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Programme  
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Mundial  
de Alimentos

Executive Board  
First Regular Session

Rome, 21 - 23 January 1997

## EVALUATION REPORTS

### Agenda item 8



Distribution: GENERAL  
**WFP/EB.1/97/8/Add.1**  
11 November 1996  
ORIGINAL: ENGLISH

## TERMINAL EVALUATION SUMMARY REPORT<sup>1</sup> ON PROJECT EGYPT 3214

### Land development and settlement in the High Dam Lake area

Total food cost	6 664 437 dollars
Total cost to WFP	7 332 527 dollars
Date of approval of project	29 October 1987
Date plan of operations signed	31 May 1988
Date of first distribution	1 January 1989
Duration of project	Five years + two years
Official termination date	31 December 1995
Date of evaluation	April/May 1996
Composition of mission	WFP/FAO <sup>2</sup>

All monetary values are expressed in United States dollars, unless otherwise stated. One United States dollar equalled 3.37 Egyptian pounds (LE) at the time of the evaluation.

<sup>1</sup> The full mission report is available upon request, in English only.

<sup>2</sup> The mission comprised a senior agricultural economist and mission leader (consultant), WFP/FAO; an agriculturalist (consultant), FAO; an irrigation engineer (consultant), FAO; and a rural sociologist (consultant), FAO.

### ABSTRACT

The project is in line with the national policies of increasing food security, utilizing scarce water resources efficiently, and moving the population away from densely inhabited areas. WFP food assistance was used effectively to raise the standards of living of poor farmers, labourers and fishermen. The economic returns to settlers ultimately reached levels that placed them well above the poverty line. The overall economic rate of return to foreshore irrigation was an impressive 28 percent, explained by the very low development cost and reliance on the self-help of settlers. These rates are much higher than those for most land settlement projects in Lower Egypt. Housing and access roads, also supported with food aid, were instrumental in making production in the settlement areas possible. While the beneficiaries generally fit closely the description of WFP's target population, the project did not succeed in reaching many women, partly because the project design had not made adequate provision for the active participation of women. Environmental concerns, improvements in foreshore irrigation, and better approaches to targeting women would need to be addressed in any future project.

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## NOTE TO THE EXECUTIVE BOARD

**This document is submitted for consideration to the Executive Board.**

Pursuant to the decisions taken on the methods of work by the Executive Board at its First Regular Session of 1996, the documentation prepared by the Secretariat for the Board has been kept brief and decision-oriented. The meetings of the Executive Board are to be conducted in a business-like manner, with increased dialogue and exchanges between delegations and the Secretariat. Efforts to promote these guiding principles will continue to be pursued by the Secretariat.

The Secretariat therefore invites members of the Board who may have questions of a technical nature with regard to this document, to contact the WFP staff member(s) listed below, preferably well in advance of the Board's meeting. This procedure is designed to facilitate the Board's consideration of the document in the plenary.

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## THE PROJECT AS PLANNED

1. Egypt is virtually all desert and has extremely limited arable land due to scarce water resources. The Government's strategy is to enhance food production both by increasing productivity and by extending the cultivated area through land reclamation. The areas around the lake fit this strategy very well.
2. The immediate objectives of the project were to: a) redistribute the population by settling 4,500 families in the High Dam Lake area and provide them with employment opportunities; b) improve the standards of living of these families; and c) develop the agricultural base of the settlement area.
3. Difficulties in carrying out upland irrigation (see paragraph 20) resulted in an amendment of the plan of operations in 1992, reducing the upland component from 11,500 to 650 feddans<sup>1</sup> and increasing foreshore development from 11,500 to 16,000 feddans (see the annex for details). Consequently, the number of settlers in the foreshore areas was increased to 3,200 and that of those in the upland areas reduced to 130.
4. WFP food assistance was to serve: a) as an incentive for settlers to construct their houses; b) to help assure subsistence over a two-year period for settlers in the foreshore area and over three years for upland settlers; and c) as part payment to workers involved in constructing access roads and in producing tree seedlings.
5. Settlers were to be charged 10 percent of the value of the food rations, to be matched by the Government. The generated funds were to be used as follows: a) establishment of a credit fund for farmers to purchase equipment (40 percent); b) provision of credit to finance agricultural inputs through cooperatives (20 percent); c) upgrading of schools and other social infrastructure (15 percent); d) supporting other settlement activities (10 percent); e) setting up training centres for women and other activities mutually agreed upon by the Government and WFP (10 percent); and f) supporting the monitoring and evaluation (M&E) unit of the project (five percent).

## PROJECT PERFORMANCE ASSESSMENT

### Project management and food utilization

6. The Government has satisfactorily met its commitments on financial resources, logistics and in the distribution of food aid. The High Dam Lake Development Authority (HDLDA), a semi-autonomous agency, at the time of evaluation under the Ministry of Agriculture and New Communities (MDNC), and subsequently placed under the supervision of the Ministry of Agriculture and Land Reclamation, was adequately staffed, and commitment to the project was high.
7. At the end of the project on 31 December 1995, it had received and distributed 96 percent of its total commitment; post-c.i.f. losses were negligible (0.01 percent of receipts; they occurred through spillage during handling and storage). The shortfall in

<sup>1</sup> One feddan equals 0.42 hectare.



delivering the total commitment was due to WFP resource constraints. In the opinion of the mission, this shortfall had no negative impact on overall project execution or performance.

8. Food was not always used as planned. Some settlers were bachelors when they arrived, although they received a family ration; and others came to the area alone for a year or so before bringing their families. While food in excess of the individual's needs was sometimes sent back to family members in the home village, in many cases it was used in support of the settlement activity as compensation for labourers who were hired to assist in land development and farming.

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## OUTPUTS

9. Revised targets have all been met, and for the construction of access roads they were exceeded by over 50 percent (see paragraph 26 and the annex for details).
10. *The development of foreshore farming areas* was undertaken by groups of settlers who voluntarily join together; this had not been envisaged originally. The group members were relatives, or to a lesser extent friends from the same village of origin. Varying in size, the groups not only farmed their land holdings as a single unit, but they also jointly marketed products and shared input costs and labour. These groups were highly effective and a real strength of the project. This type of organization would appear to have the potential of being replicable in other parts of Egypt and should be considered for this purpose.
11. Although it has been working well enough for the time being, the present irrigation system (mobile pumps that channel water into short canals) is costly for the Government, since it requires continual excavation.
12. At the time of project appraisal, it was assumed that each settler would be able to plant five feddans of forage in the first year of settlement, which would require only minimal irrigation. Settlers could introduce one and then two feddans of vegetables in subsequent years. This pattern has not turned out as planned. While the groups have been assigned about five feddans per member as intended, during the first year they appear to have been able to cultivate only about 20 percent of this area. In year two they cultivated about double this amount. At the time of evaluation, when most settlers had participated in the project for four to six years, settlers reported that owing to limited pumping capabilities in particular, they were cultivating about 80 percent of their area in the winter and less in the summer season.
13. Permanent forage was difficult to grow on the foreshore. Although sorghum that can be used as forage was an important part of the cropping pattern, it has been secondary to that of watermelon, vegetables and wheat. Watermelon and tomatoes provided the greatest economic value. Crop yields of cereals and vegetables varied according to the number of years the land had been under cultivation, and they were low in comparison to farming areas in the Nile Valley and Delta. However, they were comparable to those attained in many other New Land areas of Egypt.
14. In view of the sandy soils of the lake shore, in most cases farmers found it necessary to incorporate livestock and poultry manure or chemical fertilizers. Although playing an important and growing role, livestock were still not numerous enough to generate the required manure.

15. Marketing appeared to be going quite successfully. Contrary to initial expectations that the majority of the crops would be marketed through cooperatives (with the exception of fruits and vegetables), all products were marketed through private channels.
16. The settler groups have stronger marketing power than individual farmers. They were able to grow on a larger scale than individuals, and they managed to harvest and market in relatively large lots, often in full truckload quantities. During at least the first two years, the project authorities provided free transportation as far as Aswan. A small but growing number of groups succeeded in going beyond this stage, and they were successfully arranging and paying for their own trucks.
17. Technical information and training of settler groups were provided through site visits and direct explanations by the agricultural engineer/extension agents employed by HDLDA. These were relatively well informed and motivated, and the system appeared to work well.
18. **Development of upland farming areas.** In contrast to the foreshore areas, the complete irrigation infrastructure for water delivery to the farm gate was supplied by the Government. Farmers received water under pressure, which was then used for irrigation by gravity flow. Consequently, the development of the upland areas required less labour and was less expensive to the farmer than was the system being followed on the foreshore. However, for the Government, upland irrigation has proven to be far more difficult and time-consuming to establish, and the costs have been far higher.
19. Because of technical difficulties in setting up the large pumping systems and the increasing price of electrical energy over the past years, HDLDA decided to place more emphasis on foreshore irrigation. However, the major factor was the denial of the Ministry of Public Works and Water Resources (MPWWR) of permission to use lake water for irrigating upland areas. Only some months ago, HDLDA received authorization in writing from MPWWR to irrigate up to 10,000 feddans of upland area.
20. The five-feddan units were farmed individually. In the year following settlement, farmers planted fruit-trees - mainly date, lemon and guava. Great emphasis has been given to growing watermelon and tomatoes. Also, there was a significant amount of permanent forage, which is easier to grow than on the foreshore. Originally, the establishment of fruit and windbreak trees was envisaged to be a major factor in the uplands. However, in view of the settlers' insufficient knowledge of tree-crop production and lack of guidance from the project, the trees planted have not developed to any great extent.
21. Housing construction by the settlers with WFP assistance appeared to satisfy the basic needs for shelter. Most settlers have constructed their houses near their farms, normally in a cluster which contains the houses of all members of their farming group.
22. **Roads.** The revised target of 275 kilometres of access roads has been surpassed by 55 percent. However, it should be noted that additional road construction and improvement over and above project targets were funded by HDLDA or MDNC, and not undertaken on the basis of food for work. Fifty-five percent of the access roads have been paved; this was initially not planned.
23. **Tree nurseries.** While the target of producing 2.78 million fruit- and windbreak tree seedlings was achieved, only 600,000 seedlings were distributed. This was due to the fact that most seedlings were to be used in upland areas, the development of which was greatly scaled back as of 1992. It is regrettable that when the plan of operations was amended in 1992, tree seedling production was not adjusted accordingly.



24. **Village and social infrastructure.** The implementation process appeared to have focused on facilitating farm production more than social services. Therefore, an acceptable pattern of schooling and literacy training was not developed, and illiteracy among project children and adults was being unnecessarily perpetuated.
25. **Generated funds.** As at 31 December 1995, generated funds amounted to LE 2,390,192, including the Government's contribution. Because of fluctuations in the rate of exchange, it was not possible to compare this amount accurately with that projected in the plan of operations. However, in dollar terms the total amount generated appeared to have exceeded the projected amount. As loans made to beneficiaries were repaid, an additional LE 942,786 was made available for use.
26. Funds utilized by the end of the project totalled LE 3,332,998. The largest portion went to provide credit for farm equipment as intended (pumps and tractors, livestock, seeds, etc.). Although the full credit needs of the settlers could not be met, the loans were still very beneficial.
27. The project appraisal was incorrect in assuming that credit would be available through cooperatives in the area. Although the project has promoted the organization of four cooperatives for distribution of farm inputs and livestock, these cooperatives have not developed to the point where they are able to administer and distribute credit. As credit provided either through the generated funds or direct loans from the Government has not been sufficient to satisfy the needs, many farmers have relied on borrowing from merchants. Some settlers have been able to borrow money for farm inputs from the Agricultural Development Bank office in Aswan city. However, such credit was extended only to individuals and not to the groups.
28. Funds were also spent to purchase six mobile demonstration centres for agricultural extension and to support monitoring and evaluation activities; a portion of these funds was used for a socio-economic survey conducted during 1991-93.
29. The women's training centres planned have not been established. Furthermore, the use of funds for other activities specifically designed to enhance women's role and participation in the development of their communities proved to be very disappointing. As finally devised, these funds were spent for "women's loans" of up to LE 1,000, primarily in support of farm production. In most cases, these loans were not controlled by women, and did not serve to enhance their role or participation in the project.

### **Role and functions of food aid**

30. The evaluation confirmed that food aid was a valuable contribution to development. Under the circumstances of the lake area, it was probably more valuable to the settlers in many cases than cash would have been. WFP food rations provided a significant proportion of the settlers' basic nutritional requirements in a remote area where procuring food was difficult.
31. Food aid also provided a much needed income support in the first years of settlement when the beneficiaries' own production had not yet started or was still quite limited. Receiving food aid enabled settlers to devote their own cash to procuring farm production inputs and making down payments on irrigation pumps.
32. WFP's intended functions of food aid as an incentive and part payment of wages for other project activities have been largely fulfilled. Housing and access roads were instrumental in making production in the settlement areas possible.

## Beneficiaries and benefits

33. As the project has evolved, and particularly after the decision to suspend the development of upland areas, the composition of the actual beneficiary population has varied. The number of fishing boat workers was only about 20 percent of the planned figure apparently because of conflicts between the labour requirements of farming and the work schedules as fishermen, and conflicts with the boat owners for whom they worked.
34. Many Nubians from the Kom Ombo who had formerly inhabited the area flooded by the High Dam Lake lost interest in joining the project when it was decided that there would not be as much upland farming as had originally been planned. However, significant numbers of Nubians did settle on some foreshore areas.
35. The aim of settling Bedouins had limited success, although project staff have encouraged Bedouins to settle. Only some 15 families chose to settle, which was under the 200 planned.
36. Given the lower participation of the groups that had been specifically targeted, the gap was filled by labourers and landless or near-landless farmers from densely populated areas. Interviews by the mission verified that many of these did come from the Governorate of Aswan, but that others came from Sohag and Qena, just to the north. But a surprising number came from low-income areas of the Nile Delta.
37. Although the mix and proportion of beneficiaries has varied from the original plans, a high percentage of the actual project participants nevertheless falls into WFP's poor and food-insecure target group. Thus, in the opinion of the mission, the project was well targeted.
38. **Gender issues.** The project design did not envisage an active participatory role for women in terms of access to land, training, agricultural credit or extension. Women have been viewed primarily in their role as wives and mothers, and as additional family labour, rather than as productive persons in their own right. Although the incidence of poor households headed by women is perceptibly on the increase in Egypt, the project did not target households headed by women, possibly because of the hardship associated with settling on and cultivating new land and with the absence of social support structures during the first years. This was to some extent exacerbated by the fact that in many cases wives were left behind in the villages of origin during the initial settlement phase.
39. Training in handicrafts was provided by the Ministry of Social Affairs, but it was limited not only in terms of number of participants and areas covered, but also in the extent to which it contributed to income generation.
40. **Economic benefits.** Settlers experienced negative cash flow during the first year or two, but their situation improved after that. By the fourth year, the settlers' income rose above Egypt's current absolute poverty level of LE 3,399 per family per year. Food aid was instrumental in supporting the settlers during this period of low income. By the end of the sixth year, however, it was estimated that beneficiaries earned a net annual cash flow of LE 8,447 per family in foreshore, or LE 8,682 in upland areas. After adjusting for differences in the exchange rate, these levels were three to six times greater than those quoted for poor workers in the amended plan of operations. In other words, their situation has improved greatly as a result of the project.
41. The mission estimated that the total development cost per feddan of foreshore farming area was LE 3,130, whereas the cost to develop the upland area was estimated at LE 8,687 per feddan. According to a recent government study, these costs compare to an average of



LE 9,753 per feddan for developing new land settlement areas in Lower Egypt. Costs for Lower Egypt projects include lengthy canals, electrical grids and certain utilities which were either not required or not supplied in the Lake area. Reliance on self-help housing represented another opportunity for the Government to save money in the High Dam Lake area.

42. Taking into account only the costs to farmers and the Government, the economic return to foreshore settlement was 35.5 percent. The rate was 28.1 percent when the cost of food was also considered. These rates are much higher than those for most land settlement projects in Lower Egypt. The rate of return for the upland areas at the High Dam Lake was a much lower 10.5 percent, considering only farmer and government costs, and 9.4 percent when the cost of food aid was also included.
43. **Employment.** Since the initial land clearing took a lot of effort, and because vegetable and melon crops were very labour-intensive, the use and availability of labour were critical elements of the farming system. Despite joint sharing of labour within groups and reciprocal exchange between groups, hired labour was also required. The project has thus been generating a demand for additional labour. Some people who originally came to the area as labourers later became settlers.

### Monitoring and evaluation

44. In general, the extensive information collected on an ongoing basis by the project authorities and reported to WFP appeared to be a reflection more of desired targets than of actual performance. Not enough effort has been made to analyse monitoring data and use these data for providing guidance to management.
45. The socio-economic study which was carried out during 1991-93 also contained much information. Judging by the English translation, however, this study was not always well documented or clear in its analysis. Nevertheless, it did provide some guidance to project management, particularly with regard to problems which the settlers were encountering and difficulties experienced in upland irrigation at the time.

### Environmental considerations

46. There was concern among some environmentalists and government officials in Egypt that farming the High Dam Lake shore would cause pollution. This was a valid concern which project staff took into serious consideration. The project has been taking various approaches to reduce the need for chemical insecticides. Biological pest control materials were being produced and distributed to farmers by the project, and biological approaches were being taken to improve soil fertility.
47. Although the environmental impact from foreshore agriculture appeared to be minimal at the time of evaluation, many of the organic farming approaches being used were still in the early stages of development and thus not fully proven. Moreover, as farming along the lake shore expanded and intensified, the potential for adverse environmental impacts would increase. There did not appear to be a clear statement of the project's policy on these matters, and there was some uncertainty among the project staff as to just what the policy was.

### Sustainability

48. The project's sustainability was enhanced by the profitability of the farming in which the settlers engaged. However, a number of issues raised concerns. The planning of roads,

village settlement locations and social services appeared to be somewhat ad hoc, and it was not certain that these facilities were being placed in the best locations. Furthermore, no source of credit was developed to replace the current settlers' interest-free loans. Moreover, the existing irrigation system on the foreshore was costly. Project staff should forge ahead with their plan to identify and introduce piping (as originally intended) that the settlers could connect to their pumps.

## CONCLUSIONS AND RECOMMENDATIONS

49. Overall, the project was well implemented and achieved good results. Weaknesses in the original project design, such as the assumption that local cooperatives could be used to provide credit and the failure to address adequately the needs of female beneficiaries, were not overcome in the project as implemented, and these matters would have to be addressed in any future project, together with a number of other important issues highlighted below.
50. Insufficient attention has been paid to what will happen when the project ends. This relates to how the basic social and governmental services that are now being supplied by the project and HDLDA might be transferred to regular agencies of the Aswan governorate, and to whether or not transportation and agricultural services now being provided to settlers free of charge could be effectively provided by the private sector. Planning is required to provide for these transitions.
51. Foreshore farming areas are scattered in a narrow band along the lake in a dispersed pattern which presents many challenges for the provision of roads, villages, schools and other infrastructure. The present planning process appeared to be ad hoc and should be reconsidered by HDLDA before going ahead with significant new settlement.
52. It is also recommended that HDLDA develop a clearer policy on environmental impact.
53. The mission made a number of detailed recommendations which are included in the full evaluation report. The highlights of these recommendations, which have been accepted by the Executive Director and the Government, are as follows:
  - a) That the project authorities carefully study practical ways to improve access of beneficiaries to credit from the formal agricultural banking sector and that a way be found to qualify the foreshore groups (not just individuals) for such credit.
  - b) That the project reevaluate its approach to training women and providing them with better access to resources; this effort might include hiring female extension agents and training male staff in gender issues.
  - c) That more attention be paid to gathering accurate monitoring information, including information about women's status and needs, and that this information be analysed in a more systematic way, for use in guiding project decision-makers.
  - d) That any future appraisal mission review issues related to the allocation of food aid between land settlement and housing, environmental impact, use of water resources, and approaches to targeting women.



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## LESSONS LEARNED

54. WFP assistance in support of settlement appears to make a valuable contribution to development. Given the difficulties of procuring food in remote areas, WFP rations are probably more valuable to settlers than cash would have been. The level of incentive and the number of years of WFP assistance required to stabilize the farmers economically in settlement areas need to be determined at the appraisal stage and monitored on an ongoing basis.
55. It is of utmost importance that the control and ownership over resources and assets created be established properly from the beginning. Furthermore, the issue of environmental impact needs to be addressed by appraisal missions and such impact regularly monitored during the project.

**ANNEX**



## OVERALL TARGETS AND ACHIEVEMENTS

Activity	Unit	Target according to amended plan of operations 11.11.92			Achievements as at 31.12.95			Achievements compared to targets (%)	
		Output	Total workdays for food	Total individual rations	Output	Workdays performed	Individual rations distributed	Output	Workdays
Construction of houses	No. of houses	3 330	2 331 000	11 655 000	3 330	21 331 000	11 655 000	100	100
Upland farming	Feddans No. of farmers	650 130	142 350	711 750	650 130	142 350	711 750	100	100
Foreshore farming	Feddans No. of farmers	16 000 3 200	2 336 000	11 680 000	16 000 <sup>1</sup> 3 200	2 336 000	11 680 000	100	100
Road improvement	Km. No. of settlers/workers	275 9 350	825 000	4 125 000	425	825 000	4 125 000	155	100
Seedling production	No. of seedlings No. of farmers	2.8m 110	200 750	1 003 750	2 800 000 <sup>2</sup> 90	200 750	1 003 750	100	100
Training in housing construction	No. of trainees	1 200	72 000	360 000	1 200	72 000	360 000	100	100
<b>TOTAL</b>		-	<b>5 907 100</b>	<b>29 535 500</b>	-	<b>5 907 100</b>	<b>29 535 500</b>	<b>100</b>	<b>100</b>

<sup>1</sup> Area distributed; area actually cultivated varies from season to season.

<sup>2</sup> Quantities produced in nurseries. Of these, only 600,000 have actually been distributed.

