

SUMMARY

of Evaluation of the "Chantiers régionaux de Développement" Program (CRDP)

Background

1. USAID support to CRDP under PL 480 Title I started October 1st, 1987, with an amount of \$19.1 million over one year. The objective of this support was to enable the Tunisian Government to expand by 35,000 jobs the capacity of the "Chantiers" program - a long-standing labor-intensive works program designed to help absorb seasonal rural unemployment and urban unemployment - in order to face the increase in unemployment which was expected to result for a few years from the structural adjustment program which was initiated in 1986 to restore the Tunisian economy through an austerity policy. The situation was aggravated at the beginning of 1988 by an extremely severe drought.

2. The aim of the evaluation, which took place after seven months only of USAID assistance, was, first, to provide quantitative estimates of the results achieved, particularly in terms of employment and, second, to provide the basis for in-process improvement in operation and monitoring of CRDP.

Estimates and evaluation of results achieved

3. At the time of evaluation, only data concerning the October-December 1987 period of CRDP were available. During that period, 1,328,579 man-days of work were generated (as against an expected 2,130,000 man-days) with TD 3 million of credits allocated (as against TD 4.5 million). This can be taken as an equivalent of 22,150 jobs created (as against an expected 35,000). Neither the delay in starting implementation nor the 3-4 months delay in monitoring are surprising since the CRDP just started a few months ago. If indirect and secondary effects are taken into account, employment generated may be about 20 per cent more.

4. The total amount of man-days generated in the "Chantiers" program as a whole in 1987 was about 15 million (or an equivalent of 65,000 jobs for eight months), not including the above mentioned USAID support. This shows that the CRDP input during the last quarter of 1987 was by no means negligible, particularly if one has in mind the number of registered unemployed (314,000 in 1988, not all of them of course being prepared to work in the "Chantiers") and the increase in registered unemployment over the last four years (69,000).

5. CRDP funds have been allocated to directly productive activities (forestry, soil and water conservation): 64% in 1987 and 70.8 in 1988, the balance being mostly for the improvement and maintenance of urban public works and (8.9% in 1987) of archaeological sites. This distribution appears to be quite appropriate, considering, on the one hand, the need to generate long-term benefits and, on the other hand, the very heavy present urban unemployment pressure and the social demand for improvements in small cities and suburbs.

6. The volume of CRDP physical achievements over three months is rather impressive: planting 192 ha of forest trees; protecting 1896 ha of forests; planting 451 ha of fodder shrubs; improving 390 ha of pastures; improving 206 km of forest roads; protecting 182 ha against desertification; land levelling on 2081 ha; strengthening dams and weirs over 5086 ha; developing river catchment areas over 365 ha; connecting streams over 636 ha; building 15 kms of sidewalks, and so on.

7. Quality of work, particularly in soil and water conservation projects, is excellent. This good performance, which is due to the skills and devotion of technical staff of the services concerned, shows that the allocation of 20 per cent of local currency proceeds for materials, use of equipment and supervision should be kept at this level.

8. Although data were very limited on long-term employment and economic effects of forestry and soil and water conservation projects, it appears that, in the long run, these projects, as parts of large development projects, will be positive economically speaking - and consequently for employment too. The consultant's report deals with these aspects as extensively as it is possible now.

Operation and management of CRDP

9. Though there is no advance planning of CRDP activities, they are carried out in harmony with development programs since, once credits have been allocated, those parts of approved projects which are technically suitable for labor-intensive methods are entrusted to the "Chantiers". Nevertheless an advance listing of CRDP future activities, according to selection criteria, would result in better planning.

10. Administrative support to the "Chantiers" program in general, and to CRDP particularly, is extremely thin since there is no staff working full-time on the "Chantiers". It seems that a small full-time cell at central level would facilitate monitoring and evaluation in the future.

11. Project selection criteria concerning the employment impact of and economic return from projects are conceived in very general terms, with the result that information in these respects

in project proposals is rather vague. The more precisely selection criteria are defined, the better the selection will be. This is the reason for the relatively detailed recommendation made below in this regard.

12. Criteria for worker selection are essential for alleviation of hardship. The only criteria at present in CRDP are: unemployment, and number of dependants. Since there are too many candidates, sometimes a rotation system is organized. It seems that such a system should be generalized to prevent certain workers to stay indefinitely in the CRDP while others would have no access to it. Moreover, to reach the poorest in rural areas, consideration should be given to selecting, first, landless workers.

13. Remuneration and conditions of work in the "Chantiers" seem to be acceptable. Though unskilled labor is paid only TD 2 per day (plus World Food Program commodities valued at TD 0.5 in forestry and soil and water conservation projects), which is substantially lower than the minimum agricultural wage (now TD 3.050), there are more candidates than jobs to be offered. An interesting experiment is the organization of "brigades mobiles" with skilled and unskilled labor which work as autonomous units and can be transformed into enterprises.

14. Concerning reporting and monitoring of program implementation, complaints were made that it was difficult to collect information at site for projects which include several activities, and for Governorates to produce in time data on man-days, on units achieved and on actual expenditures. Actually, in the October-December 1987 report, no information was given on materials and supervision costs while a number of physical achievements were not quantified. The recommendations made below in this respect take into account the various views which have been expressed.

Recommendations

1) Improvements in the Program to better achieve the objectives of alleviation of hardship

(1) An advance listing of projects to be carried out by the "Chantiers" in the future, together with a ranking of projects according to selection criteria would permit more rigorous planning at Governorate level:

(1) Project selection criteria could, as far as possible, be refined to include:

- complementarity with other development programs or projects;

- an estimate of expected benefits and costs, and of distribution of benefits among various groups of the population;

- short-term employment generation, including direct and indirect employment;

- longer-term employment generation after project completion;

(iii) For selecting workers, in addition to the criteria already in use, the rotation system should be generalized, for simple tasks which do not require substantial on-the-job training, when the number of candidates is very high; moreover, priority should be given to landless workers and to peasants owning a plot smaller than a predetermined surface;

(iv) The 20 per cent average proportion for non-wage costs in CRDP projects should be kept;

(v) The present project-mix in CRDP (70 per cent for forestry and soil and water conservation; 30 per cent for other projects, including mostly urban projects) should also be kept;

(vi) The experiment of "brigades mobiles" should be encouraged and, if possible, expanded.

(b) Improvements in methods of management including reporting and monitoring

(i) Establishment of a small permanent cell, working full-time on the "Chantiers" programs, at central level (COGEDRAT) would make easier the management, monitoring and evaluation of CRDP as part of the overall "Chantiers" activities;

(ii) For reporting, data should preferably be submitted by Governorates to COGEDRAT by project rather than by adding up all activities of the same nature, leaving it to COGEDRAT to add up data on every activity as contained in each project information in order to report to USAID;

(iii) Henceforth only data on physical achievements and on man-days achieved should be produced on a quarterly basis, whereas financial data on expenditure should be submitted on half-yearly basis.

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Consultant Report
on the Operation and Results
of the "Chantiers de développement" Program

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I. BACKGROUND

1. Since 1954, Tunisia has embarked on a major labour-intensive works program specially designed to help absorb widespread seasonal unemployment in rural areas as well as urban unemployment while promoting development through productive projects. For ten years now, this "Chantiers de développement" program has been closely tied with the regional development program, although a distinction is made between the "chantiers régionaux" and the "chantiers nationaux" according to the source of financing - either at Governorate or at national level. In spite of the success of the program, the Tunisian Government has been led to renew it annually, particularly because of population expansion.

2. The structural adjustment program which was initiated in 1986 and embodied in the VIIth Economic and Social Development Plan 1987-1991 in order to restore the Tunisian economy on a sounder basis by reducing budgetary deficit and external trade deficit started satisfactorily, as shown in the "Budget économique 1988". In 1987, the GDP grew by 5.5% while exports increased by about 12%. However, the level of investment at constant prices went down in spite of a strong increase in national savings, which resulted in an employment generation of 35,000 as against a 40,000 jobs forecast.^{1/} This was not unexpected considering the austerity policy which characterizes the structural adjustment program, at least in the short run, and which resulted in curtailment of operations in manufacturing and construction industries in 1987.

3. This particular situation, which may cause social discontent mostly in urban areas and aggravates the persisting unemployment and under-employment situation in rural areas, is the "raison d'être" of both the expansion of the "Chantiers régionaux de développement" program by the Tunisian Government and the allocation of \$19.1 million equivalent by USAID from PL 480 Title I to expand the program from the 25,000 jobs planned by the Government under the Regional Development Program to a total of 60,000 jobs over one year starting October 1st, 1987.

^{1/} République Tunisienne: Budget économique 1988, Novembre 1987, pp.2-6

4. PL 480 commodities (wheat, corn, soy oil) are all the more necessary as increased unemployment has a negative impact on malnutrition. Handling and storage of commodities raise no problem in Tunisia and marketing is done through the "Office National des Céréales" and the "Office National de l'Huile". It was confirmed during the consultant field visits that these commodities are well accepted by consumers and involve no difficulty in preparation. Although Tunisia is an exporter of olive oil, olive oil is too expensive for the poor who accept soy oil very easily.

5. An evaluation of U.S. assistance to CRDP 1/ was scheduled for April 1988. According to the terms of reference, the objectives of this evaluation, which actually took place at an early stage of U.S. assistance, were twofold. First, to provide quantitative estimates of the results, particularly in terms of employment, and second, to provide the basis for in-process improvement in operation and monitoring of the program.

II. SCOPE OF THE WORK

6. As defined by U.S.A.I.D. and E.D.C., specific analytical tasks to be carried out included:

(a) Review available data to quantify current unemployment by geographical area - Governorates are the principal geographical units to be examined.

(b) Review progress in implementation of the Chantiers program to assess the extent to which it has been effective in alleviating the unemployment impacts of the structural adjustment program. Both direct impacts (i.e. employment) of displaced workers and indirect impacts should be examined. The latter may include indirect employment generated as a result of injection of resources into an area via the Chantiers program.

(c) To the extent feasible, estimate the economic benefits of the programs undertaken, especially in such productive areas as soil and water conservation and reforestation. Estimate the direct and indirect impacts of U.S. assistance portion.

(d) Examine the management procedures including: criteria for worker selection, allocation of resources to the governorates, technical design and supervision of activities, computer system for monitoring of implementation of the Chantiers program.

1/ "Programme des Chantiers régionaux de développement", which is taken as that part of the "Chantiers" programme which is financed out of US assistance funds.

Based on the above analyses:

(e) Assess the appropriateness of the allocation of resources to salaries and to support costs of projects, including equipment, supplies and supervision.

(f) Recommend improvements in the program to better achieve the objectives of alleviation of hardship associated with unemployment resulting from the structural adjustment program.

(g) To the extent appropriate and feasible recommend improvements in methods of management including reporting and monitoring of program implementation by COGEDRAT 1/ and USAID.

7. The information collected as well as the consultant's views and estimates in these respects are given hereafter.

III. CURRENT UNEMPLOYMENT SITUATION

8. The registered unemployment rate, which amounted to 13.1% of the labour force in 1984, reached 14.3% in 1987 2/. The total number of registered unemployed was 245,200 in 1984 as against an estimated total number of 314,000 in 1988, i.e. an increase of 28.06% over four years or a 6.17 annual growth rate (compounding continuously), more than double of the population growth rate (2.5% in 1987-1988 3/). Of course, these figures substantially under-estimate the actual number of unemployed, particularly in rural areas where, according to certain governors, the number of seasonally unemployed might be three times higher than the numbers of those who register, at least in the extremely severe drought conditions which prevailed at the beginning of 1988.

9. Another evidence of this very serious situation is that, due to the massive arrival of the youths to the labour market, additional labour supply, which was estimated to be 275,000 during the Fifth Plan period and 324,000 during the Sixth Plan 1983-1986, would amount to 346,000 over the Seventh Plan period 1987-1991 comparing with a total employment generation of 240,000 jobs only. Because of internal migrations, regional projections show that, out of 346,000, 207,000 additional demands for work would emanate from the urbanized North-East and Center-East regions; one third of the demands, however, would come from rural areas 3/.

10. The following table gives the number of registered unemployed by regions and governorates in 1984 and 1988; it shows that the sharpest increase occurred in the North-West and Center-West governorates (an average 45.6% increase over four years). In 1984, in Tunisia as a whole, 58.5% of unemployed were in the 18-24 age group while 80% had only primary education or were illiterates (34.7%).

1/ Commissariat Général au Développement Régional et à l'Aménagement du Territoire.

2/ Budget économique 1988, p. 52

3/ Id., p. 53

4/ République Tunisienne, VIIe Plan de développement économique et social 1987-1991, pp. 72-73

Number of registered unemployed (age 18-59)

Governorates and Regions	1984 1/	1988 2/
Beja	11.800	15.650
Jendouba	23.200	25.278
Le Kef	12.200	20.604
Siliana	9.200	18.000
NORTH-WEST	56.400	79.532
Kairouan	11.300	26.000
Kasserine	11.900	19.611
Sidi Bouzid	9.100	4.000
CENTER-WEST	32.300	49.611
Gafsa	10.000	13.900
Tozeur	1.900	2.700
Kebili	2.300	3.850
SOUTH-WEST	14.200	20.450
Gabes	9.100	4.188
Medenine	5.100	5.124
Tataouine	2.000	1.502
SOUTH-EAST	16.200	10.814
Sousse	9.900	19.233
Monastir	8.800	4.000
Mahdia	7.200	12.350
Sfax	15.100	15.000
CENTER-EAST	41.000	50.583
Tunis	32.300	38.000
Ariana	11.300	10.300
Ben Arous	9.400	12.000
Bizerte	17.700	15.000
Nabeul	10.400	13.716
Zaghouan	3.800	14.000
NORTH-EAST	85.100	102.016
TOTAL	245.200	314.006

1/ Sources: Institut national de la Statistique, Recensement général de la population et du logement, 1984.

2/ Source: Ministère de l'Intérieur.

11. In such a situation, it is obvious that the CRDP as a work relief scheme designed to promote development is still a necessity for absorbing the unskilled labour surplus. Nevertheless, with a sustained 5.5% growth rate in the GDP as in 1987, and provided national investment increases - which should be possible following the substantial increase in national savings - one can reasonably expect that unemployment rates could begin to fall down at the end of the VIIth Development plan period (1991) and that the Tunisian Government should then be in a position to fund the CRDP on a reduced scale.

IV. IMPLEMENTATION OF THE "CHANTIERS" PROGRAM

(a) Main features and activities: integration into regional planning

12. The basic objective of the "Chantiers" program is to provide productive temporary employment - say, six months per year as an average - to unemployed workers and to utilize that labour on priority public works. The VIIth Development Plan again insists so that "classical relief schemes should be improved to become productive and useful" (p. 200). The activities are identified at the local - exactly at the "sub-governorate" level - either by the technicians from the Ministries of Agriculture, Equipment, Education or Health, or by the "Delegates"^{1/} in cooperation with technicians and in consultation with local populations.

13. Activities include:

- I. Forestry works (29.4% of total US assistance in 1987; 33.6% in 1988): planting trees and hedgerows, forest maintenance, reforestation and anti-desertification works, planting cactus and acacia for animal feeding, forest road maintenance, nursery works, etc.).
- II. Soil and water conservation (34.6% in 1987; 37.2% in 1988): land levelling, terracing of hillsides, construction of check dams and weirs, construction of rockfill, gabions or concrete filtering dams, river diversion works, soil-fixing through planting, digging and maintenance of surface wells, construction and maintenance of rural tracks and roads).
- III. Improvement and maintenance of public works (26.7% in 1987; 21.6% in 1988): urban water and sewerage systems maintenance, street and sidewalk improvement, public buildings maintenance.

^{1/} The Delegates are government officers who are responsible for the administration of a territorial sub-division of the Governorates (usually six or seven per Governorate).

- IV. Improvement and maintenance of archaeological sites (8.9% in 1987): this includes removal of scrubs, site clearance and marking out of boundaries.
- V. Participation in various development projects, in the National Programme for resorption of unsound buildings ("dégourbification"), and in the school-building programme (7.6% in 1988).

It must be pointed out that most of US assistance has been allocated to directly productive activities (forestry, soil and water conservation): 65% in 1987 and 70.8% in 1988. These percentages are roughly equivalent in the "Chantiers" program as a whole; actually, they reached 80% in past years when unemployment pressure in small cities was not as strong as it is now.

14. Due to the fact that the "Chantiers" activities cannot be defined until credits have been allocated on an annual basis to Governorates, integration with economic development programmes is not ensured at the planning stage. The programming of the "chantiers nationaux", which are financed by the central Government, is more rigorous and, generally speaking, they are closely tied with agricultural development projects. As far as the "chantiers régionaux" are concerned, the VIIth Development Plan says that "the main ways for restructuring the Regional Development Program include ... (inter alia) more integration of the credits allocated to the "chantiers régionaux" in the form of labour employed in infrastructure and maintenance works"^{1/}.

15. What actually happens is that most activities of the "Chantiers", at least in rural areas, are not only complementary to but are even parts of projects of the Department of Agriculture (Forestry or Soil and Water Conservation) included in the Regional Development program. For instance, in the Oued Merguellil project (Governorate of Kairouan, Haffouz and El Alaa Delegations), which is a large land development and reclamation project to be carried out over 13 years, a number of activities - namely those technically suitable for labour-intensive methods (river correction through the construction of weirs, construction of filtering dams in gabions or concrete, soil fixation through planting, land levelling, fruit tree planting) - were carried out by the "Chantiers" once credit had been allocated. In such cases, it is the consultant's firm feeling that, though there is no advance planning, the "Chantiers" activities are in harmony with economic development programs.

16. An additional point is that the "Chantiers" activities enable technical departments to utilize technical personnel and that equipment which would have remained idle if, for instance, CRDP funds had not been made available. Indeed this purely practical point is essential from the point of view of fuller utilization of existing capacity in developing economies.

^{1/} VIIth Development Plan, p. 250

17. It is suggested, however, that, in order to be consistent with the recommendation made in the VIIth Development Plan (para. 14 above), an advance listing of projects to be implemented by the "Chantiers" in the years to come, together with a "ranking" of these projects according to selection criteria (para. 23 below), would be a step forward on the way to more rigorous planning at the Governorate level.

(b) Overall management and administrative structure

18. The overall budget of the "Chantiers" program is discussed and approved by the Inter-ministerial Council and then submitted to the National Assembly (now "Chambre des Députés") for approval. To determine the content of the program, and particularly the allocation of funds among Governorates, interministerial committees with representatives of the Ministry of Planning and Finances, the Ministry of the Interior, the Ministry of Agriculture, the Ministry of Equipment and COGEDRAT meet occasionally. In September-October 1987, such a meeting was held at the COGEDRAT with the participation of Governors and regional technical services to decide on the allocation of credits and the activities to be carried out, in the framework of the approval of the Regional Development Program for 1988. It is at this stage that a selection is made among the activities identified at local level (para. 12 above).

19. At the administrative level, the Ministry of the Interior (Regional Development Directorate), as part of its responsibility for governorates, is responsible for the general policy aspects of the "Chantiers" program whereas technical study and selection of projects is the task of COGEDRAT staff. Three professional officials in the Ministry of Interior and four in COGEDRAT work part-time on the "Chantiers" program, and COGEDRAT has, in general, two representatives in the Governorates, where Regional Development committees examine the program at their level. All these officials have the support of technicians from technical ministries concerned.

20. This structure appears to work in a satisfactory manner as far as the implementation of the program, and particularly of the CRDP, is concerned. One may wonder, however, whether for a large program which, in spite of its annual character, has been going on for more than thirty years, a small full-time permanent cell at central level would not improve on the present organization, particularly - but not only - for monitoring and evaluation purposes. But this, to some extent, is a political issue.

(c) Allocation of resources and project selection

21. No particular comment can be made on the financial management of the "Chantiers" program. The special procedure which was devised for the PCRD in order to put funds at the Governorates' disposal as rapidly as possible (pp. 5-6 of the "Note sur le Programme des chantiers régionaux de développement" prepared by COGEDRAT in September 1987) seems to work reasonably well.

22. Allocation of resources among Governorates and project selection are stated to be made according to the following criteria:

- unemployment level in the Governorate;
- amount of credits allocated to the "Chantiers" in the Regional Development Program;
- percentage of utilization of credits put at the Governorates' disposal within the Regional Development Program;
- economic return from projects;
- employment impact of the projects.

While the first three criteria refer to allocation of resources, the last two directly refer to project selection.

23. Concerning project selection proper, it is suggested that selection criteria could be refined as follows to be in line with the objectives of special labour-intensive works programmes:

- complementarity with other development programmes or projects;
- rough estimate of an ex-ante benefit/cost ratio;
- short-term employment generation, including direct employment in the "chantiers" and indirect employment resulting from production and transport of necessary materials and equipment,
- longer-term employment generation after completion of the project in the area concerned (again direct and indirect employment).

No doubt, it would be difficult to obtain precise data in these respects at the project preparation stage. But an effort should be made to assess as precisely as possible the expected economic and development impact of a project even without a detailed feasibility study. Insofar as the "Chantiers" are development-oriented, some preliminary survey of this kind would seem necessary, at least for relatively large projects.

(d) Technical aspects

24. "Chantiers" projects are implemented on the basis of technical studies and designs made by the technical services concerned under the Governors' responsibility. Technical studies may be revised depending upon funds available and if labour-intensive techniques have to be used as a consequence of the utilization of "Chantiers" unskilled labour, but generally the parts of projects expected to be carried out by the "Chantiers" are labour-intensive by nature (para. 15 above).

25. Similarly, technical supervision at site is ensured by the relevant technical services: Forest or Soil and Water Conservation (CES), Equipment and townships, National Institute of Archaeology as far as the CRDP is concerned. From field visits paid to the Kairouan and Beja Governorates, the consultant was convinced that, both in size and quality, the water and soil conservation works were far above the average of what is done in similar special labour-intensive works programmes he had visited in other countries and that forestry projects were similar to what is usually done in such programmes. Talks with all technicians concerned demonstrated their competence, skill and devotion.

26. Work norms in the "Chantiers" are defined according to experience made at site. Labour productivity (1 man/day for bush and scrub clearing over 20 m²; 5 man/days for building a small 3 m³ stone masonry weir across the stream) appeared to be normal, again as compared with similar labour-intensive programs.

(e) Recruitment: criteria for worker selection

27. CRDP workers are recruited at the Delegation level among those unemployed who are not benefiting from another program for unemployment relief. When there are too many candidates, those who have dependants are selected first.^{1/} These are the only selection criteria in use. However, where the number of candidates is very high, a rotation system may be organized. For instance, in a forestry project in the Beja Governorate, rotation of workers was organized from fortnight to fortnight.

28. It is suggested that:

(i) for simple tasks which do not require substantial on-the-spot training, the rotation system should be generalized wherever the number of candidates is very high, in order to prevent certain workers to stay in the CRDP indefinitely while others could not have access to it;

(ii) as an indirect poverty criterion and to reach key groups in rural areas, preference be given, first, to landless agricultural workers and to peasants owning a plot smaller than a predetermined surface. Of course, this surface may vary from one area to another depending upon land productivity.

(f) Remuneration and conditions of work: wages out of total cost

29. Unskilled workers' daily wage in the "Chantiers" was D 1.9 in 1987; it has been raised to D 2 in 1988. This is substantially lower than the minimum agricultural wage (SMAG), which was D 2.6 in 1987 and D 3.050 in 1988. In addition, workers in the forestry and

^{1/} The consultant was able to see on sites that this second criterion had not precluded the recruitment of young workers.

soil and water conservation projects receive food (2.5 kgs of wheat flour, 100 grs of sugar, 100 grs of oil and 100 grs of milk powder per day) from the World Food Program.^{1/} The daily ration is valued at US\$ 0.625, which is less than D 0.5. Consequently, even so, the daily wage in the "Chantiers" is very low. Nevertheless, this does not prevent the number of candidates from being higher than the number of jobs being offered and, as already mentioned above, labour productivity is certainly not lower than in other programs of this kind. Field visits also demonstrated that in some cases workers come from far remote areas to work in the "Chantiers".

30. In these circumstances, it appears, however, that the proposed 5 per cent increase per year of the cash wage, as envisaged by the Tunisian Government, is fully justified. It is even surprising that the workers accepted that up to 20% of their total wage be in the form of WFP food: this is one more evidence of the acute unemployment situation.

31. The issue of wages out of total cost was discussed extensively by the Tunisian authorities with USAID, Tunis, and again during the consultant mission. The consultant's view is that, whereas the initial 10 per cent of local currency proceeds for non-wage costs (i.e. materials, use of equipment and supervision - possibly, in some cases, wages of skilled workers too) should be sufficient for most - not all - forestry projects, improvement of archeological sites and urban projects insofar as materials are paid by townships, certainly soil and water conservation projects that are the most impressive in the CRDP could spend up to 30 or 35 percent on non-wage items. Therefore the 20 per cent average proportion for non-wage costs which was proposed in December 1987 by the Tunisian authorities for CRDP as a whole and accepted by USAID in January 1988 seems to be appropriate and even somewhat conservative considering the CRDP project-mix as it stands now. This view is based, not only on observations and talks with engineers and technicians during the field visits, but also on experience gained in many programs of this kind in developing countries. Of course, CRDP is mainly employment-oriented, but one should not overlook that the quality of achievements is the best propaganda for such programmes.

32. Concerning conditions of work, hours of work and rest periods for the "Chantiers" workers are in conformity with local habits. There is no social insurance for them, due to the temporary nature of their activity: this again is what happens in similar programs elsewhere. But in case of injury they are taken care of in hospitals free as are all destitute people in Tunisia.

^{1/} This is out of WFP project 2493 - Lutte contre l'érosion et la désertification.

(g) Reporting and monitoring of program implementation

33. The practice up to now has been that Governorates submit quarterly reports on physical and financial achievements to COGEDRAT and then COGEDRAT makes a synthesis - through a computerized system financed by USAID as far as the CRDP is concerned - to produce a general report for all program projects. At the date of the mission, only information about the fourth quarter of 1987 was available - with three months delay, which is not surprising for a program so scattered over the whole country and many activities of which are integrated in other development programs. But not all Governorates could submit data about jobs created, no information was given on materials and supervision costs while a number of physical achievements were not quantified.

34. Indeed on several occasions during the mission, both at central and Governorate level, complaints were made that more flexibility in reporting was needed, that it was not easy to collect information at site for projects which include several activities, and that, although data collection should be accelerated, it was difficult for Governorates to produce in time quantified information on man-days, on "units" (hectares, kms, seedlings, etc.) achieved, or on actual expenditures.

35. Taking into account the various views which have been expressed, it seems logical to suggest:

(i) that information be submitted by Governorates to COGEDRAT by project (for instance Oued Merguellil, or Oued Nebhana, water and soil conservation project, North Beja forestry project) rather than by adding up all activities of the same nature (for instance manual land levelling, fruit tree planting), which means that COGEDRAT would have to add up data on every activity as contained in each project information in order to enter it into the computer and submit it to USAID;

(ii) that only data on physical achievements and on man-days spent be produced on a quarterly basis, whereas financial data (particularly on accounted expenditure for materials, supervision, use of equipment) would be submitted on half-yearly basis.

V. SHORT-TERM EMPLOYMENT IMPACT OF THE "CHANTIERS" PROGRAM

36. On the basis of the Agreement concluded in August 1987 between the Tunisian Government and USAID, with an amount of TD 15.28 million of sales proceeds, a daily wage of TD 1.9 and 10 per cent of non-wage costs, a total of 7.2 million man-days of work could have been generated in the CRDP over one year starting October 1987, including 2.13 million man-days in the last quarter of 1987 (with a budget of TD 4.5 million). This was the equivalent of 36,000 jobs for eight months over a year. After the decision to

raise the daily wage to TD 2 and the non-wage costs to 20 per cent, the 1988 component was reduced to 4.31 million man-days (equivalent to 28,750 jobs for 150 work-days over nine months), which gave a total of 6.44 million man-days.

The following table shows what should be the CRDP situation after the Agreement as revised:

CRDP Expenditure Schedule

	1st quarter Oct-Dec 87	2nd quarter Jan-Mar 88	3rd quarter Apr-June 88	4th quarter Jul-Sept 88	Total
Budget (TD)	4,500,000	3,593,333	3,593,333	3,593,333	15,280,000
Wages	4,050,000	2,874,666	2,874,666	2,874,666	12,674,000 ^{1/}
Non-wage costs	450,000	718,667	718,667	718,667	2,606,000 ^{1/}
Man-days ^{1/}	2,130,000	1,437,330	1,437,330	1,437,330	6,441,990
Jobs created ^{1/}	36,000	28,750	28,750	28,750	30,562 ^{2/}

^{1/} Rounded figures

^{2/} Average over one year

37. As compared with the figures for the October December 1987 period, only 1,328,579 man-days were generated with about TD 2 million of credits allocated. This can be taken as an equivalent of 22,150 jobs created on the basis of 60 days of work per worker since activities started mid-October only. However, activities had already started at the end of December on a number of sites for which 535,552 man-days had been allocated. Part of this amount refers to work done in December, which should slightly increase the direct employment impact of the CRDP in 1987, both in terms of man-days and jobs created. The corrected table hereafter gives the distribution of man-days achieved and accounted for by Governorate.

GOVERNORATES	MAN-DAYS ACHIEVED
Ariana	13 585
Ben Arous	10 270
Bizerte	97 655
Nabeul	68 366
Tunis	72 460
Zaghouan	74 300
Beja	59 893
Jendouba	70 389
Siliana	72 505
Le Kef	51 084
Mahdia	85 712
Monastir	59 824
Sfax	67 666
Sousse	71 633
Kairouan	109 802
Kasserine	48 088
Sidi Bouzid	77 191
Gabes	33 644
Medenine	9 803
Tataouine	33 359
Gafsa	55 733
Kebili	53 752
Tozeur	<u>31 865</u>
TOTAL	1 328 579

38. The total amount of man-days generated in the "Chantiers" program as a whole in 1987 was about 13 million (or an equivalent of 65,000 jobs^{1/} for eight months) with a TD 30 million budget, not including USAID assistance. In 1988, with TD 44 million (including TD 10.5 million from USAID), it is expected to generate about 17 million man-days, i.e. 85,000 jobs for eight months. Of course, by comparison with the estimated number of registered unemployed in 1988 (314,000, para. 10 above), these figures are still relatively low (27 per cent in 1988) but not all unemployed would accept to work in the "Chantiers", particularly those with secondary or higher education (20 per cent in 1984) although the consultant talked in Haffouz Delegation with a young worker with three years secondary education who had no other opportunity than to work in the "Chantiers".

^{1/} The amount of 25,000 workers referred to in the Agreement between the Tunisian Government and USAID in August 1987 was in fact related to workers in the "Chantiers" of the Rural Development Program only.

39. No data at all were available on indirect employment resulting from production and transport of materials and equipment needed by the "Chantiers" or on secondary employment resulting from the workers' increased consumption. Experience in other programs shows that indirect employment does not reach 20 per cent of direct employment in most soil conservation or forestry projects, but it can be as high as 50 per cent in urban schemes. Considering the present project-mix in the "Chantiers" program and the fact that non-wage costs are relatively low (20 per cent)^{1/}, it seems that indirect employment would be about 15 to 20 per cent of direct employment. Secondary employment is certainly low: the workers' consumption being mainly in foodstuffs and textiles, it is likely that most secondary employment is in the form of a reduction in under-employment. Consequently, it seems reasonable to estimate the overall indirect and secondary effect during the "Chantiers" activities as 20 per cent of direct employment, i.e. about 17,000 jobs in 1988, for instance. This raises the total short-term employment generation to some 100,000 jobs in 1988.

40. Another point is that the number of man-days achieved in Governorates in the CRDP (table in para 38. above), is to some extent, if not proportionate, at least parallel to the number of registered unemployed, particularly at regional level. It is even more so when one considers the number of man-days achieved in 1987 in the "Chantiers régionaux" as a whole.

^{1/} But materials in urban projects are not included in these 20 per cent since they are paid by townships. The amount of non-wage costs is an indicator of its own possible wage (i.e. employment) content.

Man-days achieved in 1987 in the "Chantiers régionaux"

Governorates	Man-days achieved
Beja	285 000
Jendouba	460 000
Siliana	237 218
Kef	225 501
Nord Ouest	1 207 719
Kasserine	316 732
Kairouan	426 423
Sidi Bou Zid	227 000
Centre Ouest	970 155
Tozeur	128 900
Gafsa	322 445
Kebili	134 430
Sud Oued	585 775
Gabes	88 065
Medenine	215 800
Tataouine	192 105
Sud Est	495 970
Sousse	118 469
Monastir	108 421
Mahdia	145 000
Sfax	234 073
Centre Est	605 963
Nabeul	166 500
Tunis	188 000
Ariana	94 736
Ben Arous	94 000
Zaghouan	230 995
Bizerte	229 000
Nord Est	1 002 131
TOTAL	4 867 713

41. In connection with employment generation, it is interesting to note that in implementing a number of projects in the CRDP, small work units ("brigades mobiles"), manned with technicians and unskilled labourers, will be formed with a view to transforming them into autonomous enterprises after experience has been acquired. This certainly should be encouraged since it is a way to reabsorbing unemployed workers into national economy and to long-term employment generation.

VI. LONG-TERM EFFECTS OF THE "CHANTIERS" PROGRAM

(a) Physical achievements

42. The overall volume of physical achievements under the CRDP in October-December 1987 is rather impressive. Main achievements include:

- planting 192 ha of forest trees;
- protection and maintenance of 1986 ha of forests;
- planting 451 ha of fodder shrubs;
- improving 390 ha of pastures;
- improvement and maintenance of 206 km of forest roads and tracks;
- protection of 182 ha against desertification;
- land levelling: 2081 ha;
- strengthening and maintenance of dams and weirs on 5086 ha;
- development of river catchment areas over 365 ha;
- correction of streams over 636 ha;
- various soil and water conservation works over 2278 ha;
- 15 kms of sidewalks;
- sanitation, sewerage and maintenance of public buildings;
- land clearing and levelling for archeological sites.

Considering the quality of the works, particularly the soil and water conservation works, the overall performance as well as the economic and social effects of the CRDP as part of larger development projects are certainly positive. The same conclusion can be drawn about the whole "Chantiers" program, which obviously

is the fruit of experience acquired over long years.

(b) Permanent employment generation

43. Very few data were available in this regard although the issue is of paramount importance. Only two figures were given: 30 man-days per ha. and per year for maintenance of fodder shrubs and pasture land; 200 man-days per ha. and per year for maintaining and exploiting forests. Respectively, permanent employment generated by the CRDP through these categories of activities is, therefore, 84 and 1460 jobs if the above figures are taken as national averages. This is certainly not negligible, although the second figure seems to be on the high side.

44. Data were lacking for soil and water conservation works. International experience suggests that, through higher production, the annual volume of durable employment created by terracing often accounts for 15 to 30 per cent of employment created per ha. in the construction phase; for land clearing, the percentage varies from 20 to 40 per cent when no production was possible before the works phase. Percentages are even higher for water conservation projects. Consequently it is quite possible that, through the 502,000 man-days achieved in the CRDP in this category of activities, permanent employment would be generated for some 125,000 man-days, i.e. for more than 400 annual jobs. Permanent employment generation as a result of soil and water conservation works in the whole "Chantiers" program is undoubtedly substantial and an effort should be made in the future by the services concerned to produce estimates in this respect.

45. Permanent employment generated by urban projects and preparation of archaeological sites is certainly very limited.

(c) Economic and social effects

46. First of all, it must be pointed out that, even though sanitation, sewerage and maintenance of public buildings projects, or sidewalk construction, have very little impact on permanent employment, they are of particular importance in countries at the development stage of Tunisia. From a social point of view, more and more they are felt to be a necessity by populations in small cities or in suburbs. Thus quite apart from their importance in a situation of widespread urban unemployment, they are inescapable for social reasons, including for preventing migrations to big cities.

47. In addition to their undeniable scientific and historical interest, archaeological sites may attract tourism in the future. But it is too early to make any estimate of the effect of the new sites being opened as compared to the already very rich ruins which attract part of the tourists to Tunisia.

48. Coming now to the core of the matter, namely the economic effects of the forestry and soil and water conservation projects, two remarks have to be made at the outset:

(a) the annual character of the "Chantiers" program, as it is conceived and managed now, does not facilitate the collection of those data which would be necessary for any thorough economic evaluation of the program or even of the most significant projects in the program;

(b) imbrication of the "Chantiers" activities within rural development projects and programs, although it is positive from the point of view of effectiveness, makes it difficult, in most cases, to ascribe to the "Chantiers" part of the benefits to be derived from projects or even of the costs of projects.

Any comments, figures or estimates below should be taken bearing in mind these remarks. However, on the positive side one must consider that all "Chantiers" projects, not only create immediate employment for Tunisia's lowest income families, but also (because of the areas where they are implemented) will, when completed, generate flows of benefits mainly for the poor: and this actually is the best criterion for passing a judgment on the merits of any program of this kind. Unfortunately, no data were available to estimate with some accuracy the distribution of benefits among various groups of population.

49. For forestry projects, it was possible to obtain some information concerning activities carried out by CRDP essentially. For instance:

(i) For acacia plantation, with an investment of TD 512 per ha. (including labour, supervision and materials - but not the cost of technical personnel or services concerned), plus about TD 300 per ha. every third year for maintenance, the average gross output is estimated to be, after three years and over 15 years, 5 tons of fodder, i.e. TD 250/ha/year, plus wood production of 50 steres, i.e. TD 1000, every second year. This results in a very rough benefit/cost ratio of 3.92, not including improved breeding benefits or soil protection, and discounting future costs and benefits at 10% per year 1/;

(ii) For cactus, with an investment of TD 258 per ha, average gross output is expected to be 25 tons, i.e. TD 250/ha/year from the fourth year after plantation;

(iii) For tree-planting (acacia, eucalyptus) for sand fixation, with an investment of TD 648, the value of gross output (timber, firewood, boughs and fodder) after twelve years is expected to be TD 1680;

1/ As recommended by experts of the U.N. Research Institute on Social Development concerning developing countries.

(iv) In a tree-pruning project in forests of Beja Governorate, while the cost of man-days was TD 31,143, the value of the immediate output (grinding-wood, firewood, boughs and stakes) was only TD 1810. But the impact of tree-pruning will materialize around 1995, when the total volume of wood, which is now 4620 cubic meters, should reach 8327, with an increase in wood production valued at TD 25949 at constant prices. This, which is mainly due to the tree-pruning project, does not include, of course, soil protection or ecological effects of forests.

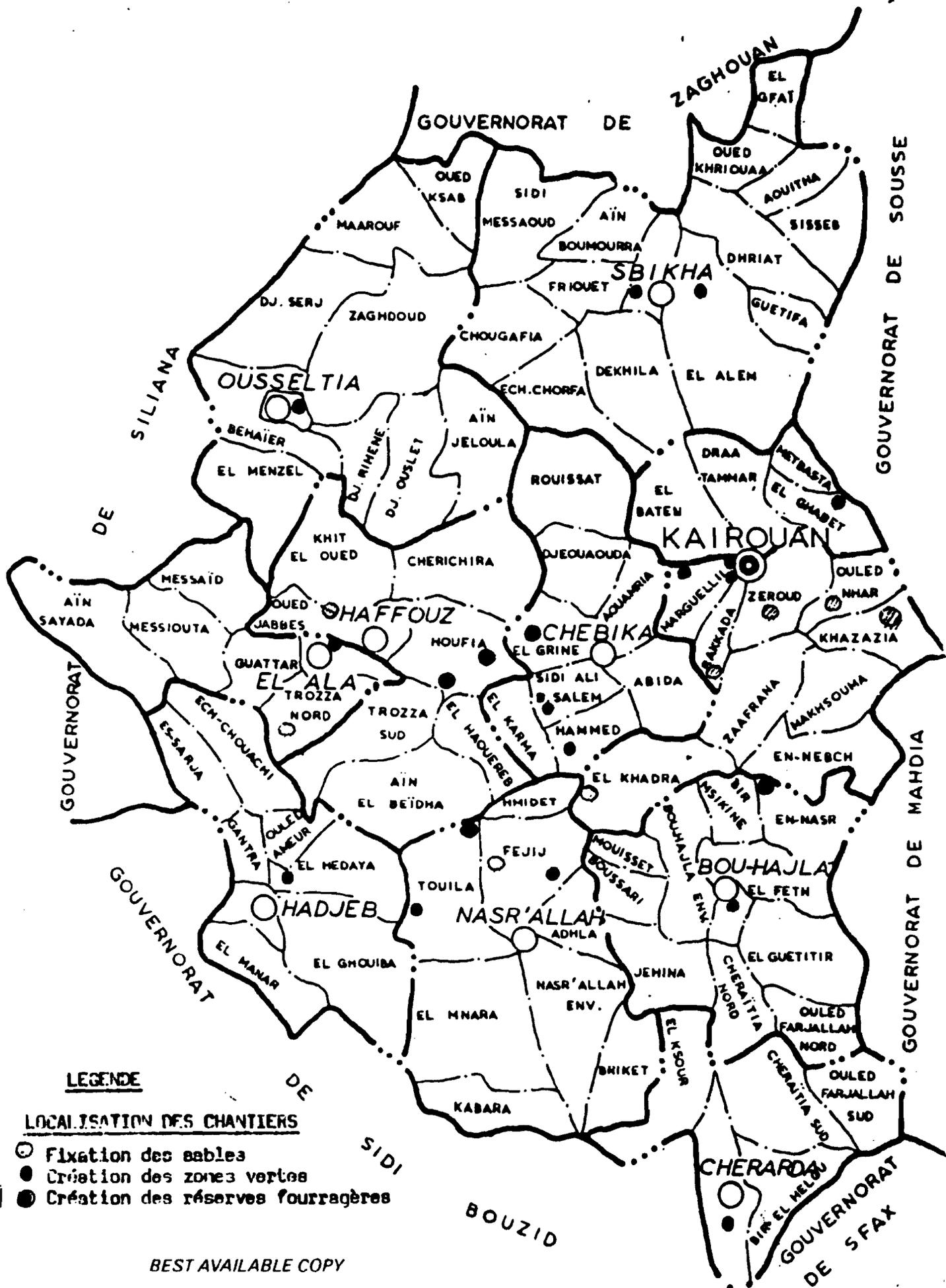
50. The first three above projects are located in Kairouan Governorate. The attached map of the Governorate gives an idea of the scattering of CRDP forestry projects. To give an idea of how CRDP sometimes grafts itself on much larger programs, CRDP funds amount to 2.94 per cent of total investment for production of forest saplings in Beja Governorate: in such cases, as said in para. 15 above, CRDP labour intervenes for a specific operation at a particular time and not only it is difficult, but it might be arbitrary to estimate the value of its cooperation.

51. Generally speaking, soil and water conservation works on farmed land result in an increase in production and improved quality of fruit and cereals. Production starts increasing after two or three years and is stabilized at 20 or 25 per cent more from the fifth year for olive and almond trees. Yields improve by 4 or 5 quintals/ha. (TD 80 to 100 in value) for wheat in Northern Tunisia, and by 8 to 9 quintals (TD 90 to 100) for barley.

52. Now, a good example of what can be the result of CRDP soil conservation works (banquette construction, banquette strengthening with cactus and acacia cyanophylla, and fruit tree plantation) on waste sloping land in the Oued Merguellil catchment area was given during the consultant's field visit in Kairouan Governorate. Before the works, one ha. of land produced barley and could be used as fallow pasture with a total annual output estimated at about TD 480. Total cost of the works was TD 600.7 per ha. After works completion, output will include, per ha: fodder production for TD 145 (acacia after three years, cactus after four years) and fruit production for TD 925 (almonds after three years; olives after ten years): i.e. a total of TD 1070 at full production. This of course does not include intangible indirect effects such as better water infiltration and reduction of erosion.

53. In the same area, construction of stone walls to correct river meanders costed TD 135,800. Before the works, a quantity of sediments estimated at 1 ha./year settled at a dam downstream and olive trees plantations went off at every flood. After the works, the annual loss of 1 ha. will be prevented, 5 ha. will be recovered for fodder plants, the drift to the dam will lessen, existing land and crops will be protected. But to figure out all these obvious benefits would be impossible or, again, arbitrary.

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54. As stated above (par 15), CRDP interventions in the Oued Merguellil catchment area are parts of a large project aiming at increasing by 25 years the dam useful life, improving agricultural land and irrigating 2240 ha. for the production of acacia, atriplex, cactus and almond, olive, apricot and pistachio trees. At this moment, the cost of these interventions (TD 74,530) is very small compared to the total cost of the project, over ten years, estimated at TD 20,458,650 in a detailed feasibility study carried out in October 1986 1/. But it is to be hoped that the support of CRDP to such important and profitable projects will be continued beyond 1988. According to the study, the (purely financial) rate of return of the project is 7.7%. A rough estimate of a social benefit/cost ratio made on the basis of this study by the consultant 2/ was 0.98. But this apparently mediocre result - which is common for most big agricultural development projects anywhere - comes from the fact, first, that all benefits mature relatively late (full maturation after 23 years) whereas investments costs are incurred during the first ten years and, second, that non-wage costs in the project as a whole are bound to be rather high (43.5 per cent according to the study, p. 34).

1/ République Tunisienne, Ministère de l'Agriculture, Direction de la C.E.S.: Aménagement anti-érosif du bassin versant de l'Oued Merguellil, Protection du barrage El Houareb, Octobre 1986.

2/ Assumptions in this simple but rather severe calculation were as follows:

(a) social discount rate for future costs and benefits = 0.10 (footnote to para. 49 above);

(b) shadow price of unskilled labour per day = TD 0,94, i.e. zero opportunity cost since workers are fully unemployed and leave sites if they have work elsewhere; but allowance for a loss of current investment entailed by income transfer from the private sector to workers who fully consume their wages;

(c) shadow exchange rate for imported equipment simply taken as the ratio imports/exports of goods and services in 1987-1988 (Budget économique 1988, p. 81): 1.067 applied to actual costs;

(d) no shadow pricing for other capital investment, i.e. actual cost of capital at constant prices.

55. The attached map shows the distribution of CRDP soil and water conservation projects in Kairouan Governorate in 1987-1988.

VII. RECOMMENDATIONS AND SUGGESTIONS

56. Although the above assessment of activities carried out under the CRDP and the "Chantiers" program in general is clearly positive, it is the consultant's feeling that, in order to improve the management procedures of the Program and strengthen the cooperation which has just started a few months ago between the Tunisian Government and USAID in this field, as well as for the sake of clarity, the recommendations which proceed from this assessment may be summed up as follows:

(a) Improvements in the Program to better achieve the objectives of alleviation of hardship

(i) An advance listing of projects to be carried out by the "Chantiers" in the future, together with a ranking of projects according to selection criteria would permit more rigorous planning at Governorate level (para. 17 above);

(ii) Project selection criteria could, as far as possible, be refined to include:

- complementarity with other development programs or projects;
- an estimate of expected benefits and costs, and of distribution of benefits among various groups of the population;
- short-term employment generation, including direct and indirect employment;
- longer-term employment generation after project completion (paras. 23, 44 and 48);

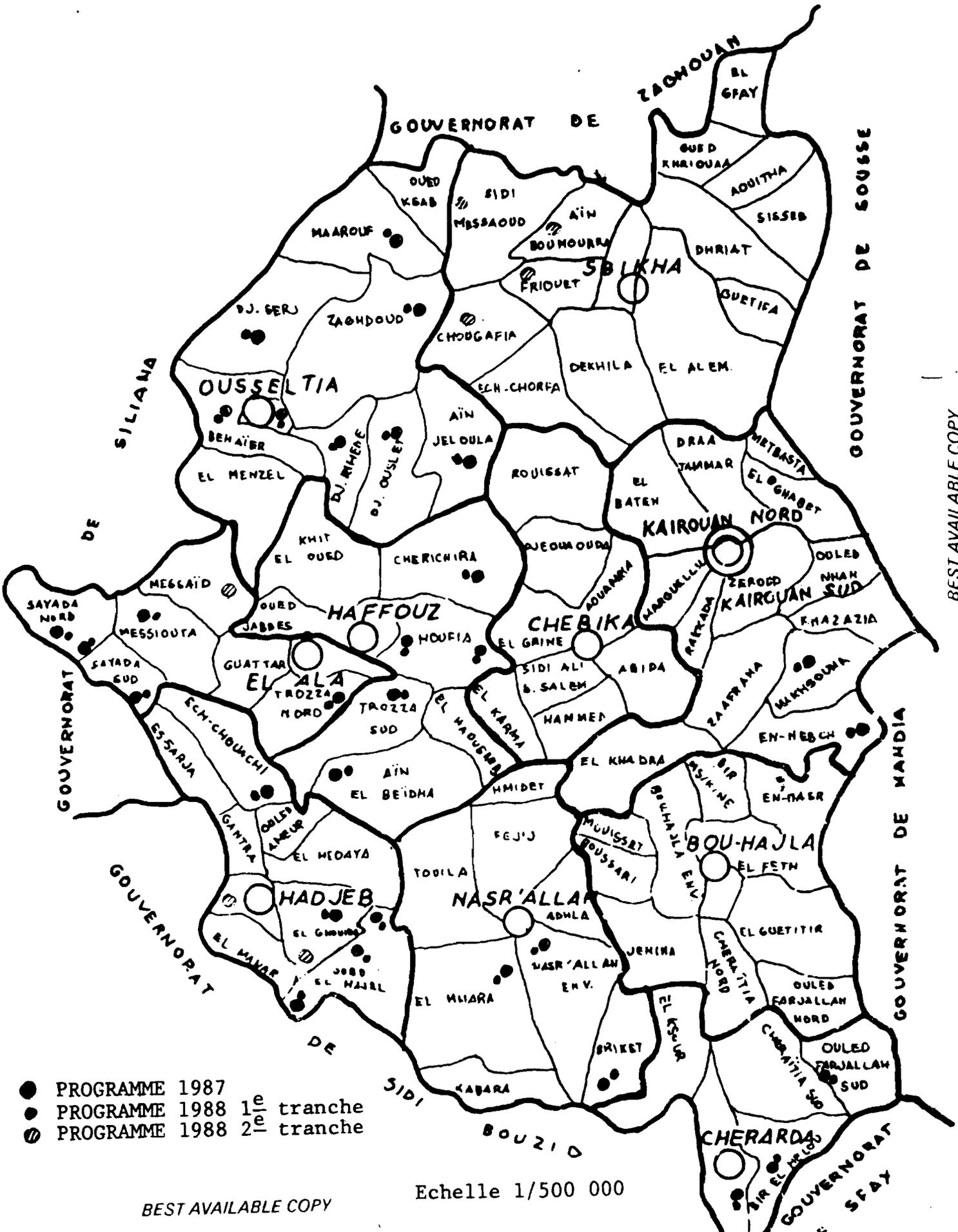
(iii) For selecting workers, in addition to the criteria already in use, the rotation system should be generalized, for simple tasks which do not require substantial on-the-job training, when the number of candidates is very high; moreover, priority should be given to landless workers and to peasants owning a plot smaller than a predetermined surface (para. 28);

(iv) The 20 per cent average proportion for non-wage costs in CRDP projects should be kept (para. 31);

(v) The present project-mix in CRDP (70 per cent for forestry and soil and water conservation; 30 per cent for other projects, including mostly urban projects) should also be kept (para. 46 and ff.);

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- PROGRAMME 1987
- PROGRAMME 1988 1^e tranche
- ⊖ PROGRAMME 1988 2^e tranche

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(vi) The experiment of "brigades mobiles" should be encouraged and, if possible, expanded (para. 41).

(b) Improvements in methods of management including reporting and monitoring

(i) Establishment of a small permanent cell, working full-time on the "Chantiers" programs, at central level (COGEDRAT) would make easier the management, monitoring and evaluation of CRDP as part of the overall "Chantiers" activities (para. 20);

(ii) For reporting, data should preferably be submitted by Governorates to COGEDRAT by project rather than by adding up all activities of the same nature, leaving it to COGEDRAT to add up data on every activity as contained in each project information in order to report to USAID (para. 35);

(iii) Henceforth only data on physical achievements and on man-days achieved should be produced on a quarterly basis, whereas financial data on expenditure should be submitted on half-yearly basis (para. 35).

APPENDIX I

List of Contacts

Ministry of Planning

Mr. Mohamed Ali Mouelhi, Director, General Planning

Office of the General Commissioner for Regional Development (COGEDRAT)

Mr. Jamal Abdelwahab, General Commissioner

Mr. Bechir Naija, Deputy Director General

Mr. Salah Mejri, Director, Regional Development Program

Mr. El Bour, Regional Development Program

Ministry of the Interior

Mr. Brahim Ben Ali, Regional Development Officer

Ministry of Agriculture

Mr. Habib Hizem, Director, Soil and Water Conservation (CES)

Mr. Bouzid, Director, Forestry Department

Governorate of Kairouan

Mr. Rafik Bel Hadj Kacem, Governor

Mr. Abdelmajid Souiasi, General Secretary

Mr. Mansour Bouraoui, Regional Commissioner for Agric. Development

Mr. Fethi Fekih, Director, Regional Development Program

Mr. Sadok Omezzine, regional Director, COGEDRAT

Mr. Ridha Hadj Salem, Director, CES

Mr. Taoufik Ketata, Director, Forestry

Governorate of Beja

Mr. Moncef Ben Jedediya, Governor

Mr. Abdelaziz Jamal, General Secretary

Mr. Mahmoud Chahed, Director, Forestry

World Food Program

Mr. Béguin, WFP Deputy Representative

USAID

Mr. Charles F. Weden, Jr., Director

Mrs. Nancy M. Tumavick, Assistant Director for Project Management

Mrs. Shirley Pryor, Agricultural Economist

Mr. Salah Mahjoub, Program Specialist (CRDP Project Officer)

APPENDIX II

Project sites visited

Governorate_of_Kairouan

Haffouz_Delegation:

- River correction through weirs construction (Oued Merguellil)
- Strengthening of soil conservation works (Oued M'Silah)
- Filtering dam (Oued El Hajjar)

El_Alaa_Delegation:

- Stream fixation (Oued El Hammam)
- Cactus plantation (Ouled Bayou)

Queslatia_Delegation:

- Nursery (Queslatia)
- Gabion weirs and "hill lake" (Oued Ksab)

Governorate_of_Beja

North_Beja:

- Archaeological site (Faouar)
- Tree pruning project

Goubellat:

- Forest road maintenance and fire-breaks (Djebel Tellet Sidi Yahia)
- Stream correction (Gammarti Khenguet Dhan).