

Mali – Programme for Northern Mali, Phases IV to IX

Ex post evaluation report

OECD sector	43040 - Rural development	
BMZ project ID	Phase IV 1999 65 609; Phase V 2001 65 571 Phase VI 2003 65 015; Phase VII 2005 65 101 Phase VIII 2006 65 653; Phase IX 2006 65 661	
Project executing agency	Ministry for the Environment	
Consultant	GIZ (formerly GTZ)	
Year of ex post evaluation	2011	
	Project appraisal (planned)	Ex post evaluation (actual)
Period of implementation	Apr 2000 - Feb 2009	Apr 2000 - Feb 2009
Investment costs	EUR 26.75 million	EUR 28.77 million
Counterpart contribution	EUR 4.95 million	EUR 5.70 million
Financing, of which FC funds	EUR 18.64 million	EUR 18.82 million
Other institutions/donors involved	GIZ / Global Nutrition Programme	GIZ / Global Nutrition Programme
Performance rating	2	
• Relevance	2	
• Effectiveness	2	
• Efficiency	2	
• Overarching developmental impact	2	
• Sustainability	3	

Brief description, overall objective and project objectives with indicators

The overall objective for all six phases of this project was to help stabilise the social and economic situation and maintain peace in Northern Mali (the Timbuktu region), this being the area most severely affected by the rebellion which took place between 1990 and 1994. The programme objective was the “efficient and sustainable use of land and water resources”. In Phase IV, the emergency aid activities provided under Phases I-III were phased out; it hence had an additional objective, this being to “improve the provision of social and material infrastructure”. The following indicators were defined for the programme objective: (1) all infrastructure provided to be utilised as intended three years after commissioning; and (2) average yields of paddy rice of 5 t/ha from the fields under irrigation. With social and physical infrastructure development initiatives having

come to an end in Phase IV, the programme objective was subsequently confined to “better utilisation of the potential for economic development” which existed in the programme region. This objective was retained from Phase V onwards. The yield indicator of 5 t/ha that was selected for Phase IV was updated, and from Phase VII onwards it was expanded into a utilisation indicator (85 % of the fields that had been developed to be under cultivation).

Under Phase IV, the construction of social and community infrastructure continued (to a limited extent) and then came to an end. In subsequent phases (V to IX), programme activities concentrated on the construction and repair of village irrigation schemes (*Périmètres Irrigués Villageois*; PIVs), and on improving water regulation in the flooding areas which are used for agriculture (seasonally flooded depressions known as *mares*). The main tasks for Technical Co-operation (TC) included preparatory activities to facilitate implementation of construction measures *per se* as well as establishing user organisations, and advising and qualifying those organisations in the use and operation of the irrigation facilities provided.

The target group was the rural population that was directly affected by the rebellion and its consequences, comprising approximately 150,000 persons altogether.

Project design/major deviations from original planning and their main causes

The first three phases of the programme comprised emergency relief measures which concentrated on establishing peace, stabilising the socio-economic situation and supporting the rehabilitation of physical infrastructure in the region west of Timbuktu. An evaluation carried out in 1999 by the BMZ (the Federal German Ministry for Economic Development and Cooperation) approved the FC/TC programme's continuation; but at the same time recommended a future focus on agricultural development projects in flood plains and in areas near rivers, in order to improve the region's long-term food security. This key recommendation was taken into account in the design of the phases after 1999. As a result, the programme's focus shifted to expanding facilities for pumped irrigation systems in small-scale farming (PIV) and preparing fields for flood cultivation (*mares*). Phases IV and V comprised the completion (or appropriate extension) of social and community infrastructure projects. In the course of the programme, studies were carried out in parallel to assess the sustainability of the investment projects implemented to date. Proposals arising from these studies were included in the modified programme design from Phase VII onwards.

Investment measures comprised:

- constructing and equipping a central workshop (*garage mécanique agricole*; GMA), which is operated by a private contractor under the supervision of the TC programme team;
- start-up finance for a “Rice Fund”, which allows those who use it to obtain production supplies in larger batches and at lower prices, and also enables them to sell rice at higher prices at a later point in time;
- start-up finance for a “Mechanisation Fund”, to provide producers with high-quality pump sets - complete with service parts, accessories and operating supplies – at cost prices;
- Constructing (or rebuilding) micro-banks (which, according to the original TC approach, should administer the Rice Fund); and, on a pilot basis, granting refinancing lines of credit (on market terms), which would be replenished in due course.

Due to the programme’s (at least initial) multi-disciplinary emergency aid character and its political nature, ownership lay with the Malian Ministry for the Environment. Direct responsibility for implementation was delegated to GIZ, within the framework of the largely autonomous programme set-up “*Programme Mali Nord*” (PMN).

User communities are responsible for the operation and maintenance of the PIVs and of the water inlet structures for the flooding areas (*mares*). As part of the TC project, they were provided with the preparation and training to enable them to carry out these tasks properly.

Since the completion of Phase IX in early 2010, the project has continued within the framework of component I of the new programme “National Programme for Small-Scale Irrigation” (BMZ no 2009 65 376) as “*Appui au Programme National d’Irrigation de Proximité (PNIP) dans le Delta Intérieur du Fleuve Niger*” (IPRODI). With the resumption of the programme under the IPRODI successor project, institutional responsibility was transferred to the Ministry for Agriculture at the beginning of 2010.

Key results of the impact analysis and performance rating

Without doubt, the programme has succeeded in making a significant and noteworthy contribution to improving local and regional self-sufficiency in basic food commodities, and in raising net incomes correspondingly amongst beneficiary households and businesses. Due in part to the sharp increases seen in production costs, the growth originally projected for real incomes from irrigated rice cultivation was not achieved solely through the initiatives of this programme; it was reportedly supplemented by

additional income from growing wheat and vegetables outside the rice growing season. Response by farmers received to date permits the conclusion that irrigation farming continues to offer beneficiary farmers adequate incentive to apply the intensive production methods that were hitherto promoted.

Experience to date has shown that these user communities have little difficulty in operating the facilities and ensuring their maintenance. They undertake the required works themselves, which, in general is done promptly and without significant external support. The central workshop (see earlier) carries out regular site inspections, and remains at the disposal of the user committees in case of major repairs beyond the user groups' capability. The workshop has also trained two persons in each user community to service the pumps, so that minor repair and maintenance operations can be carried out independently. For the time being, the programme structure continues to play an active role in the Mechanisation Fund. For this, an exit strategy needs to be developed by the end of the programme.

We have assessed the project's **developmental performance** as follows:

Relevance (rating: 2) The core problem identified at programme appraisal - inadequate utilisation of existing developmental potential, especially in the area of agriculture - remains extremely relevant today. Expanding small-scale irrigation (with extensive involvement of target groups) constitutes one of the most promising developmental approaches available. It therefore enjoys a very high level of priority within Mali's development strategy, especially in view of its effectiveness as a method for combating poverty in rural areas. The programme's objectives conform to a large degree with Mali's developmental priorities, especially with regard to maintaining peace and stability in the north of the country and promoting small-scale irrigation farming as a preferred option for reducing rural poverty. Similarly, the programme also conformed with the developmental priorities of the German Federal Government for securing peace, combating poverty and the sustainable management of natural resources, these being priority areas for the bilateral cooperation with Mali. However, the relevance of the programme approach was constrained by the following factors: (1) a lack of integration into sectoral dialogue and donor coordination; (2) a largely autonomous implementation structure, which designed implementation modalities that were highly programme-specific and could only be replicated to a limited degree; (3) the delayed consideration of institutional sustainability aspects regarding, in particular, input finance and repair facilities.

Effectiveness (rating: 2) The revised programme objective - “the efficient and sustainable use of land and water resources” - was either achieved or exceeded in every phase of the programme. Over the period from 2001 to 2008, average utilisation of the PIV areas developed under the programme stood at 89 %, as against a target of 85 %. With average rice yields over the same period of around 5.8 t/h per year, the target of 5 t/ha was exceeded by 16 %.

Efficiency (rating: 2) For the most part, output per area significantly exceeded the levels anticipated (by 50% in new PIV systems and 466 % in the *mares*, taken across all phases), without any associated increase in costs. This applied both to the new PIV facilities and to the flooding areas which benefited from improved water regulation. Construction projects were generally completed ahead of time, which proves the programme structures' high implementation capacity. Specific investment costs as well as TC costs remained well below the levels experienced in comparable projects in support of small-scale irrigation in Mali and/or the Sahel region.

At the assumed producer price for paddy rice, contribution at the time of ex post evaluation ranged from FCFA 146,328 (EUR 223) in the least favourable case to FCFA 446,328 (EUR 680) in the best example. (This excluded any imputed costs for work by family members, but did include a depreciation allowance for the motor pumps). At constant prices, the target figures have been achieved by a rate of between roughly 71 % and 84 % of the levels anticipated at project appraisal.

Overall it can be plausibly assumed that, in the area of rice cultivation, an acceptable level of aggregate allocative efficiency was reached (under the prevailing market conditions) to achieve effective import substitution. However, the pumped irrigation system - which is essential in the programme region, where there is no effective alternative - is more expensive and far less convenient to operate than other gravity-fed irrigation systems used in the country.

Overarching developmental impact (rating: 2) The programme's most important macro- and socio-economic effect lies in its contribution to improving local and regional self-sufficiency in a staple commodity - rice. This has enhanced the nutritional situation of the rural population, despite its having grown in size by around 210,000 since the beginning of Phase IV. The additional production quantity (which now stands at around 83,000 tonnes of paddy rice per year) is sufficient for the needs of some 533,300 people, or about 81 % of the total population of the Timbuktu region. Furthermore, due to the labour-intensive nature of cultivating, processing and selling rice (including

transporting it), the project has had a significant impact on employment and produced various multiplier effects; these, however, are difficult to quantify.

Analysis of the programme's impact on income levels and self-sufficiency in beneficiary households (based on a model which assumes an average household size of eight people and an additional area under irrigation of 0.25 ha) shows that the objectives being targeted were either attained or surpassed in each scenario. Given a daily requirement of 0.4 kg of paddy rice per person, the additional production generated through the programme is sufficient, in the least favourable scenario (a producer price for paddy of just FCFA 100 / kg), to cover the needs of a family of eight for 126 days (as against the initial target of 128 days). At a price level of FCFA 160 per kg this period increases to 230 days, equating to 25 days or 12 % above expectations. Assuming that on average three people benefit from each plot, the figures become 335 days at a paddy price of FCFA 100/ kg and 612 days at FCFA 160 / kg).

Sustainability (rating: 3) Based on operational and user experience, it is evident that the farmers are highly interested in intensive irrigated rice production. This is confirmed by the degree of utilisation achieved so far and the very high level of average rice yields; it can therefore be concluded that no significant problems have arisen to date in the operation and maintenance of the irrigation systems that have been built. Individual users or farmers' organisations successfully carry out essential pre- and post-production activities (obtaining production supplies, processing and selling). This is done on an independent basis, with no injection of programme subsidies. However, programme structures continue to play a very active role in the Rice Fund, and also in ensuring an appropriate supply of pumps and service parts – thereby compensating, on at least a transitional basis, for the previous lack of market-based solutions. The ongoing evolution and consistent implementation of modified operational concepts in this area – which is of central importance to sustainability – is one key conceptual aspect of the project's current successor phase (IPRODI).

Based on the above sub-ratings, the overall evaluation of the project indicates a good level of developmental performance (rating: 2).

General conclusions and recommendations

General conclusions and recommendations can be summarised as follows:

- (1) Both at project appraisal and at the start of implementation, medium- to long-term aspects of sustainability - including institutional considerations – need to be examined and addressed through suitable measures in the programme design, even in those projects which have been conceived within an emergency aid context.
- (2) Even in those projects with largely autonomous implementation structures reduced operational involvement of public partner structures, it must be borne in mind that responsibility for various key sustainability parameters usually rests with respective government/ public entities, esp. with respect to appropriate reforms (e.g. land use rights, defining property and usage rights over irrigation and drainage systems, and policies on taxation and duties).

Attached

Overview of Phase IV

Overview of Phases IV – IX		Project appraisal (planned)	Ex post evaluation (actual)
Phase IV 1999 65 609	Implementation start and duration	April 2000; 30 months	April 2000; 21 months
	Investment costs 1)	EUR 6.08 million	EUR 8.95 million
	Counterpart contribution	EUR 0.46 million	EUR 1.15 million
	Financing, of which FC funds	EUR 5.11 million	EUR 6.57 million
Phase V 2001 65 571	Implementation start and duration	January 2002 / 15 months	December 2001 / 10
	Investment costs 1)	EUR 2.32 million	EUR 8.95 million
	Counterpart contribution	EUR 0.60 million	EUR 1.15 million
	Financing, of which FC funds	EUR 1.53 million	EUR 6.57 million
Phase VI 2003 65 015	Implementation start and duration	January 2003 / 36 months	January 2003 / 36 months
	Investment costs	EUR 7.55 million	EUR 7.48 million
	Counterpart contribution	EUR 1.49 million	EUR 1.48 million
	Financing, of which FC funds	EUR 5.00 million	EUR 5.18 million
Phase VII 2005 65 101	Implementation start and duration	January 2006 / 25 months	January 2006 / 25 months
	Investment costs 2)	EUR 5.70 million	EUR 12.34 million
	Counterpart contribution	EUR 1.70 million	EUR 3.07 million
	Financing, of which FC funds	EUR 3.00 million	EUR 7.07 million
Phase VIII 2006 65 653	Implementation start and duration	January 2007 / 25 months	January 2007 / 25 months
	Investment costs 2)	EUR 1.80 million	EUR 12.34 million
	Counterpart contribution	EUR 0.20 million	EUR 3.07 million
	Financing, of which FC funds	EUR 1.50 million	EUR 7.07 million
Phase IX 2006 65 661	Implementation start and duration	January 2007 / 25 months	January 2007 / 25 months
	Investment costs 2)	EUR 3.30 million	EUR 12.34 million
	Counterpart contribution	EUR 0.50 million	EUR 3.07 million
	Financing, of which FC funds	EUR 2.50 million	EUR 7.07 million

- 1) The current actual costs stated refer to Phases IV and V combined; these cannot be reported separately.
2) The current actual costs stated refer to Phases VII to IX combined; these cannot be reported separately.

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:

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

Ratings 1-3 denote a positive or successful assessment while ratings 4-6 denote a not positive or unsuccessful 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. Ratings 1-3 of the overall rating denote a "successful" project while ratings 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" (rating 3).