$80.00 million.

Project costs by component and expenditure category are summarized in tables 1 and 2 below.

Table 1

**Project costs by component and financier**

(Thousands of United States dollars)

Component	IFAD and Spanish Trust Fund loans		Government initial contribution		Beneficiary initial contribution		IFAD additional loan		Government additional contribution		Beneficiary additional contribution		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Community empowerment	3 649	72.9	477	9.5	-	-	786	15.7	93	1.8	-	-	5 004	6.3
2. Sustainable rural livelihoods	12 887	56.2	1 389	6.1	3 869	16.9	3 322	14.5	277	1.2	1 205	5.3	22 949	28.7
3. Sustainable water and natural resource management	20 103	52.2	4 322	11.2	3 910	10.2	7 312	19.0	1 493	3.9	1 360	3.5	38 499	48.1
4. Project management and M&E	8 726	64.4	2 150	12.4	-	-	2 181	16.1	493	3.6	-	-	13 549	16.9
<b>Total</b>	<b>45 365</b>	<b>56.7</b>	<b>8 338</b>	<b>10.4</b>	<b>7 778</b>	<b>9.7</b>	<b>13 600</b>	<b>17.0</b>	<b>2 355</b>	<b>2.9</b>	<b>2 565</b>	<b>3.2</b>	<b>80 001</b>	<b>100.0</b>

Table 2

**Project costs by category and financier**

(Thousands of United States dollars)

Category	IFAD and Spanish Trust Fund loans *		Government initial contribution		Beneficiary initial contribution		IFAD additional loan		Government additional contribution		Beneficiary additional contribution		Total	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
1. Vehicles	1 679	69.3	745	30.7	-	-	-	-	-	-	-	-	2 424	3.0
2. Equipment and materials	5 728	53.0	1 136	10.5	470	4.3	2 571	23.8	556	5.1	345	3.2	10 807	13.5
3. Sensitization, training, workshops and studies	8 174	74.5	992	9.0	183	1.7	1 462	13.3	156	1.4	-	-	10 968	13.7
4. Grants and awards	14 117	49.3	1 766	6.2	4 490	15.7	5 841	20.4	806	2.8	1 620	5.7	28 640	35.8
5. Technical assistance	2 247	71.7	246	7.8	-	-	611	19.5	30	0.9	-	-	3 133	3.9
6. Civil works	7 288	51.0	2 032	14.2	2 635	18.5	1 346	9.4	378	2.6	600	4.2	14 279	17.8
7. Salaries and Allowances	4 866	63.8	1 005	13.2	-	-	1 461	19.1	299	3.9	-	-	7 631	9.5
8. Operation and Maintenance	1 265	59.7	416	19.6	-	-	308	14.5	131	6.2	-	-	2 120	2.7
<b>Total</b>	<b>45 365</b>	<b>56.7</b>	<b>8 338</b>	<b>10.4</b>	<b>7 778</b>	<b>9.7</b>	<b>13 600</b>	<b>17</b>	<b>2 355</b>	<b>2.9</b>	<b>2 565</b>	<b>3.2</b>	<b>80 001</b>	<b>100.0</b>

\* As adjusted for exchange rate movements since the time of the original approval.

## V. Financial management, procurement and governance

26. The MTR concluded that the project-level arrangements are adequate. The same project coordination team will be responsible for the proper use of funds, including the additional financing, in line with the provisions of the financing agreement. IFAD will make the additional financing – which will be denominated in euros – available to the Government under the terms and conditions of the financing agreement. The arrangements governing financial management, procurement and internal control presented in the original President's report (EB 2012/105/R.11/Rev.1) will remain unchanged, except for the amount in the designated account, which will be adjusted to reflect the higher level of project financing. While the country's inherent financial management risk is high, the project's financial management risk rating is currently medium and is expected to

improve to low once the recently installed Sun System accounting software has been fully implemented. The audited financial statements for the year ending 30 June 2017 were unqualified, and demonstrated a high standard of financial reporting and auditing.

## VI. Proposed amendments to the project financing agreement

27. Subject to the approval of the Executive Board, the project financing agreement will be amended to include the provisions for additional financing:
- (i) Counterpart funding will reflect the updated cost tables.
  - (ii) The IFAD loan project completion and closing dates will be extended to 31 December 2022 and 30 June 2023 respectively. This excludes the Spanish Trust Fund loan, which is expected to be fully disbursed by the original completion date of 31 December 2020.
  - (iii) The additional loan will be dominated in euros.
  - (iv) The completion of an environment and social audit will be stipulated as a pre-condition for the first withdrawal of the additional financing.
  - (v) Small-scale demand-driven community interventions such as boreholes, may require stand-alone risk assessments, and will be determined on a case-by-case basis during implementation. This amendment will be reflected in schedule 1 of the financing agreement.

## VII. Legal instruments and authority

28. An amended financing agreement between the Republic of Kenya and IFAD will constitute the legal instrument for extending the proposed additional financing to the Recipient.
29. The Republic of Kenya is empowered under its laws to receive financing from IFAD.
30. I am satisfied that the proposed financing will comply with the Agreement Establishing IFAD and the Lending Policies and Criteria for IFAD financing.

## VIII. Recommendation

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

RESOLVED: that the Fund shall provide a loan designated in euros under highly concessional terms to the Republic of Kenya in the amount of eleven million seven hundred and fifty thousand euros (EUR 11,750,000) and upon such terms and conditions as shall be substantially in accordance with the terms and conditions presented herein.

Gilbert F. Hougbo  
President

## Logical framework (incorporating additional financing)

### Upper Tana Catchment Natural Resource Management Project

Results Hierarchy	Indicators					Means of Verification			Assumptions / notes	
	Name	Baseline	Mid-term	Original Target	End Target	Source	Frequency	Responsibility		
<b>Outreach</b>	Households receiving project services					RIMS	Yearly	PCU	Increase in outreach will be realized partly due to additional financing. Some of the activities will be implemented using original resources.	
	Households Number									193,476
	Persons receiving services promoted or supported by the project					RIMS	Yearly	PCU		
	Males - Number									482,722
Females - Number					484,657	720000				
<b>Project Goal</b> Contribute to reduction of rural poverty in the Upper Tana river catchment	Reduce child malnutrition					RIMS impact survey	Yearly	PCU	High absorption of grants and other project interventions by communities. Climate will not be adverse to affect project activities. Climate will not be adverse to affect project activities.	
	Child malnutrition Percentage (%)									16
	Poverty rate in upper Tana catchment					HH income survey	End of Project	PCU		
	Households - Percentage (%)									34
Proportion of population with temporary housing					Demographic and health surveys	End of Project	PCU			
Households Percentage (%)								11	4.8	6
<b>Development Objective</b> Increased sustainable food production and incomes for poor rural households in the project area; and sustainable management of natural resources for provision of environmental services	Households with an increase average annual income of 10% compared to baseline.					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	Annual	PCU	Potential conflicts between conservation and livelihood pillars of the Project are resolved. Farmers and entrepreneurs in the project area have improved market access. Other collaborators will play their part. Favorable weather conditions.	
	Households - Number									0
	Increase of household ownership index by 20% compared to baseline					Baseline survey, Impact surveys, gauging assessment, etc	Annual	PCU		
Index - %					0				10%	20%
<b>Development Objective</b> Increased sustainable food production and incomes for poor rural households in the project area; and sustainable management of natural resources for provision of environmental services	Agricultural yields per unit beans					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	End of Project	PCU		
	Beans grams in bags per/Ha - Weight (t) 90kg bag /ha									8.2
	Green grams in bags/Ha					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	End of Project	PCU		
	Green grams in bags/Ha - Weight (t) 90kg bag/ha									8.4
	Sweet potatoes					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	End of Project	PCU		
	Sweet potatoes in bags/Ha - Weight (t) 100kg bag/ha									3.5
	Bananas					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	End of Project	PCU		
	Bananas in tons/Ha - Weight (t)									38
	Yield reduction under severe rainfall reduction conditions of compared to average					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	End of Project	PCU		
	% 80%reduction in yield due to 50% reduction in rainfall									
Base flow in rivers					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	End of Project	PCU			
Base flow in rivers - Number Meter cubed per second								1.02	1.03	1.078
Sediment load in river basins in wet season					Baseline, Impact Surveys HH income and expenditure surveys, gauging surveys, periodic sampling, analysis of river water, annual reports	End of Project	PCU			
Sediment load in river basins in wet season (kg/l/sec)								0.301	0.185	0.165
<b>Outcome 1</b> Rural communities empowered for sustainable management of natural resources	Community action plans with at least one implemented key action implemented					Annual Project reports. Media articles on community-led initiatives.	Yearly	PCU	Countries have a robust conflict resolution mechanism for community investments in NRM.	
	Action plans - Number									0
<b>Output 1.1</b> Communities with increased awareness of sustainable NRM	Participating communities sensitized on NRM issues					Baseline and annual surveys/reports on sensitization meeting about NRM issues held. Baseline survey. Annual Reports.	Yearly	PCU	The communities are willing to participate in project activities. Communities have access to resources to invest in sustainable NRM.  The increase in the number of communities is realized partly because of the additional financing  Additional financing will support Environmental awards for 95,000 HHs	
	Participating communities sensitized - Number									0

												Additional financing will support provision of tree seedlings for 200 HHs
<b>Output 1.2</b> Key community organizations with increased capacity to manage natural resources sustainability	Community organizations trained on sustainable NRM				Baseline survey, Annual reports	Yearly	PCU	Communities have access to resources to invest in sustainable NRM				
	Community organizations - Number	0	1882	297				4500	The target is increased as it includes now WRUAs, CFAs, water groups (dams / pans, drinking water, irrigation, springs / wells / boreholes), CIGs			
<b>Output 1.3</b> Community action plans for livelihood improvement and sustainable NRM	Community action plans prepared				Documented action plans, PFMPs, SCMPs	Yearly	PCU	Action plans will address the community needs related to sustainable NRM				
	Community action plans - Number	0	301	297				301	It will support exit workshops for 301 communities			
	People trained in community management topics				RIMS	Yearly	PCU	Additional financing will support review of the sub-catchment plans to be in line with WRUAs development cycle. This will be done for 24 WRUAs				
	Males - Number	0	57928	19200				240000	Implementation of Gender mainstreaming through the Gender Action Learning System (GALS)			
	Females - Number	0	62756	28800	220000	Market opportunities for agricultural products will continue to expand. Climate change will not negatively affect project activities						
<b>Outcome 2</b> Natural resource-based rural livelihoods sustainably improved	Proportion of farmers in the project area using certified seeds (%)				Annual reports, Baseline and impact surveys	End of Project	PCU	Additional financing will support provision of tree seedlings for 200 HHs				
	Proportion of farmers - Percentage (%)	0	26.64	5				35	Communities will have access to resources to invest in sustainable NRM			
	Proportion of trained farmers adopting new technologies (%)				Annual reports, Baseline and impact surveys	Yearly	PCU	The additional financing is expected to contribute to supporting training for 1,600 groups				
Proportion of trained farmers - Percentage (%)	0	45.1	90	65				It will support exit workshops for 301 communities				
<b>Output 2.1</b> Agricultural packages adapted to agro-ecological and socio-economic contexts	Number of on-farm trials and demonstrations				Reports on trials, demonstrations and research results. Reports on seeds produced and distributed.	Yearly	PCU	Tested packages are adopted appropriately by farming communities				
	On-farm trials and demonstrations - Number	0	380	1230				1230	Additional financing will support review of the sub-catchment plans to be in line with WRUAs development cycle. This will be done for 24 WRUAs			
	Quantity of seed produced and distributed (Tons)				Reports on trials, demonstrations and research results. Reports on seeds produced and distributed.	Yearly	PCU	Implementation of Gender mainstreaming through the Gender Action Learning System (GALS)				
Quantity of Seed - Weight (t)	0	247.6	720	720				Market opportunities for agricultural products will continue to expand. Climate change will not negatively affect project activities				
<b>Output 2.2</b> CIGs successfully adopt or improve farm and/or non-farm IGAs	CIG members adopting Income Generating Activities				Annual reports and reports by independent oversight agent Farmer field school records.	Yearly	PCU	Continued access to financial services and inputs. Communities will apply for grants.				
	CIG members - Number	0	19,175	40,000				55,000	Additional Financing will support 600 CIGs of income generating activities, totaling 9,000 HHs			
	1.1.4 Persons trained in production practices and/or technologies				RIMS	Yearly	PCU	Additional financing will support 9,600 HHs on production practices and technologies (CIGs and irrigation groups)				
	Men trained in crop production - Number		8596					15000	Additional financing will support 12,000 HHs on soil and water conservation using catchment approach			
	Women trained in crop production - Number		11977		27000	Establishment of plant tissue culture laboratory, which is expected to support 600 HHs per year						
				Additional financing will support participatory scenario planning and dissemination of weather advisory information. This will support 6,000 HHs								
<b>Outcome 3</b> Land, water and forest resources sustainably managed for the benefit of local people and the wider community	Microbial pollution in waterways (number/100ml) Faecal coliform (wet season)				Biannual river gauging surveys by WRMA Remote sensing data to monitor forest conditions Periodic sampling and analysis of river water Annual reports from KWS	End of Project	PCU	Potential conflicts related to resource utilization will be resolved. CFAs are effective in controlling illegal uses of forest resources.				
	Microbial pollution (ml) - Number	816	1,379	400				400	The additional financing will support water quality monitoring from 90 monitoring points and preparation of two reports per year			
	Chemical pollution in water ways Turbidity (N.T.U) (Wet season)				Biannual river gauging surveys by WRMA Remote sensing data to monitor forest conditions Periodic sampling and analysis of river water Annual reports from KWS	End of Project	PCU	The additional financing will support water quality monitoring from 90 monitoring points and preparation of two reports per year				
	Chemical pollution (ml) - Number	236	85.6	150				150				
	Cases of human-wildlife conflicts				Biannual river gauging surveys by WRMA Remote sensing data to monitor forest conditions Periodic sampling and analysis of river water Annual reports from KWS	End of Project	PCU					
	Human-wildlife conflicts - Number	129	5 in the areas where the fence is introduced					2 In the areas where the fence is introduced				
Proportion of degraded forest area in the project area (hectares)				Biannual river gauging surveys by WRMA Remote sensing data to monitor forest conditions Periodic sampling and analysis of river water Annual reports from KWS								
Degraded forest area - (hectares)	7538						2000					
<b>Output 3.1</b> Sustainably managed water resources	Additional HH with access to safe water (Number)				Records by IWUAs/ WRUAs & WRMA. Water quality monitoring surveys	Yearly	PCU	There is adequate community capacity to maintain the water investments for continued sustainability.				
	Households - Number	0	17,565	60,000				70,000	Communities apply for grants under civil works category.			
	Functional WRUAs established (Number)				Records by IWUAs/ WRUAs & WRMA. Water quality monitoring surveys	Yearly	PCU					
WRUAs established - Number	0	35	24	54								

	Land under irrigation scheme using water-efficient methods (Ha)				Records by IWUAs/ WRUAs & WRMA. Water quality monitoring surveys	Yearly	PCU	Additional financing will support 5,000 additional HHs with domestic water  The additional financing will support 6 new dams serving 1,800 HHs  Additional financing will support review of SCMPs for 24 WRUAs, grants to 42 WRUAs / CFAs  The additional financing will support irrigation rehabilitation in 400 Ha (4000 HHs)  The additional financing will support capacity building for 10 IWUAs	
	Land under irrigation scheme - Area (ha)	0	776	2000	2500				
<b>Output 3.2</b> Sustainably managed forest and agricultural ecosystems	Wildlife control fence constructed (km)					Reports on activities undertaken by CFAs.	Yearly	PCU	CFAs will participate in maintaining wildlife fences. Beneficiaries of grants for SWC activities continue after the matching grants.  The additional financing will support construction of additional 60 km of the solar powered wildlife conflict reduction fence
	Wildlife control fence - Length (km)	0	60	80	120	Reports on matching grants for SWC activities			
	Rehabilitated forest areas in Mt. Kenya and Aberdare (Ha)					Reports on activities undertaken by CFAs.	Yearly	PCU	
	Hectares of land - Area (ha)	0	1543	1543	2000	Reports on matching grants for SWC activities			
	Functional CFAs established (Number)					Reports on activities undertaken by CFAs.	Yearly	PCU	
	Functional CFAs - Number	0	18	33	39	Reports on matching grants for SWC activities			
	Matching grants given to CIGs to implement environment related IGAs					Reports on activities undertaken by CFAs.	Yearly	PCU	
Matching grants given – Number	0	159	1450	400	Reports on matching grants for SWC activities				
Land under improved management practices					RIMS	Yearly	PCU		
Hectares of land - Area (ha)	0	188	2000	2500					
<b>Outcome 4</b> Project effectively and efficiently managed	Project performance status					Supervision support mission reports/ Aide Memoire, Annual Progress reports	Yearly	PCU	Annual progress reports
	Project Performance - Rating		4						Additional financing will support two progress reports; two AWPBs, etc
	AWPB implementation rate					Supervision support mission reports/ Aide Memoire, Annual Progress reports	Yearly	PCU	
	AWPB implementation rate - Percentage (%)		84	90	90				
<b>Output 4.1</b> Fully functional governance, management, monitoring and reporting systems	Unqualified audit reports/ opinion by KENAO					Annual Progress reports Audit reports Management letter	Yearly	PCU	It will be possible to recruit and retain suitably qualified project staff.
	Unqualified audit reports - Percentage (%)		90	100	90				Two audit reports
	Annual reports produced on time					Annual Progress reports Audit reports Management letter	Yearly	PCU	
Annual reports produced - Number		4	8	10					
<b>Output 4.2</b> Knowledge about NRM effectively managed and disseminated to stakeholders	Studies and publication on lessons prepared and shared with stakeholders					The publication on lesson learnt Reports of knowledge networks.	Yearly	PCU	Other partners will cooperate with knowledge management systems. Stakeholders will make use of the disseminated materials and embrace NRM
	Studies and Publications - Number	0	2	5	7				Additional financing is supporting two knowledge products
	Knowledge centres effectively networked in the project area					The publication on lesson learnt Reports of knowledge networks.	Yearly	PCU	
Knowledge centres - Number	0	2	2	2					