Report Number: ICRR14893

IEG ICR Review
Independent Evaluation Group

1. Project Data:		Date Posted:	02/23/2016	
Country:	Kenya			
Project ID:	P095050		Appraisal	Actual
Project Name:	Kenya - Natural Resource Management Project	Project Costs (US$M):	78.0	61.9
L/C Number:		Loan/Credit (US$M):	68.5	56.9
Sector Board:	Agriculture and Rural Development	Cofinancing (US$M):		
Cofinanciers:		Board Approval Date:		03/27/2007
		Closing Date:	06/30/2013	06/30/2013
Sector(s):	Irrigation and drainage (58%); Forestry (31%); General agriculture; fishing and forestry sector (6%); Central government administration (5%)			
Theme(s):	Other rural development (40%); Water resource management (40%); Rural services and infrastructure (20%)			

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2. Project Objectives and Components:

a. Objectives:

The original Financing Agreement of 2007 stated the Project Development Objective (PDO) as follows: "to enhance the Recipient's institutional capacity to manage water and forest resources, reduce the incidence and severity of water shocks such as drought, floods and water shortage in river catchments, and improve the livelihoods of communities participating in the co-management of water and forest resources".

The PDO was revised during a restructuring in June 2011 as follows: "to improve the management of water and forest resources in selected districts."

b.Were the project objectives/key associated outcome targets revised during implementation?

Yes

If yes, did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval: 06/10/2011

c. Components:

<u>Component 1: Water Resource Management and Irrigation (Appraisal cost: US$44.2 million; Actual cost US$31.8 million {Annex 1 ICR}).</u>The component had two sub-components.

(a) Strengthening the capacity of the Water Resources Management Authority (WRMA) including direct investments in the Upper Tana Catchment. This supported implementation of laws, policies, and regulations related to Water Resources Management (WRM), following promulgation of the 2002 Water Act.

(b) Consolidation of irrigation reforms and investments. This supported: (i) development of infrastructure; (ii) reforms at the National Irrigation Board (NIB), which included, preparation of an Irrigation Strategy and Business Plan, and inputs into the Irrigation Act; and, (iii) creation and strengthening of participatory Irrigation Water User Associations (IWUAs).

Component 2, Management of Forest Resources (Appraisal cost US$20.0 million; Actual cost US $19.9 million {Annex 1 ICR}). The component aimed to improve forest governance, participation and investment by stakeholders. It had three sub-components:

(a) Forest sector institutional reforms. This supported: (i) transformation of the Forestry Department into a semi-autonomous Kenya Forest Service (KFS); (ii) enhancement of governance; and, (iii) improvement of revenues for forest management.

(b) Community participation and benefit sharing. This supported: (i) articulation of rights and responsibilities of stakeholders; (ii) definition of processes for developing arrangements; and, (iii) approval of management plans and benefit-sharing mechanisms.

(c) Community and private sector investments in commercial forestry. This supported: (i) revitalization of Kenya's forest industries in line with the Forestry Act; (ii) closer integration between forest products manufacturing, harvesting and forest management goals; and, (iii) activities to increase rural income.

Component 3, Livelihood Investments in the Upper Tana Catchment (Appraisal cost US$ 5.5 million; Actual cost US$ 5.6 million {Annex 1 ICR}). This component supported a Community Driven Development (CDD) approach for managing catchments and forest perimeters by: (i) developing livelihood enhancing schemes that supported the natural resource base, such as afforestation, private sector/community partnerships for timber, fuel-wood and pulp production, tree seedlings; and, (ii) introducing productivity-enhancing techniques of agro-forestry and conservation farming.

Component 4, Management and M&E (Appraisal cost US$4.3 million; Actual cost US$ 4.6 million {Annex 1 ICR}). The component promoted an integrated approach to management and measuring results. Activities supported under this component also addressed issues related to resource rights and conflict over land and resettlement, necessary for the irrigation infrastructure.

Restructuring

The project was restructured twice on 06/24/2011 and 06/20/2013. As part of the 2011 restructuring, the PDO was simplified, scope of components 1 and 2 were revised, outcome indicators were changed and 21 percent of the credit was reallocated. It also increased disbursement percentages by category and eliminated some outdated covenants.

The following changes were made in two components:

Component 1:

The first sub-component was amended to: (i) introduce fast-track execution of small-scale investments directly by WRMA, such as small check dams and flow regulation structures to address design flaws and other implementation delays; and, (ii) provide technical assistance for priority pilot groundwater management initiatives (Kikuyu Springs) and a new groundwater management policy.

The second sub-component was amended to change and narrow the focus including: (i) the design and construction of the new Lower Nzoia Irrigation Scheme. But due to reduced budget for the implementing agencies, implementation slowed down and the construction was transferred to an IDA-financed project based on the design developed under NRMP; (ii) rehabilitating the Mwea system, dropping rehabilitation of Ahero, West Kano and Perkerra systems, but maintaining the capacity building of their IWUAs; and, (iii) the reform process at NIB.

Component 2

This component was revised to: (i) strengthen the participatory approaches for forest dependent people including vulnerable and marginalized groups (VMGs); and, (ii) strengthen the climate change dimensions of forest management, in line with the GoK's adoption of a National Climate Change Response Strategy in April 2010.

The revision also introduced additional actions to improve project implementation with respect to safeguards

OP4.10 and OP4.12. This included among other agreed actions: (i) preparing Vulnerable Marginalized Groups Plans (VMGPs); (ii) advancing the Process Framework (PF); and, (iii) providing technical assistance to facilitate the establishment and operation of an Inter-Ministerial Task Force on Land and Legacy Issues to ensure that land tenure and user rights of indigenous people were adequately addressed.

In the 2013 restructuring, unspent credit proceeds totaling US$7.24 million were cancelled before closing due to limited absorptive capacity. Some of the remaining funds were reallocated among disbursement categories.

d. Comments on Project Cost, Financing, Borrower Contribution, and Dates:

Project Cost:
Total actual project cost was US$ 61.9 million compared with a total appraised project cost of US$ 78.0 million. The actual cost did not include contingency cost of US$ 7.00 million (physical contingency of US$ 1.2million and price contingency of US$ 6.8 million). As noted above, US$ 7.24 million was cancelled as part of the last restructuring on 6/20/2013.

(Note that the contingency costs and cancellation sum to US$ 14.24 million. When subtracted from the appraisal estimate the total is US$ 63.76 million, higher by US $ 1.86 million than the ICR reported actual. The remainder is attributable to exchange rate changes.)

Financing:
The total actual financing is reported in the ICR (Annex 1 table) as US$ 81.60 million equivalent from IDA which was clearly an error since there was no additional financing. The actual figure given in the project portal data is US$56.9 million.

Borrower Contribution:
The borrower contribution increased from US$ 6.0 million at appraisal to US$ 149.05 million at closure (Annex 1 ICR). The large increase is not explained in the ICR but appears to be due to large additional beneficiary contributions being counted as a contribution which were not counted in the PAD.

Dates:
The project closed on 06/30/2013 as planned.

3. Relevance of Objectives & Design:

a. Relevance of Objectives:

As noted above, IEG has applied a split rating to assess the relevance of objectives and design due to a substantial change in the scope of the revised objective from the original objective.
Original
Rated Substantial

At the design stage, the original development objective (DO) was consistent with the goals of the Bank's Country Assistance Strategy 2004-2007 and the Government's Investment Program for the Economic Recovery Strategy for Wealth and Employment Generation (IP-ERS). The DO contributed towards the Water Act 2002 in empowering the Water Resources Users Association (WRUAs) and the Forest Act of 2005 in enabling community participation in forest resource utilization and conservation. However according to the ICR and later comments on the draft ICRR from the project team it was seen as an excessively ambitious objective.

At closure, the DO remained relevant to the Kenya Vision 2030 in regard to two focus areas, watershed systems and irrigation for domestic food security. It was also relevant to the current at closing Country Partnership Strategy (CPS 2010 -13) in addressing agricultural productivity and food security under pillar 1 of the CPS.

Revised
Rated Modest

The revised objective is rated modest primarily due to its vague and non-specific nature and its failure to identify a purpose for the improved management. While recognizing that the original objective may have been somewhat over-ambitious, for example in terms of reducing drought and flood shocks, the revised objective could have better reflected the project's logical chain even with the reduced ambition of approach. The weakness of the revised objective specification was not helped by the lack of associated measurable indicators that would have demonstrated the extent to which “improved water and forest management in selected districts” had been achieved and for whom or for what environmental purposes. Furthermore, the narrowed specification to “in selected districts” left a question of why then would support continue for higher institutional level KFS activities and support.

b. Relevance of Design:

Original
Rated Modest

The project design was based on consultations with development partners and key stakeholders including donors, private sector and communities. It took into consideration experiences from the past and on-going interventions. The design proposed activities to manage water and forest resources through strengthening and/or changing the nature of the responsible parastatals, developing the information base, enhancing the legal and regulatory framework, financing investments, and engaging communities in co-management and community-driven micro-projects. The three core project components were intended to lay the groundwork for integrated watershed management, while the fourth component supported real time monitoring of the component activities and its results. The project design emphasized community level engagement with irrigation users, water user associations, community forest associations, and vulnerable and marginalized peoples groups (largely located in and around forests).

But there were several significant shortfalls.

It failed to: (i) provide detailed designs for the irrigation investments with clearly defined responsibilities between the National Irrigation Board (NIB) and MoWI; and, (ii) link triggers for NIB investments with progress of sector level reforms. This was exacerbated by post-election violence in 2007-2008 (ICR p. 8).

It established what the ICR considered unrealistic targets such as: (i) reducing by 20% the sediment load in rivers and reservoirs; (ii) adopting recommended land use practices within the targeted catchments in 80% of households; (iii) adopting payment for environmental services (PES) in 50 schemes; and, (iv) enabling 50 new forest investment requests from communities and the private sector due to the improved investment climate.

As noted in the ICR, the original design overlooked the enormity of the long-standing land/ forest conflicts and therefore underestimated the complexity of the project context. This created difficulties in defining the boundary not only between activities of the project and those outside the project, but also in defining appropriate safeguard obligations in the forested implementation areas (p.8 ICR).

Overall, the original results framework failed to effectively link the outcomes with the PDO, and to capture the on-the-ground reality of the Project.

Revised
Rated Modest

While there were some design improvements in the redesign accompanying the main restructuring, the new statement of objectives was not well linked to intermediate or final outcomes; there were gaps and weak links in the causal chain. In adjusting to the narrowed objective of improving management of water and forest resources in selected districts, there were three main areas of weakness.

First, the Results Framework dropped a number of indicators. Some were unrealistic but others, such as beneficiary satisfaction with micro-projects and adoption of improved land practices, would have still been valuable. In place of these, the new framework offered little to measure that could have helped to answer the key evaluative question of how resource management was improving, especially in forest management.

Second, it is not clear how the design adjusted to the focus only on selected districts. The logical chain seems to have had some missing links. Judging by the continued funding of overarching KFS capacity building and other support, there remained during implementation a focus that went beyond merely selected districts. There seemed no clear strategy linking the district level project support with the broader agency level support. As noted in the previous paragraph there was little measurement of proxy indicators provided for to show what might be changing on the ground in terms of KFS or community management capacity or in terms of inter-institutional linkages at national and district level.

Third, in the redesign at restructuring, beyond a measure of avoidance in the narrowing to selected districts, there was little enhanced clarity on the Indigenous Peoples' Planning Framework (IPPF) in relation to customary rights, The IPPF focused on operationalizing development plans for the vulnerable and marginal groups. The Bank did not sufficiently address the potential conflict issues related to peoples' customary rights. According to the ICR the IPPF raised unrealistic expectations. But it should be noted that the Bank had cleared the IPPF and the PAD supported its implementation.

4. Achievement of Objectives (Efficacy):

The PDO in the 2007 Financing Agreement was: "to enhance the Recipient's institutional capacity to manage water and forest resources, reduce the incidence and severity of water shocks such as drought, floods and water shortage in river catchments and improve the livelihoods of communities participating in the co-management of water and forest resources."

The restructured PDO was: "to improve the management of water and forest resources in selected districts."

The original PDO includes four sub-objectives and the revised PDO two sub-objectives. Each sub-objective is rated below.

The ICR identified external factors that detracted from achievement of the PDO, the very difficult political reality stemming from post-election violence that resulted in the displacement of hundreds of thousands of people, the complex politics of ethnic struggles, as well as land ownership conflicts that have deep historical roots. These external factors compounded the other issues encountered during the implementation of the Project.

ORIGINAL OBJECTIVE

(a) *Enhance the Recipient's institutional capacity to manage water resources*
Rated Modest

Outputs (with indirect impact on water resources)
1) 81 individual training and 2 group training sessions were held on WRM, procurement, financial management, project management, record keeping and monitoring
2) 51 Water Resources Users Association (WRUAs) had their Sub-Catchment Management Plans (SCMP) approved by WRMA under implementation (target 30, achieved 136%).
3) 172 community-user groups were collaborating with the GoK institutions in water activities. 50.5% of which were women.
4) With an indirect impact on water resources, 460 forest maps were digitized (target 461—achieved 99.8%, Annex 2, p.39)
5) Again with an indirect impact on water, forest Resource Assessment was completed for 140,000 acre of plantation forests (target 120,000 acre- achieved 116% Annex 2, p. 39)

Intermediate Outcomes and Outcomes
It is not very clear from quantified evidence how the overall capacity to manage water changed. There was greater information developed that had an impact on water resources through such means as digitized forest maps and water resource assessment reports. It is reported that: (i) awareness increased among the WRU on guidelines for developing the SCMPs and for implementing integrated watershed management; and, (ii) capacity to assess the submitted plans strengthened in the WRMAs. Development and implementation of SCMPs based on participatory approaches and public outreach allowed for expanding experiences to other catchments.

(b) *Enhance the Recipient's institutional capacity to manage forest resources*
Rated Modest
Outputs
1) 28 Kenya Forest Service Strategic plans selected for implementation under NRMP completed (p.37 Annex 2).
2) 388 KFS staff were trained in various skills including forest assessment, transformative leadership, VMGs conflict management and participatory forest management skills (p.38 Annex 2).
3) 460 forest maps were digitized (target 461, p. 39 Annex 2).
4) Forest Resource Assessment was completed for 140,000 acre of plantation forests (target 120,000 acre P. 39 Annex 2).
5) 6 Five Year Participatory Forest Management Plan were developed.
6) 4,800 Kenya Forest Service (KFS) staff were trained on investment opportunities.

Intermediate Outcomes and Outcomes

It is not very clear how these activities changed the institution's management capacity of the forest sector in terms of management efficiency improvement over earlier levels of efficiency. However, according to the project team there is new evidence and recognition since project closure of the role of Community Forest Associations in contributing to forest expansion and management, seen as a first step toward decentralized resource management. However, no related outcomes were evidenced, for example, in terms of response times to illegal activity or changes in community attitudes to participation or relationships with forest staff.

(c) *Reduce the incidence and severity of water shocks such as drought, floods and water shortage in river catchments*

Rated Negligible

No evidence of outputs and outcomes were reported. According to the ICR, the project did not provide financing for activities which were designed to actively reduce water shocks in river catchments in the project areas. It was considered too ambitious by the mid-term review team and this was addressed during the 2011 restructuring (Section 1.3 p. 2 ICR).

(d) *Improve the livelihoods of communities participating in the co-management of water and forest resources.*

Rated Modest

Outputs

1) US$5,650,000 of investment on CDD micro-projects was financed (113% of the budgeted amount of US$5,000,000)

2) 713 livelihood based micro-projects were supported, of which 51% were women (142% over the target of 500) The impact of some of these is documented in selected (as far as we can tell not randomly selected) case write-ups in the ICR.

Intermediate Outcomes and Outcomes

Family income is reported to have increased through the sale of products such as milk, greenhouse production of vegetables, eggs, poultry etc. but there is no survey evidence of this impact only the few limited case reports. Training on governance, procurement and technical skills related to specific micro-project activities is reported to have strengthened the communities enabling them to organize into groups to better manage their interests and become involved in the project management and safeguard-related activities.

REVISED OBJECTIVE

(a) *Improve management of water resources in selected districts*

Rated Substantial

This is discussed under two headings: overall water management and irrigation management although the latter is an element in the former.

As noted under the relevance of design, it is not clear how the indicators for water resource management improvement "in the selected districts" were different from the broader pre-restructuring objective which had not narrowed the management improvement to selected districts. The selected districts (ICR p. 77) were: Kiambu, Thika, Muranga, Nyeri, Kirinyaga,Laikipia, Nyandarua, Mbeere, Machakos, Mt. Elgon, West Pokot, Kakamega, Vihiga, ButereMumias; Lugari, Bungoma, Busia, UasinGishu, Trans Nzoia, Keiyo, Nandi North, Nandi South, Marakwet, Ugunja, Siaya, Bunyala, Kirinyaga East, Mwea East and Mwea West. There appears to be little evidence in the ICR on changes in water management practices in many of these districts. However, there is evidence from Mwea (Ndiiri et al 2013), the largest rice irrigation area in Kenya, of improvements in rice crop management and water use efficiency. This is cited below.

(i) Overall Water Management

Outputs

1) Revenue from water use charges collected by the Water Resources Management Authority (WRMA) increased by Ksh 37 million (baseline Ksh 267 million, target Ksh 366 million, achieved 100%). (This goes beyond the selected districts.) However, it is questionable how far this revenue recovery, much of which came from one major corporation that had been delinquent in its payments, is any indication of "improvement in the management of water resources" or even is attributable to the project. Improved water use charges are an ultimately necessary but far from sufficient condition for improved water management. (Sedimentation changes, an original indicator but apparently too difficult to collect, would have been a better indication of changes in water management on the ground.)

2) 51 Water Resources Users Association (WRUAs) had their Sub-Catchment Management Plans (SCMP) approved by WRMA under implementation (target 30, achieved 136%).

3) Nearly 120,000 members of community based organizations (CBOs) were mobilized and trained in sub-project

management. Of these, 3,332 sub-project proposals were received from 713 CBOs, and 706 micro-projects were financed by NRMP.
4) 81 individual training and 2 group training sessions were held on WRM, procurement, financial management, project management, record keeping and monitoring.
5) A National Irrigation Strategy and Irrigation Reform Implementation Strategy was prepared.
6) A National Groundwater Policy was developed.

Intermediate Outcomes and Outcomes

Decentralized water resource activities linked WRUAs with WRMA in the design and execution of Sub Catchment Management Plans (SCMPs) and there was increase in the revenue from water users for WRMA. There is limited evidence on what the impact of the management plans was on water management.

Indirect benefits are reported for: (i) farmers downstream from the forested water towers (such as the Lower Nzoia); (ii) users of power from the Masinga and Kamburu dams, and Nairobi residents who were dependent on Sasumua and Ndakaini dams for water supply. But it is not reported what the benefits were. (For example, did siltation of Sasumua dam slow, did it fill more consistently, or was water quality better?)

Communities and associations were able to implement community driven development (CDD) sub-projects. The project-financed micro-projects supported livelihoods for 4,145 direct beneficiaries, and nearly 25,000 beneficiaries including household members (p.17 Section 3.2 ICR). However, it should be noted that only some of the micro-projects were related to improving water management.

Overall, there was somewhat limited evidence in the ICR of "improved management of water resources in selected districts" but the Mwea data below that has been obtained by IEG recently offers some evidence in relation to rice irrigation management.

(ii) Irrigation Management
Outputs
1) 9,500 ha were reported to have improved irrigation in project intervention areas (hectares) (target of 9,427 ha, achieved 100.7% {ICR results framework})
2) 95 % cost recovery for O&M of the project's irrigation investments (target 70%, achieved 135% {ICR results framework})
3) NIB delivered capacity building interventions to 11,162 farmers out of which 30% were women and 20% youth against the appraisal target of 8,500 users in the five schemes (p.35 Annex 2. ICR)
4) Design of Lower Nzoia irrigation scheme was completed but not the implementation.

Intermediate Outcomes and Outcomes
The project contributed to:

1) piloting the "System of Rice Intensification" in Mwea. According to the ICR, the pilot "System of Rice Intensification" allowed some participating Mwea rice farmers to conserve water, increase yields by approximately 20% and reduce water use by roughly a third. The ICR itself is not very clear about sources of evidence on SRI productivity and water savings nor about the methodology of data collection and analysis. The project team provided some additional evidence from a recent research experiment that showed significant yield gains and water saving but this was on a research plot scale and did not offer evidence of farmer yields or adoption. However, during this review IEG was able to find additional evidence in (Ndiiri et al. 2013). This study surveyed a sample of 40 farmers and found a 33% yield increase, a 13% reduction in seed, and a 9% increase in labor. Over two seasons the B:C ratios went from 1.30 and 1.35 to 1.76 and 1.88 respectively. The study also reports an SRI adoption rate from Mwea Scheme MIS data increasing from 2 adopting farmers in 2009 to 2,700 in 2012 (out of about 11,000 farmers). There is some indication from other sources of a continuation of this quite rapid adoption trend since 2012. In addition, it is expected that farmers will now pay for water by volume instead of the earlier flat rate. This can be expected to increase the incentive for adoption of the SRI water saving technology in the future beyond simply the yield increase. Water saving in this study (SRI involves allowing a short period of drying out with no standing water) was estimated to be 26%, a significant reduction. This Mwea evidence is important for the efficiency analysis as is discussed under the Efficiency section.

2) The ICR reports a strengthening of the capacity of NIB to implement activities and carry out its mandate. (In five years, NIB moved from an empty pipeline of schemes to processing 119 projects for a total possible area of 144,000 ha and a 2012/13 budget of Ksh 11.4 billion (US$142 million).

3) The original target to benefit a total of 30,000 farmers was not fully achieved. Out of the total original 30,000 users targeted to benefit from improved irrigation service in Lower Nzoia and Mwea, 11,000 from Mwea benefitted from rehabilitation and improved service. 9,500 ha were improved, 7,250 ha of that through

rehabilitation and 1,250 ha expanded into outgrower areas (this was below the PAD target of 12,800 ha and 3,500 ha respectively). Satisfaction with O&M services increased from 54% to 95%.

4) About 4,200 farmers benefited only from improved irrigation services as the proposed Lower Nzoia irrigation was not constructed under NRMP (it was transferred to another project KWSCRP-I).

5) The Irrigation Act and the new Irrigation and Drainage Bill were pending approval and the Irrigation Sector Alignment Action Plan, and the Irrigation, Drainage and Water Storage Development Investment Plans were yet to be implemented.

(b) *Improve management of forest resources in selected districts*
Rated Substantial
Output

As noted under the relevance of design, it is not clear how the indicators for forest resource management improvement "in the selected districts" were different from the broader pre-restructuring objective which had not narrowed the management improvement to selected districts. There appears to be little district-specific evidence on changes in forest management practices. Some of the evidence listed here goes beyond the selected districts answering more to the original objectives but having, presumably, some spill-over to selected districts.

1) Management and geographic information systems were developed.
2) Three environment audit reports were completed.
3) A communication strategy was developed.
4) KFS incorporated a full-time Social Development Specialist to support the agency's engagements with communities beyond the life of NRMP.
5) The project constructed a modern knowledge management and training center and regional offices.

Intermediate Outcomes and Outcomes

1) The community forest associations (CFAs) supported under NRMP reportedly gained practical knowledge in NRM. KFS itself supported participatory approaches and extension services but the extent to which this was a change over what had been practiced by the Forest Department before is not clear since they had been previously supporting some measure of participatory approaches in some areas. Activities were carried out in accordance with the Community-led Vulnerable and Marginalized Group Plans (VMGPs) prepared by each participating community. An intensive series of participatory consultations was institutionalized under this process and VMGs and VMGCCs are reported to have improved their ability to organize as groups and manage their enterprises.

2) 320,000 ha of forests in the project intervention areas were being managed according to approved forest management plans (FMP) (target 300,000 ha achieved 106.7% {results framework}) and 7,124 ha were brought under forest cover in project intervention areas (Original target of 2,500 ha, achieved 285 percent of the target. Revised target of 3,500ha, achieved 203%) There is little evidence in the ICR of what the implementation of these approved plans achieved on the ground, for example reporting of illegal felling or illegal forest agriculture plots. It is early to expect many measurable changes in forest cover or catchment hydrology. There is also limited evidence on the KFS institutional impact at district level. In particular, how did operational effectiveness of district offices change?, In the rating of this objective, IEG is giving the benefit of the doubt based largely on assertions and one independent observer's report provided by the project team that the management plans are being substantially followed in implementation.

5. Efficiency:

Rated Substantial although there are some uncertainties about evidence and attribution.

The Project Appraisal Document does not present an aggregate *ex-ante* economic evaluation, but it presents analyses some of the different NRM interventions, such as Sustainable Land Management (SLM), reforestation, irrigation, and Community Driven Development Projects CDD) micro-projects. It concluded that most activities were likely to be profitable from the beneficiary and project perspective, and that in many cases, the off-site effects could be expected to significantly add to the economic viability from society's perspective.

An *ex-post* economic efficiency analysis was conducted by the ICR for selected NRMP activities such as agriculture including irrigation, reforestation, and carbon sequestration. While a cumulative ERR of 16.7% was found by the ICR, there are questions about some of the assumptions as well as some methodological questions. Nearly half the benefit stream depends on the 20% yield gain and extended area in rice, especially at Mwea. From the ICR alone it is difficult to assess the validity of the irrigated rice benefit stream since with respect to the System of Rice Intensification (SRI) that was to raise yields while reducing water demand there was no information on the methodology of data collection and some uncertainty about adoption levels and attribution. Supplementary evidence presented by the project team came from a single randomized treatment research plot experiment testing SRI so was of little value in assessing actual farmer adoption or yield gains. However, IEG was able to find a more relevant farmer adoption study (Ndiiri et al. 2013 J. of Agricultural Water Management) that offered some of the missing evidence. This is from a modest sized sample of 40 farmers purposively sampled to have adopted SRI on at least some of their land and covering all of the 16 unit areas in the scheme. This study found a 33% yield increase, water savings of 26%, 13% seed saving, a 9% increase in labor use although some indication that, with experience, this was declining, Over two seasons the B:C ratios went from 1.30 and 1.35 to 1.76 and 1.88. There are some questions about this study, particularly how the non-SRI yields were obtained , but overall it appears to be a solid study. In addition, SRI adoption, reported by this study went from 2 farmers in 2009 to 2,700 in 2012 in a population of some 8,000 plot holders. This is a rapid adoption level that we believe from another source may have increased further since then. Overall, this new evidence in addition to that provided in the ICR offers enough evidence to support the ICR claims for the irrigated agriculture part of the economic analysis which is nearly half the total net benefit stream.

However, there are some weaknesses in methodology related to water management. First, the economic benefit claimed of increased government revenue from increased water use charges is not an economic benefit to Kenya, it is a financial transfer, nor does it demonstrate improved water management although the project team argues that it does. A substantial element of this collection of increased water charges came from a single entity that was well behind in its payments. There is no evidence that they decided to pay their arrears because of improved water resource management. However, it is argued by the project team that this improved collection, which was not solely from this single large entity, gives more funding for improved water management investment and operation in the future. While the link between fee collection and budgetary resources is not demonstrated in the ICR, IEG accepts that in due course some economic benefits to the economy are likely from better cost recovery, particularly if it is across the majority of users. Second, there is a methodological question on prices applied. It is not clear from the ICR that border prices were applied and rice in Kenya is protected by a substantial tariff. In other words, the rice part of the benefit stream may be overvalued. On the other hand, balanced against this, some aspects of the analysis were conservative including no yield increases beyond the project period, only a 15 year period for the net benefit stream, and the fact that, with payment for water by volume now being introduced, water efficient SRI adoption may increase beyond what was projected in the analysis and having some attribution to what was started by the project.

The Economic Analysis Annex (p. 55) discusses the benefits of reduced deforestation and degradation. There is little evidence that shows the extent to which the approved forest management plans were actually implemented, for example there is no evidence on early management indicators such as changes in illegal felling or changes in reporting of illegal activities by communities. This makes it difficult to judge the validity of the carbon and hydrology improvement assumptions. However, IEG accepts that carbon and other less quantifiable benefits of more sustainable forest management take some years to start to show effect and that, provided the approved plans are being substantially followed, such future benefits that have been valued conservatively, are plausible.

The costs per beneficiary of the livelihoods investments are quite high relative to global CDD experience and in the absence of wider data it is difficult to assess what a representative economic return would be. However, about half of them appear likely to have additional environmental benefits beyond the immediate income earning.

a. If available, enter the Economic Rate of Return (ERR)/Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point Value	Coverage/Scope*
Appraisal	No		
ICR estimate	Yes	16.7%	50%

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome:

As noted above, the first restructuring in 2011 is considered the significant one for a before and after weighted restructuring calculation of the overall outcome rating.

At the time of restructuring, there was a substantial change from the original objectives, partly because performance to that point was considered to be unlikely to reach the objectives set, partly because some of the indicators were considered unmeasurable, and partly for simplification and adaptation to changed circumstances. While shifting to a more realistic objective was better than sustaining an unrealistic one, there was a retreat from some of the intermediate outcome or outcome objectives such as livelihoods and soil and moisture retention, towards a vague and difficult to measure objective of improved water and forest resource management. There was also a narrowing of the scope from an implied national scope to only selected districts although, in implementation, a number of national level activities were continued. There were advantages in terms of realism from this narrowing of objectives but some loss of outcome focus.

The original ratings are: Relevance of Objectives rated Substantial; Relevance of Design rated Modest, Efficacy through the four objectives rated three Modest and one Negligible; Efficiency rated Substantial. This gives an aggregate rating of Moderately Unsatisfactory.-.

The Restructured ratings are: Relevance of Objectives rated Modest; Relevance of Design rated Modest; Efficacy of the two objectives rated Substantial; Efficiency rated Substantial. This gives an aggregate outcome rating of Moderately Satisfactory.

In weighting these, 31% (ICR p. 15, footnote #14) of disbursement was before restructuring and 69% after. The weighting formula becomes: (0.31 x 3) + (0.69 x 4) = 3.69 or an overall rating of Moderately Satisfactory. Overall, the project had moderate shortcomings.

a. Outcome Rating: Moderately Satisfactory

7. Rationale for Risk to Development Outcome Rating:

Unresolved land access and customary rights, especially to forest lands, remains a critical risk to the development outcome. The lag in safeguard adherence in the resettlement of the Sengwer /Cherangani communities poses a risk to development outcome of CDD micro-projects that arose from the VMG Plans developed by the vulnerable and marginalized communities of the Cherangani Hills.

The Kenyan law on the Prevention, Protection and Assistance to Internally Displaced Persons and Affected Communities Act of 2012 is relatively closely aligned to World Bank safeguard policy concerning customary rights of indigenous people and resettlement. However, in October 2013, nearly four months after the project closed, the media widely reported that the GoK was giving vulnerable populations and forest evictees Ksh400,000 per household with which to buy land. This implied that the earlier intended plan by the MSSP to resettle these groups had shifted and was no longer under consideration by the GoK. Since then, in January 2014, evictions were carried out in the Cherangani Hills. This could in turn affect the development outcomes achieved through the community-driven activities and trust-building support financed by the NRMP. (ICR p. 24&25 para 92)

Also, project costs per household were high, as noted above, and there are questions about O&M of some of the sub-project investments in the absence of project support raising some questions about sustainability.

a. Risk to Development Outcome Rating : Significant

8. Assessment of Bank Performance:

a. Quality at entry:

A social and institutional analysis was carried out during preparation, including stakeholder analysis to identify appropriate modus operandi. In this process, strengths and weaknesses of the private and public entities were determined to develop implementation arrangements. However, the Bank failed to define clear responsibilities between NIB and the Ministry of Water and Irrigation (MoWI) for reform deliverables or link triggers for investments by NIB with progress in sector level reforms. Some of these issues were exacerbated by post-election violence in 2007-2008.

Stakeholder participation followed a need-based approach taking into consideration the location specific disparities. For instance design emphasized community level engagement with irrigation users, water user associations, community forest associations, and vulnerable and marginalized peoples groups (largely located in and around forests). Also, at smaller catchment scales, the project's design focused on participatory resource management with communities and identified ways for achieving integrated actions that were generally well conceived – such as through the promotion of sustainable land management (SLM) practices so that conservation and production goals could converge to enhance livelihoods and prevent erosion.

Introduction of forest co-management as proposed by the project, was an essential part of the reform under the new Forests Act but the Kenya Forest Service (KFS) was not adequately equipped to implement it. So, it required a major change in the functioning o(KFS and sustained support to build the capacity of KFS. An Inspection Panel request was accepted in relation to forest community land rights. According to the Inspection Panel report dated May 22, 2014 (Chapter 4 p.58) "While the Project provided training to some NRMP staff in Participatory Forest Management and safeguard policies related to VMGs, the Panel is of the view that Management had not sufficiently identified the magnitude of what is required to make such a paradigm shift during appraisal".

Gender and poverty aspects were considered and a two-way causal relationship between natural resource degradation and poverty was reflected in the design.

The project triggered seven safeguard policies and developed measures as required by the Bank. The triggered policies included: (i) OP/BP 4.01 on environment assessment; (ii) OP/BP 4.12 on Involuntary Resettlement; (iii) OP/BP 4.04 on Natural Resources; (iv) OP/BP 4.36 on Forestry; (v) OP/BP 4.10 on Indigenous Peoples (IP); (vi) OP/BP 7.50 on International Waterways; and (vii) OPN 11.03 on Cultural Property. With regard to OP 4.12 and OP 4.10, although a Resettlement Policy Framework and an Indigenous Peoples Policy Framework were developed, the Bank overestimated the borrower's capacity to put these into effect and translate them into resettlement action plans.

More broadly, some risks were identified and mitigation measures were developed. However, the Bank did not fully appreciate the complexity of the project context related to land access and customary rights, although IEG accepts that the land history in Kenya in both forest and farming areas is immensely complex with ramifications that would be difficult to predict. Nevertheless, the preparation team did not sufficiently consider the policy scope of the forest component and the limited mandate of the implementing agency. This lead to promises beyond what the project design could realistically address. This led in turn to the implementation difficulties and the subsequent request for investigation by the Bank's Inspection Panel.

According to the Inspection Panel report (p. 59), "The livelihood restoration measures attempted to play the role of fulfilling some of the requirements of a duly designed and implemented resettlement mitigation effort resulting from a restriction of access to resources. While the beneficiaries obviously appreciated these small projects, they were not part of a broader strategy on how to manage forest people and conflicts that may arise, or to protect customary rights".

The original results framework, though relevant to the original PDO, included indicators that arguably could not be sufficiently influenced by the project itself. Many indicators lacked baseline values, although the Project Appraisal Document had recorded that while a baseline survey was indeed carried out, many of the project indicators did not have a baseline value.

The evaluation design was weak, reflecting limited specification of data needs for an ex-post cost-benefit analysis. Indicators for improved resource management were also weak and it was not clear how "improved management" was to be measured.

Quality-at-Entry Rating: Moderately Unsatisfactory

b. Quality of supervision:

The Bank task team was generally proactive with regard to supervision. An early MTR carried out in March 2010 assessed the causes of delays, identified the remedies and recommended the restructuring. Though the 2011 project restructuring amended project activities and outcomes so that they were more within the capacity of the implementing agencies to deliver, complaints were raised by affected people, which in turn led to a request to the Inspection Panel.

In early 2012, the project team and Bank management worked internally with the Operations Policy and Country Services (OPCS) department of the Bank to prepare a dispute resolution approach complementing the local project-level grievance redress mechanism (GRM) led by KFS) to support resolution of community concerns. The

Bank team pro-actively addressed enquiries and complaint letters and carried out fact-finding missions. However, in January 2013, the Inspection Panel of the World Bank received a request for inspection sent by individuals from Sengweri communities (see also Safeguards section 11a).

The Inspection Panel noted that, while the project had provided training to some NRMP staff in Participatory Forest Management and safeguard policies related to VMGs, the Panel was of the view that Management had not sufficiently identified the magnitude of what was required to make such a paradigm shift during appraisal. Although the inspection panel report dated May 22, 2014 (chapter 4 p. 60) noted that, “The Panel also recognizes and appreciates Management’s proactive stance towards the forceful evictions that are taking place after the closure of the Project, encapsulated in the Bank President’s statement that the World Bank is not a “bystander.”

Field missions averaged one every 10 weeks, better than the usual 6 months for most projects. The number of staff involved in missions ranged from 4 to 11 depending on the borrower’s evolving needs. Staff specialties were consistent and relevant with the requirements. Aide Memoirs documented events and recommendations with clarity and substance.

The Bank team was also cognizant of the unused funds and pro-actively cancelled these prior to project closing. According to the management comments, the cancelled portion was retained under IDA support to the government in the water and climate resilience project. The irrigation infrastructure designs developed by NRM were then implemented by the left over funds in the second project.

Quality of Supervision Rating : Moderately Satisfactory

Overall Bank Performance Rating : Moderately Satisfactory

9. Assessment of Borrower Performance:

a. Government Performance:

The Government of Kenya (GoK) remained committed to the project during the project period. GoK institutions participated in the project design, implementation, supervision and offered implementation support, undertaking specific studies, annual performance reviews, auditing and reporting. The Government set up project implementation structures such as the Project Steering Committee (PSC), the Project Coordination Office (PCO), AC and NPCC to facilitate project implementation and provided sectoral staff at each of these levels. However, there were shortcomings with respect to appointing the required personnel for the development of the new activities.

The government developed appropriate sectoral policies such as the Water Act 2002 and the Forests Act 2005). However, due to initial implementation delays partly attributable to government and insufficient support to the reform agenda as well as the original ambitious targets, the design had to be adjusted at restructuring taking account of the realities of the operational environment and the changes in assumptions originally used.

Implementation was also affected by bottlenecks at Treasury in channeling Project funds to the implementing agencies -- a problem facing many Bank financed projects in Kenya.

Although government coordinated with other stakeholders such as, internally, the Ministry of Agriculture, CBOs and NGOs, to improve land use and management practices, there were shortfalls in its commitment to adhere to the resettlement agreement with the Bank which became more apparent after project closure (ICR p. 24 &25 para 92).).

Government Performance Rating Moderately Unsatisfactory

b. Implementing Agency Performance:

WRMA,, NIB and KFS implemented the project engaging the local communities through registered WRUAs, Irrigation Water User Association (IWUAs) and CFAs. Protocols, operational manuals, management agreements, and MOUs, etc. were developed for resources management including public irrigation schemes, watersheds and forests.

WRMA and NIB met the revised targets on: (i) increasing revenues or fees collected from water users and (ii) strengthening their capacity to monitor and control. However, they could not incorporate and maintain the necessary staff for performing the additional project functions over and above those that fell under their routine responsibilities. This delayed overall progress significantly. There was often lack of continuity of project personnel in key positions, contributing to delays in implementation. During the 2011 restructuring, with a moderately unsatisfactory performance rating, indicators and targets had to be adjusted downwards to align with the limited capacity to deliver. According to the Implementation Status Reports, performance improved after restructuring, but absorption issues persisted leading to cancellation of project funds despite a substantial rise in disbursement in the last year.

Implementing Agency Performance Rating :	Moderately Unsatisfactory
Overall Borrower Performance Rating :	Moderately Unsatisfactory

10. M&E Design, Implementation, & Utilization:

a. M&E Design:

The design followed a two-tier monitoring approach. The Geographic Information System (GIS) laboratory situated at the Kenya Agricultural Research Institute (KARI) tracked the overall performance, and accountability mechanisms such as score cards and social audits tracked performance at the community level. The centralized, comprehensive Management Information System (MIS) housed at the central Kenyan Soils Survey (KSS) supported multiple natural resources related activities and was not exclusive to the Project. It also proposed a public awareness and communication program to reinforce stakeholder participation.

The original institutional arrangement involving multiple institutions was problematic. It was rectified only at MTR and a new more modest design was put in place at the time of the 2011 restructuring. The simplified project results chain was aligned with the revised PDO and focussed on indicators that were within the sphere of project influence, with more reasonable targets achievable within the timeframe and budget. In addition, the indicators in the results framework were also amended to better monitor progress toward PDO achievement.

As noted, there were weaknesses in indicators for measuring the improvement in water and forestry resource management.

b. M&E Implementation:

M&E implementation was initially stalled due to delay in establishing the M&E system and difficulties in implementation by multiple institutions. There were also inconclusive discussions between the Project Coordination Office (PCO) and the Kenya Agricultural Research Institute (KARI.

With completion of the mid-term review (MTR) mission, a project-specific M&E system was developed and operated at the Project Coordination Office (PCO) level and implementing agency (IA) level. PCO acted as the hub to the IAs that had M&E functions. The IA had a module and a data transfer protocol for communicating with the PCO. The system allowed for linking each step in the results chain, producing regular reports every quarter, half year and annually. However, information compiled for the second tier monitoring of impacts on resources and communities was inadequate and at times M&E staffing at the IAs was deficient. Regular upgrades added geo-referenced CDD schemes and reporting of social and environmental safeguards. Although the recalibrated M&E system was utilized by the client to report on project targets, it lagged in quantifying social and environmental impacts.

c. M&E Utilization:

M&E was utilized effectively for reporting on the project results framework since the 2011 restructuring. The collected data was used in decision making enabling implementers to gain insight into outputs from individual project activities and to address implementation challenges. The M&E reports were also used at the MTR and for informing the restructuring of the subject Project (NRMP). The MIS enabled reporting on the project activities and outputs and information sharing between the PCO and the implementing institutions.

M&E Quality Rating: Modest

11. Other Issues

a. Safeguards:

At appraisal the project triggered seven safeguard policies and developed measures as required by these policies. The triggered policies were: (i) OP/BP 4.01 on environment assessment; (ii) OP/BP 4.12 on Involuntary Resettlement; (iii) OP/BP 4.04 on Natural Resources; (iv) OP/BP 4.36 on Forestry; (v) OP/BP 4.10 on Indigenous Peoples (IP); (vi) OP/BP 7.50 on International Waterways; and (vii) OPN 11.03 on Cultural Property. The ICR reported compliance with these seven safeguard policies.

Environment:
The project was classified Category B and was consistent with the Bank's Safeguards Policy on Environmental Assessment OP/BP 4.01. An Environmental assessment was carried out as part of project preparation. An Environment and Social Management Framework (ESMF) was developed and disclosed in-country and at the Bank's Information Center in Washington D.C. on January 10, 2007. Annual environmental audits for the NRMP activities were conducted providing qualitative and quantitative evidence on the environmental status of the various interventions.

Social:
The Project triggered OP 4.12 and OP 4.10 as part of project preparation and a Resettlement Policy Framework (RPF) and Indigenous Peoples Planning Framework (IPPF) were prepared. The ambitious nature of the project design resulted in additional safeguard concerns early in the project. A Process Framework (PF) was approved after wide consultations. It addressed customary rights of forest dependent populations and established a grievance mechanism.

The IPPF, which was approved by the Bank, introduced controversial elements, some that appear unrealistic, such as: (i) hastening the provision of titles for land occupied and used by communities in the project areas. This included support for necessary steps such as a land survey, demarcation and registration of titles; and, (ii) offering assistance within the land restitution process to vulnerable and marginalized population to claim all lands over which they had lost control between 1895 and 2002 (p.12 ICR). These elements raised unrealistic expectations contributing to unresolved conflicts between sections of some communities and the GoK.

During the initial three years, GoK and the Bank pro-actively worked to build trust so that progress could be made on poverty alleviation, community resource rights, and conservation in a way that satisfied the majority of stakeholders. Both government and the Bank reacted promptly to complaints as they came to their attention and carried out field supervision and verifications. The Bank strongly advised Government to implement solutions consistent with project safeguard frameworks and international best practices on social and environment safeguards. At the time of the Project restructuring in 2011, a change in safeguards category was not considered necessary, because the process of setting up institutional structures to address these issues under the new Constitution was in progress, as was the development of the NRMP Process Framework which included the grievance redress mechanism which was used by the indigenous communities and Kenya Forest Service (Section 2.4 p. 13 ICR)

In early 2012, the project team and Bank management worked internally with Operations Policy and Country Services department of the Bank to prepare a dispute resolution approach (complementing the local project-level grievance redress mechanism (GRM) led by KFS) to support resolution of community concerns. This was followed through with an independent high-level regional mediator to support dialogue between KFS and community groups through a collaborative problem-solving process.

However, in January 2013 the Inspection Panel of the World Bank received a request for inspection sent by individuals from Sengwer communities who "live and represent others who live" in four areas of the Cherangani Hills, claiming that they had suffered harm as a result of the Bank's "failure and omissions" in the project for incidents between 2007 and 2011. After reviewing the issues raised, Bank Management at that time concluded that any harm that may have stemmed from the incidents cited in the request was not caused or aggravated by the project, nor had the project supported these incidents. Management stated that in spite of the difficult operating environment which included complex and sensitive legacy issues, the Bank had complied with the policies and procedures applicable to the matters raised in the request. The Panel stated in its initial Report and

Recommendation dated May 29, 2013 that there were conflicting assertions and differing views on issues of harm and compliance with policies and procedures raised in the request for inspection, in the Management response, in the Panel's meetings with affected people, and with Bank staff. Hence, the Panel recommended an investigation, which was to be concluded in early 2014. (Section 2.4. p.12 &13 ICR).

According to the Inspection Panel report dated May 22, 2014 (Chapter 4 p. 60) "The Panel acknowledges that the Project took place in the context of a very difficult political reality stemming from post-election violence that resulted in the displacement of hundreds of thousands of people, complex politics of ethnic struggles, as well as land ownership conflicts that have deep historical roots. It is the Panel's firm view that, despite the complexities of the issues it reviewed in this case and the challenges involved, the World Bank continues to be best equipped in terms of expertise, mandate and resources to support the GoK in resolving these issues, in the interest of sustainable development, the natural environment, and the protection of vulnerable communities, including Indigenous Peoples". However, as noted under Quality at Entry above, the Inspection Panel also noted that, while the project had provided training to some NRMP staff in Participatory Forest Management and safeguard policies related to VMGs, the Panel was of the view that Management had not sufficiently identified the magnitude of what was required to make such a paradigm shift during appraisal.

b. Fiduciary Compliance:

Financial Management:

WRMA, NIB and KFS included designated accountants to serve the project despite the project's payment processes being fully mainstreamed into the financial management systems of the implementing agencies and GoK. The PCO at the MoWI coordinated project implementation for the three agencies. Financial procedures for issuing project funds by the World Bank were followed and were well documented. The government received the funds and released them to the IAs through their line Ministries. Acceptable accounting, financial reporting, and auditing arrangements are reported in the ICR to have been maintained throughout the project duration. The estimated budgetary provisions for the project were adequate. Compliance with all legal covenants related to financial management was maintained. Annual financial audit was carried out by the Kenya National Audit Office. All quarterly IFRs and audit reports were submitted to and reviewed by the Bank as required by the relevant Financing and Grant Agreements. There were no outstanding audit issues at project closure.

Procurement:

Procurement of goods, civil works and employment of consultants adhered to the "World Bank Procurement and Consultants Guidelines for the selection and employment of Consultants (May 2004)," and the Government of Kenya "Public Procurement and Disposal Act, 2005". All requirements as stipulated in the Financing Agreement were fully followed through. However, there were delays in procurement processes for some of the key project activities due to internal slow processing of key procurement-related activities by the IAs and in obtaining the no objection from the Bank.

c. Unintended Impacts (positive or negative):

A substantial decline in malaria due to reduced water stagnation following irrigation rehabilitation works was reported.. The Mutithi Health Centre, serving about 1,500 farming households in Mwea, reported a decline in clinically reported cases from a monthly average of 166 in 2010 to 2 in 2011 and 0 in 2012 and 2013 (ICR p.25).

d. Other:

NONE

12. Ratings:	ICR	IEG Review	Reason for Disagreement/Comments
Outcome:	Moderately Satisfactory	Moderately Satisfactory	
Risk to Development Outcome:	Moderate	Significant	Unresolved land access and customary rights, especially on forest lands, remains a serious risk to the development outcome. (Section 7)
Bank Performance:	Moderately Satisfactory	Moderately Satisfactory	
Borrower Performance:	Moderately Satisfactory	Moderately Unsatisfactory	Moderately unsatisfactory performance of the government and implementing agency (Section 9a&b). In particular,

			resettlement issues, periods of slow disbursement, and staffing issues.
Quality of ICR:		Satisfactory	

NOTES:
- When insufficient information is provided by the Bank for IEG to arrive at a clear rating, IEG will downgrade the relevant ratings as warranted beginning July 1, 2006.
- The "Reason for Disagreement/Comments" column could cross-reference other sections of the ICR Review, as appropriate.

13. Lessons:

Based partly on the ICR, the following are the three most important lessons:

1. ***A simple and limited project design that considers institutional capacity and promotes active stakeholder participation is especially appropriate for complex natural resource situations where there is potential for land rights conflict.*** Sufficient time, budgetary needs and staff capacity are critical factors during preparation to ensure that all the project elements are coordinated. In this case the Project design was too broad and ambitious to be implemented within the planned duration partly because it addressed multiple reforms across several implementing agencies that had insufficient capacity and staff retention.

2. ***In-depth understanding of the political context and other historical evidence is critical in designing community-based natural resource management initiatives .*** In this case, there was insufficient appreciation at the design stage of the political and historical context of the land issue.

3. ***Sustainable natural resource management actions should consider : (i) incentives for resource users to avoid free-rider behavior; (ii) secure rights to resources for local communities ; (iii) strong environmental and socio-economic monitoring; and, (iv) effective coordination among stakeholders since changes in upstream watersheds affect downstream users and this can drive conflict .***

The ICR contains a number of other useful lessons, some more specific to Kenya.

14. Assessment Recommended? ● Yes ○ No

Why? There are important questions about the impact evidence and the efficiency estimates and potential lessons for project design in a land conflict situation.

15. Comments on Quality of ICR:

The ICR was variable in quality but on balance is rated Satisfactory. It is largely consistent with OPCS guidelines. It provides sound analysis and summary of project preparation and implementation including an extensive report of project investments and problems faced. The section on lessons learnt is well done. Results reporting follows a causal chain, linking project preparation with implementation and completion. Stakeholders are well defined and the ICR reports their participation in various segments of the project cycle. The ICR records poverty, gender and social elements addressed by the Project. Annex 5 of the ICR includes the Borrower ICR.

However, there were weaknesses although some can be partly attributed to weak available data. Outcome evidence is not well articulated. The ICR did not sufficiently answer: (i) how water and forest management by agencies, farmer groups, and farmers improved due to the project activities; (ii) what measurements were taken to determine the claimed rice yield increases; and (iii) what the improved forest management did for downstream hydrology or, more broadly, for incomes. Too much focus is given on what means were provided and not enough on the ends. The selected (it appears not randomly) subproject cases were of some anecdotal value but only a few allowed deduction of a profit figure or an environmental impact quantification.

A key source of evidence on the benefits of SRI rice at Mwea, published August 2013, nearly a year before the ICR seems not to have been used, or if it was used generically, was not referred to. Once obtained, this reference filled an important gap in the evidence on irrigation benefits.

On safeguards, the ICR reports adequately on fiduciary compliance but the project triggers seven out of ten other safeguard policies, yet the ICR documents the compliance measures only for three (OP 4.01, OP 4.10 and OP 4.12).

The ICR offers a well-considered substantial lessons section, some of which are more specific to Kenya. Some of the lessons are well articulated and of value for other similar projects with potential land conflict.

The ICR contains a few editing errors: (i) a discrepancy between figures reported in the component costs in the main text and Annex 1 and also within the annex itself. Annex 1 reports US$ 81.60 million as the actual financing amount when the actual project cost is only US$ 61.9 million (the true actual financing appears to be US$56.9 million based on project portal data); (ii) it misses a number of full titles of abbreviations (eg: NPCC , AC in Section E.2 p.85).

a.Quality of ICR Rating: Satisfactory