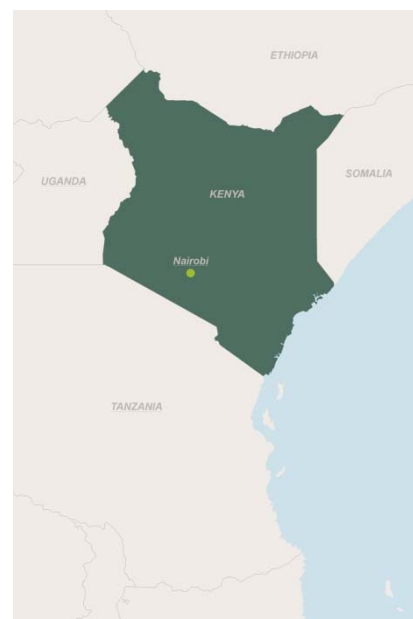


Ex post evaluation – Kenya

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Sector: Agricultural Development (CRS code 31120)
Project Small-scale Irrigation Programme Mt. Kenya, Phase I (BMZ No. 1999 66 466 (Inv.) / 2003 70 437 (Acc.Meas.) & Phase II (BMZ No. 2004 65 146* (Inv.)/ 2006 70 224 (Acc.Meas.)
Project Executing Agency: Ministry of Water: Irrigation + Drainage Department



Ex post evaluation report: 2014

		Project A (Planned)	Project A (Actual)	Project B (Planned)	Project B (Actual)
Investment costs (total)**	EUR million	3,70	3,13	3,50	3,95
Counterpart contribution	EUR million	0,40	0,40	0,00	0,00
Funding	EUR million	4,60	4,03	4,80	5,25
of which BMZ budget funds**	EUR mil.	4,60	4,03	4,80	5,25

*) Random sample 2015

**) considering transfer of residual funds to subsequent phases

***) incl. Accompanying Measures (institutional support to PMU)

Description: Support to smallholder irrigation agriculture by virtue of establishing small- and medium-scale irrigation perimeters along the Eastern and South-Eastern slopes of Mt Kenya. In the first two phases (phase III ongoing, phase IV under preparation) approx. 2,700 smallholder farmers benefited from the establishment of 1,785 hectares of newly irrigated land (6 perimeters with altogether 473 ha in Phase I; 9 Perimeters with 1,312 ha in Phase II); farmers’ self-help groups transformed themselves into irrigation cooperatives to become eligible for programme funding. They then received investment funding through local partner banks: 50% of German Financial Cooperation (FC) funds were provided on a loan basis, the other half on a grant basis. Complementary training in production methods, irrigation mgt. and organisational development was provided through GIZ (previously DED).

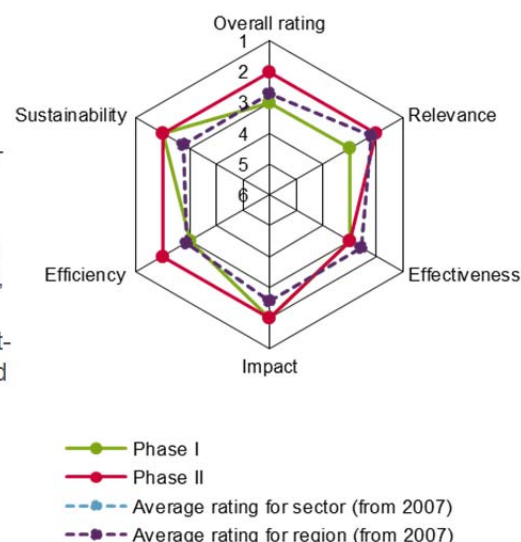
Objectives: Increased agricultural productivity (with cropping intensities and acreage yields as outcome indicators) was to improve the participating smallholders’ living conditions – and notably household incomes – as key impact.

Target group: Smallholder households participating in the programme (approx. 2,700 in phases I+II).

Overall rating: 3 (Phase I) and 2 (Phase II)

Rationale: Envisaged increases in productivity and income have largely materialised, with a distinct surge in implementation dynamics during phase II.

Highlights: In comparison to similar interventions (not only in the region), the farmers’ own contribution was substantial – and loan-financed. This has significantly enhanced smallholders’ ownership and contributed to good results, as can be inferred from the intensive use of irrigated areas and from swift implementation. With the „cooperative concept“ having become tainted in the past due to various failures, farmers’ willingness to establish such structures (anew) has become high. Good cohesion within cooperatives and strong leadership from their management committees are important for fully exploiting the production and marketing potential created through the programme.



Rating according to DAC criteria

Overall rating: 3 (phase I) and 2 (phase II)

The programme concept is in high demand among smallholder groups in the region, with envisaged increases in productivity, employment and income having largely materialised. However, the structural advantages of a cooperative society, like coordinated production, input purchase and marketing, are – at best – only exploited in part. Sustainability perspectives can be considered favourable, especially with view to a forerunner project (“Mitunguu Irrigation”) that was concluded in the 90’s and is still operating successfully.

Relevance

The intervention logic aimed at exploiting agricultural productivity potential through small-scale irrigation, thus improving the target groups’ income and living conditions as well as stimulating economic development by virtue of knock-on effects along the various value chains in the region. This concept is still valid and plausible; its attractiveness is borne out by the long waiting list of currently 48 farmers’ groups. Those groups compete for becoming enlisted with the Programme Management Unit (PMU) for SIPMK support and are prepared to transform themselves into cooperatives. It can be assumed that such competition between applying groups tend to contribute toward commitment and group discipline. This hypothesis is substantiated to some extent by the weaker performance of cooperatives that were admitted to SIPMK in the early stages of phase I – without having had to compete.

The programme explicitly targeted farms with sufficient production potential, which resulted in a trade-off between economic impact and direct poverty reduction; the latter, by default, was not the programme’s main focus. With view to achieving high economic momentum at local level, this focus appears justified in retrospect. Conceptual weaknesses of the first phase comprised too small perimeter sizes; the admission of two schemes without prior competition; employing a multitude of relatively inexperienced local engineering firms for planning and supervision. They subsequently hampered effectiveness and efficiency, but were rectified prior to starting phase II.

Conceptually, SIPMK conforms to Kenya’s strategy for the agricultural sector – with particular emphasis on increasing productivity and cropping intensities. It forms part of the German-sponsored umbrella programme – Private Sector Development in Agriculture (PSDA).

Concerning the implementation approach, the principle of requiring a 50 % own contribution on a loan basis demanded a significantly higher farmers’ effort than comparable interventions – not only around Mt Kenya. Aiming at enhanced ownership, the principle of substantial own contributions can be considered particularly important for SIPMK’s success. Further in-depth investigation would be desirable to determine the – possibly supporting – role of competition among farmers’ group in this respect.

Relevance rating: 3 (phase I) and 2 (phase II)

Effectiveness

According to a variety of surveys and information sources (and despite a dearth of time series data), cropping intensities have increased to way above 200% in the SIPMK perimeters, as have yields. In comparison to maize and beans previously dominating under rainfed agriculture, a pronounced shift towards higher-value and high-yield crops can be observed under irrigation (banana, sweet potato, vegetables, and fruit). Cropping intensities are distinctly superior in comparison with similar schemes supported by other institutions. This is attributed to the farmers’ enhanced sense of ownership, commitment and discipline – mainly as a consequence of their high own contribution mentioned above. Meanwhile, the principle of increased financial contributions (albeit not on a loan basis) has been adopted by IFAD who is also supporting irrigation schemes in the region.

Pest problems have occurred sporadically, but not at a worrying scale so far. The majority of farmers have undergone at least some training on safe plant protection techniques. However, extensionists from the Ministry of Agriculture appeared doubtful on the appropriate application of pesticides. Within cropping pat-

terns, banana and sweet potatoes are dominating due to their production and income potential. At least in the medium term, a higher degree of crop diversification may be called for, as it is uncertain how long that “boom” can further sustain itself.

As a rule, agricultural produce is marketed individually, usually through brokers. Consequently, product prices tend to be inferior to those achievable under coordinated marketing using cooperative structures. Equally, coordinated production of particular crops and/or concerted purchase of inputs seem to happen only in isolated cases. Contract farming through the cooperatives has been initiated in some cases, with largely positive results. However, contract discipline – both from the purchasers’ and the farmers’ side – seems to leave room for improvement. Targeted advice and support – especially in the initial stages of actual irrigation operations – could help to exploit the cooperatives’ institutional ad-vantages more systematically. Experience shows that preparatory training constitutes a necessary, but not yet sufficient condition in this respect. In addition, continuous training, especially during initial operation, needs to be provided in all key fields.

Extension services by District Agricultural/ Cooperative/ Irrigation Offices (DAO/ DCO/ DIO) are available to a varying degree. However, service quality as such appears out of doubt. In this respect, extension effectiveness is constrained by a scarcity of public resources (budget, transport) on the one hand; on the other, farmers seem largely attentive and unaware of the Government’s new extension policy of “demand orientation”. Demonstration plots established by some cooperatives are positive complementary self-help examples for availing easily accessible extension advice to smallholders.

Effectiveness rating: 3 (both phases)

Efficiency

Concerning production efficiency, phase I fares far inferior to phase II (phase I: average unit costs of 6.617 EUR/ha; phase II: average unit costs of 3.011 EUR/ha). This difference was mainly caused by smaller scheme sizes in phase I; furthermore, the assignment of relatively inexperienced local engineering firms for planning and supervision caused severe implementation delays during phase I. In retrospect, the decision to increase scheme sizes from initially 40-100 hectares up to 80-200 can be considered justified, as significant gains in efficiency and in economies of scale could be achieved, without unduly compromising on the interventions’ participatory/ grass-roots nature.

Cost-benefit-calculations for selected schemes show economic returns in the range between 17 and over 35 % p.a. Even without considering additional effects like employment (see below), this points to good allocation efficiency.

Water abstraction permits have been duly obtained from the Water Resources Management Authority (WRMA); respective bills, however, are forthcoming only gradually, not least due to various constraints in terms of metering. This may lead to substantially accumulated bills for water user fees sometime in the future.

Efficiency rating: 3 (phase I) and 2 (phase II)

Impact

The programmes’ intended key impact was a significant contribution to improved livelihoods. This was confirmed unison in all meetings and discussions held: improved nutrition and health status, increased household incomes / availability of consumer goods and – in particular – greater opportunities to avail better education to the coming generation were stated as the most obvious improvements.

Within the livelihood dimension, one key aspect concerns the farmers’ ability to service their loan obligations that arise from participating in the programme. With repayment of the loan principal having fallen due, instalments have increased. Judging from information received, up to 25 % of the respective cooperatives’ members are challenged by this obligation. At the same time, the lack of ability and/or willingness – on the side of some farmers – to fully exploit the available irrigation potential was also mentioned. Establishing a causal link between those two phenomena, however, would require an in-depth analysis beyond the scope of this evaluation. Actual drop-out rates are way below 5 %; in such cases, farmers keep their land, but lose water rights. Those rights are transferred to „successor farmers” registered on stand-by lists

with the respective cooperatives. Those successors take over all rights and duties with regard to water use and loan repayment.

In terms of “spill-over” effects, employment generation featured most prominently: according to the discussions and interviews conducted, it can be plausibly estimated that for each hectare established under irrigation, between 1 and 1.5 full-time farm labourer jobs (albeit largely under informal arrangements) have been created, especially for the younger generation. This leads to conclude that at least 1,500 to 2,000 full-time jobs could be created as a consequence of SIPMK I + II. Concerning the number of seasonal/temporary jobs, such employment is apparently common in the range of between three and four person months per year in rain fed agriculture. From this baseline, quantifying additional employment created (e.g. in the harvesting season) turned out to be difficult in the framework of the mission. Reportedly, seasonal jobs have increased on a wide scale.

In terms of negative impact, no significant increase in malaria was reported – possibly due to the sprinkler technology applied, which does not lead to significant stretches of stagnant water. With regard to the application of plant protection measures (esp. pesticide spraying), it is far from certain whether training and extension efforts to that end are yielding the de-sired in effect in practice (see above). The need for complementary support and targeted action was highlighted.

Notwithstanding lower effectiveness ratings (resulting from weaknesses in terms of the co-operatives’ performance as well as in terms of extension outreach – see above), significantly improved livelihoods and employment justify the sub-rating „good” for both phases.

Impact rating: 2 (both phases)

Sustainability

With regard to the schemes’ operation, no major constraints have been reported. Maintenance fees levied from members range between 200 and 300 KSh/month. Within the coming years, these fees will need regular revision in order to correspond to actual maintenance requirements. At present, collection rates vary between less than 50 and 100 %. The following technical aspects appear to merit increased attention in the short term:

- Vandalism and/or theft (e.g. of structures like valves or illegal water-tapping upstream) seem to require immediate attention and (context-specific) targeted counter-measures at least in some sites.
- Irrigation discipline, esp. the exclusive use of pressure sprinklers (i.e. no hoses) will remain crucial for smooth system functionality and continuous water availability to all cooperative members.

Presupposing the continuous availability of sufficient irrigation water in the future, sustainability prospects can be regarded as favourable – not only in principle. Main causes are a generally high level of commitment by the cooperatives and their members, combined with a sufficiently robust technology. This assessment is supported by the continuing positive results from the Mitunguu Project: Mitunguu was among the first Kenyan smallholder irrigation schemes, it received support by German Development Cooperation in the ‘80s and early ‘90s. According to a comprehensive study commissioned in 2012, the scheme keeps delivering significant benefits to smallholder farmers as well as to the local economy.

In terms of sustained livelihood results, much will depend on the availability of targeted hands-on extension advice, which may come in various forms (including more organised sharing of experience and networking within and among cooperatives, the option to employ – possibly on a shared basis – agricultural technicians as “cooperative extensionists” etc.). The single most important success factor, nonetheless, has to be seen in the cooperatives’ coherence and their strong leadership. This needs to be accompanied by an appropriate set-up, with manageable “sub-group/unit” sizes as important element to allow for close (if needed: “face-to-face”) follow-up.

Sustainability rating: 2 (both phases)

Notes on the methods used to evaluate project success (project rating)

Projects (and programmes) are evaluated on a six-point scale, the criteria being **relevance, effectiveness, efficiency** and **overarching developmental impact**. The ratings are also used to arrive at a **final assessment** of a project's overall developmental efficacy. The scale is as follows:

Level 1	Very good result that clearly exceeds expectations
Level 2	Good result, fully in line with expectations and without any significant shortcomings
Level 3	Satisfactory result – project falls short of expectations but the positive results dominate
Level 4	Unsatisfactory result – significantly below expectations, with negative results dominating despite discernible positive results
Level 5	Clearly inadequate result – despite some positive partial results, the negative results clearly dominate
Level 6	The project has no impact or the situation has actually deteriorated

Rating levels 1-3 denote a positive assessment or successful project while rating levels 4-6 denote a negative assessment.

Sustainability is evaluated according to the following four-point scale:

Sustainability level 1 (very good sustainability): The developmental efficacy of the project (positive to date) is very likely to continue undiminished or even increase.

Sustainability level 2 (good sustainability): The developmental efficacy of the project (positive to date) is very likely to decline only minimally but remain positive overall. (This is what can normally be expected).

Sustainability level 3 (satisfactory sustainability): The developmental efficacy of the project (positive to date) is very likely to decline significantly but remain positive overall. This rating is also assigned if the sustainability of a project is considered inadequate up to the time of the ex post evaluation but is very likely to evolve positively so that the project will ultimately achieve positive developmental efficacy.

Sustainability level 4 (inadequate sustainability): The developmental efficacy of the project is inadequate up to the time of the ex post evaluation and is very unlikely to improve. This rating is also assigned if the sustainability that has been positively evaluated to date is very likely to deteriorate severely and no longer meet the level 3 criteria.

The **overall rating** on the six-point scale is compiled from a weighting of all five individual criteria as appropriate to the project in question. Rating levels 1-3 of the overall rating denote a "successful" project while rating levels 4-6 denote an "unsuccessful" project. It should be noted that a project can generally be considered developmentally "successful" only if the achievement of the project objective ("effectiveness"), the impact on the overall objective ("overarching developmental impact") and the sustainability are rated at least "satisfactory" (level 3).