

PJBAH 607

**IMPLEMENTATION PROGRESS EVALUATION**

**CHAD: CARE AGRICULTURE INFRASTRUCTURE RESTORATION ACTIVITY (677-0041.5)**

**of the**

**Chad Relief and Rehabilitation Project (677-0041)**

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## I. THE PROJECT

The Chad Relief and Rehabilitation Project (677-0041) was authorized in September, 1982 and amended in June, 1983 and March, 1984. Its life of project value is now \$8.322 million, having its last obligation tranche in June, 1984 and a Project Assistance Completion Date (PACD) of Dec. 31, 1987. Its purpose is to support the relief and rehabilitation efforts in Chad, that is to assist the amelioration of conditions within Chad created by civil war and drought. It finances the costs of technical services, commodities, technical exchanges and training needed to subvene Chadian relief and rehabilitation efforts in agriculture, transportation, storage, health and shelter.

The project was established to bring AID resources, initially from the Economic Support Fund (\$2.822 million) and then supplemented by Sahel Development Program funds (\$5.5 million), to bear quickly on Chad's most immediate needs, setting the stage for later, more long-term and developmental investments. To be manageable by the small AID staff in Chad and to be quick-disbursing, the project was designed to have two unusual structural properties: its components (called Activities) were to be identified, detailed and approved during the project's life after authorization and obligation; and they were primarily to be proposed, documented and implemented by private voluntary organizations (PVOs). Thus only the general purpose and mechanisms for implementation of the project were indicated in the Project Paper (PP). And to a large degree the Activities represent cooperative efforts between AID and PVOs already established and at work in Chad.

The first set of activities provided heavy trucks to CARE, for food deliveries, repaired heavy road equipment through Africare, repaired roads with food for work through CARE, and provided medicines and medical supplies to the national pharmacy. The second set of activities provided for CARE agricultural infrastructure restoration with food for work (the activity being evaluated here), an Africare vegetable gardening effort, and additional medicines and medical supplies. The third set of activities will contain a second phase of CARE infrastructure restoration, as well as assistance to restoration of the health planning unit and for management of PL480 commodities.

The format for documenting such activities and for their review, approval and management, as specified in the PP, is this: the interested PVO prepares an Activity Justification Paper (AJP) showing the activity to fit the "umbrella" project's purpose and how it is economically and socially sound and technically and financially feasible, having no environmental problems. This is reviewed by USAID/Chad and REDSO/WCA; on approval, an Operational Program Grant or Cooperative Agreement is made between AID and the PVO. The grants are generally for up to two years.

The assumption is that, while cooperation with agencies of the Government of Chad (GOC) should be maximized, in this period such agencies will continue to be understaffed, underbudgeted and little able to carry on normal services and developmental efforts, particularly in the rural areas. Therefore the activities supported by this project must be largely self-sufficient in management (including financial management), materials,

logistics, and reporting. PVOs are the ideal vehicle, under the circumstances, for delivering this aid, especially as associated with emergency food assistance in the form of food for work. An underlying objective of the project, assuming Chad's needs for this kind of assistance will continue for some years, is thus the development and support of selected PVOs themselves as operational agencies crucial to Chad's near term post-war economy.

On the whole, the project appears to be a success so far. Its first seven activities (three with CARE, two with Africare) are underway and the remaining three in late stages of design and review. Activity reporting indicates considerable physical progress and minimal managerial headaches -- with the exception that delivery of commodities and materials to land-locked Chad is periodically disrupted. Relations of AID and the two PVOs with the GOC, local authorities and the people appear to be amicable, and the efforts genuinely appreciated.

The project's evaluation plan (see PP Supplement, p.11) calls for mid-term and final evaluations of the overall project in June, 1985 and September, 1987, respectively. Individual activities have evaluation plans of their own and the CARE Agriculture Infrastructure Restoration Activity is the first one to be evaluated. What is called for at this point is an "implementation progress evaluation" as a joint effort between AID and the PVO. It is intended to assess progress and guide the Activity's managers (USAID/Chad and CARE/Chad) in implementation during the remaining nine months of work. As a follow-on overlapping CARE/food for work/infrastructure restoration activity is planned to begin in early FY 1985, however, the conclusions of this evaluation should inform the design of that as well.

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## II. THE ACTIVITY

### Rationale

The CARE Agriculture Infrastructure Restoration Activity (677-0041.5) has a simple rationale as a classic food for work, materials provision and supervision effort for rehabilitation of damaged small-scale infrastructure. Localized irrigation and other water control facilities, seed farms, and small urban sanitary drainage structures, for example, which once functioned well enough, no longer do -- owing to lack of maintenance and support caused by disintegration of the government and disruption of the economic and social fabrics during years of civil war. They are essential to resumption of normal economic activity. With injections of materials and labor, they can be restored fairly easily. Such restoration can be planned and executed for individual sites selected for maximum impact which also are accessible, have a modicum of government agency support (e.g. the national office for rural development and the public works departments of towns), and where there are manual and skilled laborers. Work can be planned with physical targets such as lengths of canal cleaning and lining and with targets for food distribution. AID's purposes of emergency food delivery and restoration of productive agriculture or improvement of health conditions can be combined as mutually supportive.

Thus the goal of the Activity (AJP,p.5) is "rehabilitation of the infrastructure of Chad's rural areas and secondary urban centers" undertaken through an expanded food for work program. "The physical infrastructure of these areas, even where not damaged during the civil war, has fallen into serious disrepair over recent years. Such a program, while serving the short-term relief function of increasing the availability of food stuffs in local markets, via its food for work element, will also contribute significantly to the long-term development of those localities as a result of its focus on directly or indirectly productive activities."

The AJP emphasizes the relative simplicity of individual sub-activities, such as moving earth with hand-tools, which serves "to transfer food to people who need it most: the unskilled and illiterate; while at the same time avoiding the stigma of a charity dole while producing some improvements in rural infrastructure, even if the rate of productivity may be relatively lower than with more sophisticated engineering methods" (AJP,p.4). Thus the AID grant of \$950,000 for this Activity is combined with approximately \$780,000 worth of PL480 Title II sorghum and vegetable oil and a balance is made between goals of works and food delivery.

The conclusion is that this approach -- its assessment of needs, feasibility and benefits -- made sense at the time of the activity's inception and still does. Under prevailing circumstances in Chad, considerable flexibility and agility on the part of the PVO would be required, however, to maximize benefits, avoid waste and delay, and assure a fair distribution of resources. This turns on the more detailed definition and modes of the project as they have evolved and the mechanics of implementation, as discussed below.

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### Definition

The Activity's AJP, as presented by CARE, and the Operational Program Grant (OPG) document specify 13 individual sub-activities, nine in agriculture and four in town public health and sanitation. The Financial Plan (Attachment One of OPG) provides general budget lines for vehicles and their operations, international, national and local-hire staff, and indirect administrative and operational expenses at a total cost of \$502,385; it then provides for construction materials, tools, equipment and local wages, etc., estimated for each sub-activity. The Program Description (OPG Attachment Two) details physical works targets for each of the 13 sub-activities to be accomplished in the first six months of operation, based on more detailed descriptions in the AJP which include estimates of labor (and therefore food) requirements.

Selection of the sub-activities sought to preserve geographical concentration in the interests of efficiency and synergism: sites are located in six prefectures (Kanem, Lac, Chari-Baguirmi, Mayo-Kebbi, Tandjile and Logone Occidentale) along a north-south axis. It was anticipated that the first three would be serviced from N'djamena, while the latter three would require a base in the town of Bongor. Selection was also made bearing in mind the following sensible criteria:

- emphasis on rehabilitation, upgrading, or extension of existing facilities rather than the construction of new ones;
- benefit to a large number of people, in term both of food for work laborers and ultimate beneficiaries;
- emphasis on the infrastructure of production and works of some durability requiring little sophisticated maintenance and low recurrent costs; and
- utilization mainly of unskilled laborers and locally available materials.

The 13 resulting sub-activities include nine agricultural sites and four public health and sanitation sub-activities. Their locations are shown on the attached map. The initial list of sub-activities, with their estimated costs for materials, etc., is presented in table 1, below. Seven of the agricultural ones treat canal irrigation systems of one sort or another; one restores polders for recessional agriculture; and one restores pisciculture. The four sanitation sub-activities clean, restore and in some cases cover drainage channels and restore associated works serving populous areas in towns.

When the AJP was reviewed in REDSO/WCA, the project committee noted with satisfaction the manner in which CARE/Chad had been able in a relatively short time and in difficult circumstances to identify and make physical and labor target estimates for these sub-activities. They appeared to meet well the established criteria. If still rather dispersed (given road conditions), their distribution was not inequitable. And some attention to the northern areas of the axis meant that work could proceed during the rainy season, as is impossible further south.

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Table 1. ORIGINAL LIST OF SUB-ACTIVITIES

<u>SITE</u>	<u>DATES</u>	<u>TYPE</u>	<u>ESTIMATED BUDGET</u>	<u>NO. WORKERS(EST.ACTUAL)</u>
<b><u>A. AGRICULTURE</u></b>				
Casier A	1 Feb - 31 May	Gravity rice irrigation system	\$ 22,440	900/571
Casier B	8 Feb - 31 May	Pumped rice irrigation system	\$ 18,080	450/260
Casier B-Pisciculture	15 Dec - 30 June	Pisciculture, pig raising	\$ 2,680	30/ 70
Casier C	15 Mar - 15 May	Irrigated rice seed farm	\$ 14,080	100/ 64
Bol (7 sub-sites)	1 Jun - 31 Oct.	Polder Dams	\$ 81,250	1000/1790
RAF	1 Feb - 30 Apr.	Small irrigated perimeter	\$ 2,680	-/ 50
Karal	1 Nov - 28 Feb.	Irrigation Canals	\$ 2,680	250/525
Guelendeng (7 sub sites)	10 Jan.- 20 May	Small irrigated perimeters	\$ 22,440	300/654
Ligi	- Postponed -	Irrigation Canal	\$ 13,760	400/-
<b><u>B. URBAN SANITATION</u></b>				
Lai	1 Mar - 31 May	Drainage system	\$ 35,160	400/112
Doba	14 Mar- 31 May	Drainage system	\$ 25,440	400/139
Mao	- Cancelled -	Erosion control	\$ 58,380	300/-
N'Djamena	21 Feb - 24 June	Drainage system, Erosion control	\$ 144,185	520/373
TOTALS			\$ 447,615	5050/4608

The major weak aspect of activity and sub-activity definition was found to be beneficiary specification. Whereas engineering, supply, labor and management issues were regarded as sufficiently treated -- on the argument that reconstruction of existing facilities presented few unknowns and simple labor, tools and food inputs could be easily planned -- the ultimate beneficiaries of the works were not counted. Nor were the micro socio-economic systems, the contexts for these works, described so that the relative utility of the restored infrastructure could be judged. As a result, the following paragraph was put in the OPG's Program Description:

C. The direct beneficiaries of the Sub-activity will be the workers and their families who will receive food as compensation for their work. The secondary beneficiaries will vary depending on the nature of the sub sub-activity.\* For example, an entire neighborhood would benefit from improved health following the repair of drainage canals in its vicinity; the benefits which accrue to the small farmer who is able to increase his food productivity through repaired infrastructure are likely to expand to the community at large due to increased food availability. CARE/Chad will be tasked with clearly defining primary and secondary beneficiaries for the thirteen sub-activities in order that the evaluation to take place\*\* will be able to suggest the overall socio-economic impact of the CARE Agricultural Infrastructure Restoration Sub-Activity, Phase I.

#### Modes

The grant for this Activity provides for one Project Manager (not full-time, as he is the CARE/Chad Assistant Director), one new-hire Technical Advisor, and one Monitor, all expatriates; as well as two senior supervisors and 10 site supervisors, all Chadians. The vehicle fleet of CARE/Chad is augmented by one dump truck, two 4x4 pickups and five mobyettes, and vehicle operations are supported. The activity assumes that vehicles from the existing CARE/Chad fleet would also be used, and that fleet operations and maintenance, warehousing, purchasing and accounting of CARE/Chad would be employed so that the value of "in-kind" inputs selectively applied would be about \$165,000. In addition CARE would provide a \$50,000 cash input for vehicle purchase, national staff salaries and local administrative costs.

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\* Corresponds to sub-activity in the terminology of this evaluation. I.e., the CARE Ag. Infrastructure Restoration operation is an activity; there are 13 sub-activities (called sub sub-activities in the grant agreement).

\*\* The final evaluation, not this one.



The procedure for implementation of the Activity, as set forth in the OPG's Implementation Plan, involves a sequence of steps for each sub-activity and parallel support functions at CARE/Chad headquarters. For a sub-activity, a detailed work plan is developed under the direction of the Technical Advisor and Project Manager and submitted to OAR/N'djamena. Then a formal agreement is executed between CARE/Chad and the counterpart agency (national office for rural development, mayoralities, etc.). Procurement is initiated, following which infrastructure restoration begins at each site under the direction of resident supervisors (CARE agents) and remuneration of workers on a monthly basis with PL480 commodities eventuates. There is regular monitoring by senior CARE staff and AID. CARE/Chad presents AID with periodic reports of progress in a prescribed format. (These were originally to be monthly, but for practical reasons were changed to quarterly reports beginning in January, 1984.)

What this means in practice is a great deal of detailed preparation for each sub-activity, enormous logistical efforts to get and deliver materials, tools and food at the right times and places, and daily hands-on field supervision by approximately 10 CARE staff -- all further monitored by two PSC food-for-work executives in OAR/N'djamena. It will be hardly surprising that aspects of the Activity's implementation and, in fact, its current form and function do not conform precisely to those set forth in the OPG documents. This effort represents cooperation on an equal footing between the PVO and AID, in an extraordinary setting, and is attempting basically important tasks that, while superficially simple, are actually difficult. See Section III, below.

The conclusion here is that the Activity was well conceived. It was designed not to be overburdened with expensive management nor undersupervised -- supposing CARE/Chad's vaunted country expertise and logistical competence would be brought fully to bear. The selection of and balance among sub-activities to be attempted represents an admirable effort to combine feasibility with fairness and combine attention to the more immediate needs of accessible Chadians with technical work on productive and sanitary systems on which future assistance efforts could be built.

### III. IMPLEMENTATION OF THE ACTIVITY

#### Evolution

In terms of the original plans of CARE/Chad and OAR/N'djamena, the project began a couple of months late: its grant agreement was signed on October 18, 1984, well into the dry season and this constricted operations. That represents some initial unrealism about AID's processing time requirements and presumably was a major cause of unfulfillment of certain targets. However, overall, the Activity began quickly and built up momentum rapidly. The Technical Advisor was recruited and fielded by late November. In the first month and a half of project operations, administrative, project, national staff and material requirements were addressed and work began on one site, Karal.

As indicated above, the procedure for beginning sub-activities involves detailing of workplans and negotiation of contracts with GOC agencies. Workplans refine physical targets, specify materials, tools and other inputs and estimate food requirements on the basis of worker-months of an intended workforce. The rush to commence sub-activities, faced with a shorter than expected lead-time, meant that estimates of material requirements for each site were less precise than planned. In turn certain sub-activity start-ups were delayed and there were some ruptures in the smooth progress at sites already in operation. As the Activity progressed, all this was exacerbated by the closing of the Nigerian border on December 31, 1983. Cameroon, as well, presented problems in supplying necessary quantities of goods to the N'djamena market, especially in light of the Nigerian situation.

Nevertheless, in December, a work schedule was established for sub-activities, the Casier B Pisciculture sub-activity commenced and planning for Guelendeng and Raf was completed. In January and February, 1984, on-site work began on five other sub-activities; two commenced in March, and one in June. During the rainy season (the summer), work will continue at Bol in the north (See Attachment Four) and N'djamena. (See Table 1, above.) One planned sub-activity, town sanitation at Mao, was cancelled after examination indicated it to be cost-ineffective. Another, irrigation at Ligna, was postponed until after the rainy season because of systemic overburden and the need for more feasibility investigation.

Originally a southern base of operations was foreseen to facilitate supervision and the delivery of supplies. However, this was not found to be necessary: all sites were serviced from N'Djamena, at an extreme distance of over 500 Kms. Instead of a geographical north-south division of operation, there evolved a seasonal one, with sub-activities moving north to Lac region with the onset of the rains in the south.

What is most striking and instructive about the evolution of the Activity, in terms of the operations of sub-activities, is the relationship of final workplans to the specifications and estimates presented in the AJP and repeated in the OPG document. In the first place, attaching dollar values, ab initio, to sub-activity costs for construction materials, tools, equipment, local wages, etc., (OPG Financial Plan Category A) appears to have imparted a specious and premature concreteness then belied during project implementation. For not only can materials and other needs only be

specified at the workplan stage (not before), but by the nature of the procurement situation, the mobility of the Activity's operations, and the variety of small items utilized (e.g., hand tools), the actual materials' costs are very difficult to quantify by sub-activity anyway.

As it is, CARE/Chad roughly estimates that four sub-activities will be overbudget in these somewhat meaningless terms (Casier B Pisciculture, Guelendeng perimeters, and Lai and Doba sanitation) and two underbudget (Casier A rice irrigation and Bol polders). Neither the Activity as a whole nor the agriculture or public health and sanitation sectors as groups are expected to be significantly under or overspent. This suggests that (a) budget estimates for discrete sub-activities should be made at the time of workplan preparation, and (b) at the AJP stage, while level of effort estimates should be indicated for discrete sub-activities, materials and other costs should be estimated only by sector.

With respect to level of effort estimates themselves, it can be seen from Table 1 that wide variation has occurred between original estimates and actual numbers of workers required for sub-activities. Town sanitation sub-activities have required generally far less (a third to a quarter) labor than originally envisaged; while no systematic reason for doubling or halving of requirements is apparent with regard to agricultural sub-activities. The total number of workers employed at all sites was close to the original estimate, however. Presumably experience will improve CARE's ability to foresee correct balances in sub-activities of labor, techniques and materials to achieve desired physical targets.

#### Support

The later than planned project commencement mentioned above and the problems of procurement from neighboring countries notwithstanding, the support system of CARE/Chad appears to have functioned well so far. There are no reports of food or materials and tools arriving significantly late, in the wrong places or wrong quantities. Weather and security situations also have not impeded progress notably. And generally the receptivity and cooperativeness of counterpart GOC and local agencies have been adequate.

In terms of staff, the two full-time expatriates have travelled constantly, criss-crossing the areas of activity and overlapping supervision of all the sub-activities, thus bringing two instead of only one mind to bear on higher planning and supervision. Seven Chadian supervisors are employed, instead of the planned two senior and ten junior ones. The number appears to be adequate, and they were chosen rigorously from numerous applicants through written tests and interviews. By and large they are experienced and reasonably devoted to their work as resident site supervisors. None has been fired. One (resident in Bongor) is regarded as outstanding.

The jobs of the Project Manager, Technical Advisor and Monitor are, however, varied, complex and highly demanding. Their duties, which they share generally, rather than there being functional specialization, include sub-activity identification, workplan preparation (including civil engineering), logistics planning and direction, junior staff supervision and reporting -- all involving constant travel. It appears that they have reached their limits. More senior staff will be required if a second activity is to overlap this one.

In two fields, more or better work would be desirable and, in fact, necessary for this Activity to fulfill its potential: civil engineering and socio-economic/demographic analysis. The breadth of works and their distribution over the countryside have meant that workplans, designs and supervision of actual construction by the technical advisor have been thinner than desirable. Some locations and sizings of water control devices (pump platforms, siphons, lined urban ditches) seemed questionable to a REDSO/WCA Engineering Advisor during a cursory inspection; although he was at pains to praise the overall quantity of work under the circumstances. Likewise, in actual construction, some simple techniques (e.g., compaction) appeared underemployed or inadequately supervised. While the rush of startup probably accounts for much of this failing -- which should not be repeated in the final months of the Activity -- there is room nevertheless for some more specialized civil engineering inputs during the Activity's life. It is anticipated that CARE/Chad will strengthen its capacity in this field during the coming months. It would be useful also for OAR/N'djamena to call in TDY engineers on a regular basis to advise CARE/Chad.

As noted above, this Activity not only feeds hungry people but rehabilitates infrastructure whose durability and low recurrent costs for operations and maintenance are supposed to mean that numerous farmers and urbanites materially benefit. At this point there is virtually no information available to or collected by CARE/Chad on such secondary beneficiaries or their micro socio-economic systems. Therefore any judgement on real economic and social impact of the whole \$950,000 Activity beyond feeding (which emergency food could do in the same numbers through other activities) remains impossible. This is contrary to the letter and spirit of the grant agreement and must be corrected. Moreover, it is probably not something which can or should be expected to be accomplished by existing CARE/Chad staff: socio-economic reconnaissance, population estimation and systems description in a situation like Chad's is a specialized enterprise. A specialist should focus on it and provide at the completion of each sub-activity a precis of imputed benefits to the affected community.\*

### Reports

Although the AJP proposed that "a report on the implementation and results of each project /i.e., sub-activity/ will be prepared" (p.19), the OPG Attachment One (p.A1-5) requires only monthly progress reports on the whole Activity (in addition to a vehicle utilization record and participation in an in-house evaluation prior to the PACD). The monthly progress reports have been converted to quarterly ones, quite properly; but in themselves, and as prescribed in the grant agreement, they will not add

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\* The recruitment of a short-term specialist for this work is planned under the follow-up activity.

up to a record of actions and accomplishments of the sub-activities. It would be highly desirable for CARE/Chad to prepare a "site completion report" for each sub-activity which would sum up the timing, inputs and physical accomplishments at a particular site (or set of sites in a sub-activity), note the problems faced, and present the socio-economic data suggested above.

Through March 31, 1984, three progress reports were presented, each indicating general Activity developments and providing some site-specific information seriatim (including food distributed in the period). These do not give a good picture of goals, events, or real progress, although they conform to the format prescribed in the OPG document.

To address this deficiency, a new quarterly report format is being instituted, beginning with the April-June submission (See Attachment One). The revised presentation includes information on supervision staff and number of international staff visits, work start-up and completion dates, workers employed and food distribution, the original and modified targets and their relationship to actual accomplishments. It is now intended that future progress reports will progressively update these so that a continuous record is provided. They should then provide as simple basis for composition of site completion reports.

### Results

There is no question that the CARE Agriculture Infrastructure Restoration Activity has accomplished a great deal of physical restoration in a short time and with appropriate technologies and regularly applied labor paid for with PL480 food. Sub-activities completed or closed down for the rainy season to date have absorbed 8,556 worker-months of labor. Approximately 2,818 workers were employed over periods of one to five months, and received food rations totalling 18,823 sacks of sorghum and the same number of cans of vegetable oil.

The attached quarterly progress report for the period ending June 30, 1984 indicates achievements by sub-activity. The irrigation systems worked on ranged in size from large rice production areas (Casier A, Casier B) to small perimeters of several hectares (Guelendeng, Raf, Casier C). The primary focus was work on irrigation channels: re-conditioning existing system or digging new ones. Additional targets were the repair or construction of water control structures (division boxes, stilling basins, culverts, retaining walls). At Karal a new 2.5 Km. canal was dug to complement two others completed last year, which water a fertile plain near Lake Chad. One sub-activity (Pisciculture) involved the construction of 49 fishpounds and associated pig-raising facilities.

Particularly impressive is work at Casier B pumped irrigation scheme (800H), where 3.5 Km of primary canal and nine Km of secondary canals were cleaned and repaired, the fluvial intake channel deepened, erosion control structures rebuilt at the siphon and station, two bridges reinforced, and five large pumps overhauled and made operational. Also at the neighboring Casier A rice production area, 10.5 Km of principal canal and 2.0 Km of secondary canals were deepened, three bridges were repaired, and maintenance was done on seven floodgates and culverts.

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The repair and construction of drainage systems was the focus for sanitation sub-activities. In N'Djamena 32 Kms of drainage channels have been cleaned out (See Attachment Three). Reinforced concrete slabs have been made to cover 540 M. of open sewer. In Lai and Doba new brick-lined ditches were built. About 80 percent of the targetted distance were completed at both sites (1.5 Km).

Certain targets were not met before wrapping up for the rainy season because of later than planned start-up. Work at these sites (Guelendeng, Lai, Doba) will be resumed after the rainy season. Work will also resume and new targets will be set at some sub-activity sites which met or exceeded their goals (Raf, Pisciculture, Casier C).

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#### IV. CONCLUSIONS AND RECOMMENDATIONS

A. The Activity is reasonably on track, has accomplished much of enduring value, is not wasteful and is properly flexible in its approach to choice among elements of sub-activities. CARE/Chad has not hesitated to abandon or delay implementation of certain planned interventions when their impracticality has become evident, reprogramming resources for work during the next dry season. Logistical support has been excellent. Popular receptivity and response are good. Planning for work during the rainy season (in N'djamena and the north) is well advanced; and completion of work as well as new rehabilitation is already planned at several sub-activity sites when operations can resume there in the autumn. There is much more activity of this type that can and should be supported during the rehabilitation period.

Recommendation: That OAR/N'djamena entertain a proposal from CARE/Chad for a second, overlapping activity concentrating largely on the same sorts of rehabilitation, conceived and managed largely in the same way.

B. The management by CARE/Chad, however, has been stretched very thin. Specifically, technical (civil engineering) planning and supervision appears to have been just adequate -- across the large and widespread set of sub-activities and their multiple sub-components.

Recommendation: That OAR/N'djamena periodically make TDY engineering advisors available to CARE/Chad to review plans and physical implementation. CARE/Chad should consider adding engineering expertise to its resident staff. CARE/Chad should also consider a different deployment of on-site supervisors (some of whom are better than others) and perhaps an augmentation of their numbers when major agricultural work resumes.

C. Reporting on progress in the implementation of sub-activities has not been as complete or helpful as it could be. Inclusion of data sheets on individual sub-activities in the quarterly reports is an improvement. But there will still be a need for a proper summary of inputs, accomplishments and impacts on a site-by-site, or at least sub-activity basis.

Recommendation: That CARE/Chad be asked to prepare a site completion report for each sub-activity as soon as possible after termination of assistance there. This should indicate, inter alia, measured physical accomplishments of all sorts, number of workers employed and worker-months of labor supported with totals of food distributed, sequential changes in targets with explanations, quantity and quality of supervision provided (both resident and peripatetic), problems in implementation and approaches taken to them, an estimate of materials and other site-specific costs based on a standard formula for approximation of prices and categorization of minor tools and the like, a socio-economic impact analysis (see below), and an appreciation of the sub-activity's relative merit in light of the Activity's aims and the overall purpose of the Relief and Rehabilitation Project.

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D. Socio-economic feasibility and impact data are currently missing with respect both to the Activity as a whole and its various sub-activities. Such information is not only required by AID but should be markedly valuable to CARE and CARE/Chad themselves in evaluation of their activities and planning for future ones. It is not information, however, which the extant CARE/Chad staff should be expected to collect and analyze: it takes a specialist.

Recommendation: That CARE provide a short-term rural sociologist, anthropologist or geographer to provide, sub-activity by sub-activity, demographic and micro socio-economic systems data and analyses which indicate real or expected impacts on secondary beneficiary populations in light of their past and current practices, organizations and capabilities. It would be acceptable that this expertise be funded in the second CARE Agriculture Infrastructure Restoration Activity, provided that field work begin early in FY 1985.

E. A second, and overlapping Activity should be designed, reviewed and approved in time to take full advantage of the next dry season. The format of its AJP may be essentially the same as that for the present activity, with one exception: the budget. The budget of the current activity is needlessly misleading in its Category A budget line because materials and like input costs cannot be estimated properly before detailed workplans are assembled; and then changes in plans, prices and availabilities of inputs during implementation make for further adjustments which proper flexibility in the mobilization and use of resources by CARE/Chad accommodates.

Recommendation: That the AJP for the next Activity of this type provide budget estimates for materials, etc., by sector (agriculture, sanitation and health, etc.), and that these be understood to limit expenditures on these sectors according to a sectoral development strategy spelled out in the AJP. Moreover, projected sub-activities should be identified and quantified in terms of level of effort and physical targets in an indicative rather than inflexible, committed fashion: the implementation plan should specify the procedure for detailed elaboration of workplans during the implementation of the Activity. It is at that stage that the specifics of sub-activities should be presented for approval to AID (OAR/N'djamena in this case). In the new Activity, preliminary beneficiary impact data should be presented in the sub-activity workplans as well, to be verified at a later stage for presentation in site completion reports.

ATTACHMENT ONE

ACTIVITY QUARTERLY REPORT

PERIOD: 1 APRIL - 30 JUNE 1984

Activity Title: CHAD AGRICULTURE RESTORATION FOOD-FOR-WORK PROJECT  
Grant N° : 677-0000-G - 00 - 3170 - 00  
Project N°: 677-0041  
Grantee: CARE

I. ACTIVITY DESCRIPTION

The activity has as its objectives the following: 1) the restoration of agricultural, forestry and urban sanitation infrastructures, 2) the employment of large numbers of under-employed laborers in a public work program; and 3) the injection of basic foodstuffs into a food deficit economy in a manner which will contribute to the reduction of dependence on free food distributions.

II. ADMINISTRATIVE ACCOMPLISHMENTS

1. Terminated work at 8 sites. Supervisory personnel reassigned to Bol area. Work start-up at 2 subsites in Bol area.
2. Procured and delivered materials to all sites (except Karal).
3. Received visit from James Osborne (REDSO) and travelled to Guelendeng, Casier A, and Bongor.
4. Prepared implementation progress evaluation in collaboration with Osborne
5. Held discussions concerning further Agriculture Restoration financing with USAID. Wrote AJP for submission to Abidjan in July.
6. Held discussions with counterpart GOC authorities for planning future activities. Visited potential sites.
7. Delivered 418,3 Mj sorghum and 34,4 MT oil to Food-for-Work laborers.

III. SITE DATA SHEETS (see attached)

IV. PROBLEMS/DELAYS (see attached)

III. SITE DATA SHEETS

SITE: Bol - repair of traditional  
polder dams

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 5

Work Start-up Date: 11 June 1984 Completion Date: 31 October 1984

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 4000

Food Distributed: 8000 sacks (363,8 MT Sorghum  
Tasks: " cans ( 29,9 MT Oil )

5220

10473 (476.2 MT Sorghum  
(39.2 MT Oil)

1) Rehabilitation of 20 earthen dams

1) Repair 5 sand dams

2) Rebuild 2 sand dams

18

## ACCOMPLISHMENTS

### Current Period:

No. Worker-months: 0

Food distributed: 0

### Tasks:

1. Reparations on one sand dam (Bagasola) were begun on June 11. Work will begin on two others once the muslim month of fasting is completed (Boumassirom and Bouroumtchiloum 1)
2. Construction of dam at Melea began June 15.

### Cumulative:

U

U

## INTERNATIONAL STAFF VISITS (Iom - Ass't Admin. / Allan - Directeur)

May 6 - 17 Tom  
June 11 - 14 Iom  
June 12 - 15 Allan

*Mirti*

*Turnbull*

## PROBLEMS/DELAYS

All four dam sites due to start up June 1 experienced delays in their eventual start-ups. This was due primarily to the time required for the transfer of operations (esp. CARE Agents) from Southern Chad to the North. In addition, the arrival of Ramadan further hindered efforts to hurry activities. Workers in Melea slowed up progress with futile demands for increased rations.

II. SITE DATA SHEETS

SITE: KARAL - Extension Irrigation Canals in  
Southern Lake Chad Area.

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 1 - MAHAMAT Samba

Work Start-up Date: 1 November 1983 Completion Date: 29 February 1984

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Workers-months: 500.

1260

Food Distributed: 1000 sacks (45,5 MT sorghum)

2520 sacks (114,6 MT sor

Tasks: " cans (3,7 MT Oil)

" cans (9,4 MT Oil)

1) Construction of a 3 Km. (3 m. wide)  
Irrigation canal.

1) Construction of new 3.0 Km  
canal (3 m. wide).

2) Maintenance to 8,5 Km.  
of existing canals.

3) Construction of 1 small  
experimental bridge for  
animal passage.

20

ACCOMPLISHMENTS

Current Period:

no. worker-months: 0  
Food distributed: 0  
Tasks:

Cumulative:

860  
1720 sacks (78,2 MT sorghum)  
cans (6,4 MT Oil)

(project ended in March)

- 1) Construction of new 2,5 Km canal
- 2) Maintenance to 8,5 Km. of existing canal.

INTERNATIONAL STAFF VISITS

June 14 - 15

Mark (Techn. Advisor).  
*Henderson*

PROBLEMS/DELAYS

Task 3, the construction of a footbridge was cancelled.

III. SITE DATA SHEETS

SITE: LIGNA - IRRIGATION

REPORT PERIOD: 1 April - 30 June

Resident Supervisory Staff: -

Work Start-up Date: - Completion Date: -

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 1200

Food Distributed: 400 sacks (109.1 MT sorghum)  
" cans (9 MT Oil)

Tasks:

- 1) Remove sand from up to 7 Km.  
of river channel.

This activity was not undertaken in the Nov. 83-  
June 84 period. After a preliminary visit the tech-  
nical advisor felt that the proposed work was  
infeasible. The site will be studied again during  
and after the rainy season for a hydrologic  
assessment of the situation.

22

ACCOMPLISHMENTS

Current Period:

Cumulative:

No. Worker months:

Food distributed:

Tasks:

INTERNATIONAL STAFF VISITS

March 20 - MARK (Tech. Adv.), KEVIN (Asst. Dir.)  
Healderson Henry

PROBLEMS/DELAYS

III. SITE DATA SHEETS

SIT: ..AF- Assistance to the Agricultural training center.

REPORT PERIOD: 1 April - 30 June 1984.

Resident Supervisory Staff: None

Work Start-up Date: 1 February Completion Date: 30 April 1984

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months:

90

Food Distributed:

180 sacks (8,2 MT sorghum)  
" cans (0,7 MT Oil)...

Tasks:

- 1) Rehabilitation of irrigation ditches.
- 2) Installation of fencing for production against livestock.

- 1) Clean, repair irrigation ditches (2 500 m.).
- 2) Dig 3 000 holes for planting trees.

24

## ACCOMPLISHMENTS

### Current Period:

No. Worker months: 50  
Food distributed: 100 sacks (4,5 MT sorghum)  
Tasks: " cans (0,4 MT Oil)

### Cumulative:

150  
300 sacks (13,6 MT sorghum)  
" cans (1,1 MT Oil)

- |  |                            |
|--|----------------------------|
| 1) Cleaning, repairing irrigation ditches. | 1) All 2,500 m. completed. |
| 2) Digging 3000 holes for trees.           | 2) Completed.              |

## INTERNATIONAL STAFF VISITS (Mark - Techn. Advisor)

April 25 Mark Henderson

## PROBLEMS/DELAYS

It was misstated in the Jan. - March QR that the above tasks were 100% completed. Work was continued for one more month through April.

### III. SITE DATA SHEETS

SITE: GUELENDENG - REHABILITATION OF CHARI RIVER IRRIGATED PERIMETERS

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 2 - ADJUM Rahamat, MAHAMAI Samba

Work Start-up Date: 10 January 1984      Completion Date: 20 May 1984

#### PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 900

1585

Food Distributed: 1800 sacks (81,8 MT sorghum)  
" cans (6,7 MT Oil)

3205 sacks (145, MT sorghum)  
" cans (12 MT Oil)

Tasks:

1) Rehabilitate 10 irrigated perimeters.

- 1) Creation of new perimeters with construction of associated water distribution structures (Midjoué)
- 2) Overhaul and install 2 Diesel pumps (Midjoué II)
- 3) Extension of perimeter at Madoubou.
- 4) Construction of 4 storerooms (Kakalé, Saiman, Makling, Unoko)
- 5) Construction of 3 stilling basins.
- 6) Establish fruit tree nursery (Saiman)
- 7) Dig 2 canals from dry season river bed to pump intakes (Saiman, Kakalé)
- 8) Provision of hand tools for maintenance at all sites.

## ACCOMPLISHMENTS

### Current Period:

### Cumulative:

No. Worker months: Specialized - 49	Specialized - 56
Non-spec. - 950	Non-spec. - 1074
Food distributed: 2043 sacks of sorghum (92,9 MT)	4363 sacks (198,4 MT sorghum)
Tasks: " cans of Oil (7,6 MT)	" cans Oil (16,3 MT)

- |  |  |
|--|--|
| 1) Creation of New perimeter at Midjoué II | 1) Approx. 1400 m. irrigation ditch built. structures (pump platforms, stilling basin, siphon) partially installed.                                      |
| 2) New diesel pump ordered from France.    | 2) Ordered, not yet received.  |
| 3) Extension of perimeter at Madoubou.     | 3) Approx. 1020 m. irrigation ditch built, 6 H land cleared, structures (stilling basin, 2 division boxes) constructed, 1 H placed into rice production. |
| 4) 3 storerooms built.                     | 4) 4 storerooms built.   |
| 5) 1 stilling basin built.                 | 5) 4 stilling basins built.  |
| 6) Fruit tree nursery.                     | 6) Nursery established and maintained.   |
| 7) Dig 2 canals to pump intakes            | 7) Completed   |
| 8) Provide hand tools to all sites.        | 8) Completed.  |

## INTERNATIONAL STAFF VISITS (Mark-Techn.Adv./Tom-Asst.Adm./Kevin-Asst.Dir.)

April 7 Tom  
April 12 Mark  
April 24 Tom  
April 25-27 Mark  
May 6 Mark, Kevin  
May 22-23 Mark  
May 26 Kevin.

## PROBLEMS/DELAYS

The 7 sub-sites were spread over 50 Kms. along both sides of the Chari River, so supervision and distribution of construction materials were a constant problem. That, coupled with delays in procurement of certain materials, meant that most tasks took longer than planned.

However, except for Midjoué II, all work was completed within the period of the project.

### III. SITE DATA SHEETS

SITE: Casier A - Rehabilitation of Bongor  
Irrigated Rice Production Area "A"

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 1 - KHALIL Diidda

Work Start-up Date: 1 February Completion Date: 31 May 1984

#### PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 5400

1898

Food Distributed: 10800 sacks of sorghum (491 MT)

3840 sacks of sorghum  
(174,6 MT)

Tasks: " cans of oil (40,4 MT)

" cans of oil  
(14,4 MT)

- |  |  |
|--|--|
| 1) Reinforce 40 Kms of earthen dike along Logone River.  | 1) Reinforce 40 Kms of earthen dike along Logone River.  |
| 2) Repair irrigation floodgates and culverts along length of dike and reopening associated principal canals.       | 2) Repairs and maintenance to floodgates and culverts and cleaning 7 associated principal canals |
| 3) Clean 4 Kms of major intake canal leading to the experimental farm and repairs to 3 bridges crossing the canal. | 3) Clean 4 Kms of the major intake canal and repair to 3 bridges crossing the canal.             |
| 4) Repair of secondary canals at the experimental farm.  | 4) Clean and deepen 4 secondary canals at the experimental farm.                                 |

## ACCOMPLISHMENTS

### Current Period:

No. Worker-months: Specialized - 105  
Non-specialized - 1109  
Food distributed: 2553 sacks of sorghum (116 MT)  
Tasks: " cans of oil (9.5 MT)

### Cumulative:

Specialized - 175  
Non-specialized - 1779  
4085 sacks of sorghum (185.7 MT)  
" cans of oil (15.3 MT)

- |   |  |
|---|--|
| 1) Reinforce 40 Km of earthen dike along Logone River. Was not undertaken except at 7 structures. | i)   |
| 2) Repairs and maintenance to floodgates and culverts and cleaning 7 associated principal canals. | 2) a. Repairs and maintenance to floodgates and culverts completed, including reinforcement of roadway<br>b. 7 principal canals cleaned and deepened (total distance = 10.5 Km). |
| 3) Repairs to 3 bridges.  | 3) 3 bridges partially rebuilt   |
| 4) Clean and deepen 4 secondary canals at experimental farm.                                      | 4) Clean and deepen 4 secondary canals (total distance = 2 Km).  |

## INTERNATIONAL STAFF VISITS (Mark - Techn. Adv./Tom - Asst. Adm./Kevin - Asst. Dir)

April 11 Mark  
April 19 Tom  
April 27 Mark  
May 6 Mark, Kevin  
May 23 Mark  
May 26 Kevin.

## PROBLEMS/DELAYS

There were no significant delays during this reporting period. Although some of the tasks required more time than originally allotted, all were completed within the time-frame of the sub-activity.

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III. SITE DATA SHEETS

SITE: REHABILITATION OF BONGOR IRRIGATED RICE  
PRODUCTION AREA 'B' "Casier B"

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 1 - THOME Ahmat

Work Start-up Date: 8 February 1984 Completion Date: 31 May 1984

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 1800

1188

Food Distributed: 3600 sacks (163.7 MT sorghum)  
" cans (13,5 MT Oil)

2444 sacks (111,1 MT sorghum)  
" cans (9,1 MT Oil)

Tasks:

- 1) Cleaning and lining of intake at pumping station on the Logone River
- 2) Cleaning more than 3.500 m. of primary canal.
- 3) Repairs to 10.000 m. of secondary canals.

- 1) Cleaning and deepening pump station intake canal.
- 2) Cleaning and repair to primary canal (3,5 Km).
- 3) Cleaning and repair to secondary canals (9.000 m.)
- 4) Deepening fluvial intake channel.
- 5) Rebuild erosion control structures at siphon and station, and reinforce bridge.
- 6) Overhaul, repair 5 pumps.

## ACCOMPLISHMENTS

### Current Period:

No. Worker-months: Specialized - 49  
Non-spec. - 415  
Food distributed: 977 sacks of sorghum (44.4 MT)  
cans of Oil (3.7 MT)

### Cumulative:

Specialized - 88  
Non-spec. - 740  
1744 sacks of sorghum (79.4 MT)  
cans of Oil (6.5 MT)

- |  |  |
|--|--|
| 1) Cleaning and deepening pump station intake channel.                             | 1) Fully cleaned                                 |
| 2) Repairs to primary canal  | 2) Primary canal cleaned and repaired (3,5 Km).  |
| 3) Repairs to secondary canals.  | 3) Secondary canals cleaned and repaired (9 Km). |
| 4) Deepening fluvial intake channel and central basin of non-irrigated perimeter.  | 4) Completed.                                    |
| 5) Rebuild erosion control structures at siphon and station, and reinforce bridge. | 5) Completed.                                    |
| 6) Overhaul, repair 5 pumps and conduct pump tests.                                | 6) Completed.                                    |
| 7) Cleaned tertiary canal system.  | 7) Completed                                     |
|  | 8) Bulldozer repairs                             |
|  | 9) Bridge into perimeter reinforced.             |

### INTERNATIONAL STAFF VISITS

(Mark-Techn.Adv./ Tom-Ass't.Adm/Kevin-Ass't.Dir)

April 10 - 11 Mark  
April 18 - 20 Tom  
April 27 - 29 Tom, Mark  
May 6 Mark, Kevin  
May 23 - 24 Mark  
May 27 Kevin  
May 29 - 30 Tom  
May 31 - June Mark

### PROBLEMS/DELAYS

No delays were experienced during this period. All planned tasks, plus some extra ones, were completed by the end of May.

III. SITE DATA SHEETS

SITE: BONGOR Pisciculture - Expansion of Fishpond

Construction in Rice Production Area 'B'

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 2 - Thom Ahmat (CARE-Chad), Tom Rowan (Resident American proj. supervisor)

Work Start-up Date: 15 December, 1983 Completion Date: 30 June, 1984

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 120

320

Food Distributed: 240 sacks (10,9 MT Sorghum)

640 sacks (29,1 MT sorghum)

Tasks:           " cans (0,9 MT Oil)

" cans (2,4 MT Oil)

1) Construction of 50 fish ponds

1) Rehabilitation of 19 fish ponds  
and construction of 30 new ponds

2) Construction of 11 pigpens

3) Construction of 4 adobe houses  
(living quarters, offices, store-  
room, guest hut).

4) Construction of 3 hand-dug wells.

5) Preparation of garden plots.

6) Manufacture of fish cages.

## ACCOMPLISHMENTS

### Current Period:

No. Worker-months: 360

Food distributed: 720 sacks (32,7 MT sorghum)

Tasks: " cans (2,7 MT OIL)

### Cumulative:

600

1200 sacks (54,6 MT Sorghum)

" cans (4,5 MT Oil)

1) Construction of 30 new fish ponds

1) Rehabilitation of 19 fish ponds  
and construction of 30 new ones.

2) Construction of 10 pigpens

2) 11 pigpens completed

3) Construction of 4 adobe buildings

3) 4 buildings completed

4) Manufacture of fish cages

4) Manufacture of fish cages

5) 3 hand-dug wells completed

0,1 n of garden plots prepared

### INTERNATIONAL STAFF VISITS (Mark - Techn. Adv./ Tom - Ass't Adm./ Kevin-Ass't Dir.)

April 10 Mark

May 31 Mark

April 19 Tom

April 28 Mark

May 6 Mark, Kevin

May 23-26 Mark

May 27 Kevin

### PROBLEMS/DELAYS

III. SITE DATA SHEETS

SITE: CASIER 'C' - REHABILITATION OF THE NYAN  
RICE AND RICE SEED PRODUCTION AREA

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 1 - MISDONGARTI

Work Start-up Date: 15 March 1984 Completion Date: 15 May 1984

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 200

128

Food Distributed: 400 sacks (18,2 MT sorghum)

264 sacks (12 MT sorghum)

Tasks: " cans (1,5 MT Oil)

" cans (1 MT Oil)

1) Repairs on a small dam, including replacement of spillway flash boards.

1) Reinforce earth dam with laterite and split palm logs.

2) Replace flash boards at all turnout gates.

2) Replace flash boards on spillway and all turnout gates.

3) Clean and repair all primary and secondary canals.

3) Clean and deepen all primary and secondary canals.

## ACCOMPLISHMENTS

### Current Period:

No. Worker months: Specialized - 8  
Non-spec. - 120  
Food distributed: 264 sacks (12 MT sorghum)  
Tasks: " cans (1 MT Oil)

### Cumulative:

Specialized - 8  
Non-spec. - 120  
264 sacks (12 MT sorghum)  
" cans (1 MT Oil)

- 1) Reinforcement of dam with 450 split palm logs and laterite was completed in allotted time.
- 2) Replacement of all spillway and turnout gate flash boards was completed.
- 3) All primary and secondary canals were deepened and lengthened on schedule.

All project activities took place in the current reporting period.

### INTERNATIONAL STAFF VISITS (Mark-Techn.Adv./Tom-Adm.Asst./Kevin-Asst Dir)

April	1	Tom
April	7 - 8	Mark
April	22	Tom
May	2	Mark
May	4	Mark, Kevin
May	28	Mark

### PROBLEMS/DELAYS

Apart from some material shipment delays, which did not prevent a timely achievement of project targets, this activity experienced no noteworthy problems.

**III. SITE DATA SHEETS**

**SITE:** Laf - Urban Sanitation  
Construction of drainage system

**REPORT PERIOD:** 1 April - 30 June 1984

**Resident Supervisory Staff:** 1 - NGONIRI Gos Mbairo

**Work Start-up Date:** 1 March **Completion Date:** 31 May 1984

**PROJECT DEFINITION**

**Original Targets:**  
**(as per proposal)**

**Modified Targets:**  
**(as per workplan)**

**No. Worker-months:** 1600

282

**Food Distributed:** 3200 sacks (145,5 MT Sorghum)

606 sacks (27,6 MT sorghum)

**Tasks:** " cans (12 MT oil)

" cans (2,3 MT Oil)

- |   |  |
|---|--|
| <p>1) Deepening and lining 500 m. of drainage ditches .</p> | <p>1) Construction of Brick-lined drainage ditches (850 m.).</p> <p>2) Construction of 5 culverts and an outlet structure.</p> <p>3). Construction of 8 public garbage bins.</p> |
|---|--|

## ACCOMPLISHMENTS

### Current Period:

No. Worker-months: Specialized - 57  
Non-spec. - 148  
Food distributed: 467 sacks (21,2 MT sorghum)  
Tasks: " cans (1,7 MT Oil)

### Cumulative:

Specialized - 69  
Non-spec. - 231  
669 sacks (30,4 MT Sorghum)  
" cans (2,5 MT Oil).

- |  |   |
|--|---|
| 1) Construction of brick-lined drainage ditches (680 m). | 1) Full 850 m. trenched but 80% lined.  |
| 2) Construction of 5 culverts and outlet structure.      | 2) Completed.                           |
|  | 3) Construction of 5 of 8 garbage bins. |

## INTERNATIONAL STAFF VISITS (Mark - Techn. Adv./Tom - Ass't. Admin./Kevin - Ass't.)

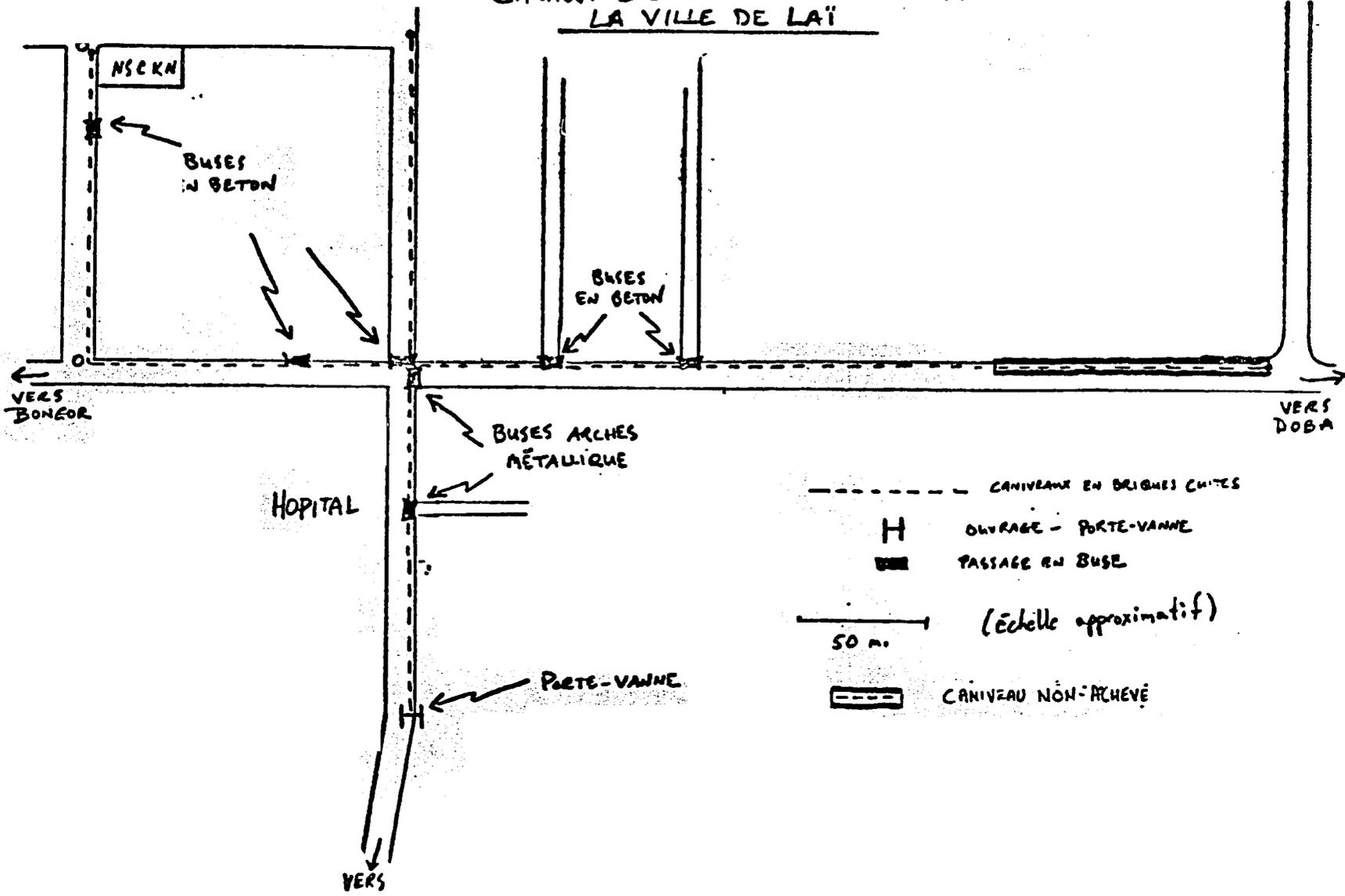
April 1 - 4	Mark, Tom	May 26 - 27	Mark
April 9	Mark	May 30	Mark.
April 21	Tom		
April 23 - 27	Tom		
April 30 - 31	Mark		
May 5	Mark, Kevin		

## PROBLEMS/DELAYS

Early rains and the slow pace of masonry work prevented the full 850 m. from being completed. A 170 m. section was trenched but remains unlined. The remaining 3 garbage bins were not built.

MARCHE

CANAUX D'EVACUATION DES EAUX  
LA VILLE DE LAÏ



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### III. SITE DATA SHEETS

SITE: DOBA - Urban Sanitation  
Construction of drainage System

REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 1 - MISDONGARTI

Work Start-up Date: 14 March Completion Date: 31 May

#### PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 1600

290

Food Distributed: 3200 sacks of sorghum (145.5 MT) 610 sacks of sorghum (27,7 MT)

Tasks: 3200 cans of oil (12 MT) 2300 cans of oil (2,3 MT)

- |   |  |
|---|--|
| 1) Deepening and reinforcing 500 m. of drainage ditches.                    | 1) Clean and repair existing drainage system (200 m.).     |
| 2) Construction of public garbage bins.                                     | 2) Construction of additional bricklined ditches (800 m.). |
| 3) Upgrading of slaughterhouse and creation of a solid waste disposal site. | 3) Construction of brick public garbage bins.              |
|   | 4) White-wash 2 hospital buildings.                        |

## ACCOMPLISHMENTS

### Current Period:

No. Workers, months, Specialized-41  
Non-specialized-282  
Food distributed: 687 sacks (31,2 MT sorghum)  
Tasks: " cans (2,6 MT Oil)

### Cumulative:

Specialized-41  
Non-specialized-282  
687 sacks (31,2 MT sorghum)  
" cans (2,6 MT Oil)

- |  |                   |
|--|-------------------|
| 1) Clean and repair existing system (200 m).               | 1) Completed.     |
| 2) Construction of additional brick-lined ditches (800 m). | 2) 80% completed. |
| 3) Construction of 10 garbage bins                         | 3) 10 completed.  |
| 4) White-wash 2 hospital buildings.                        | 4) Completed.     |

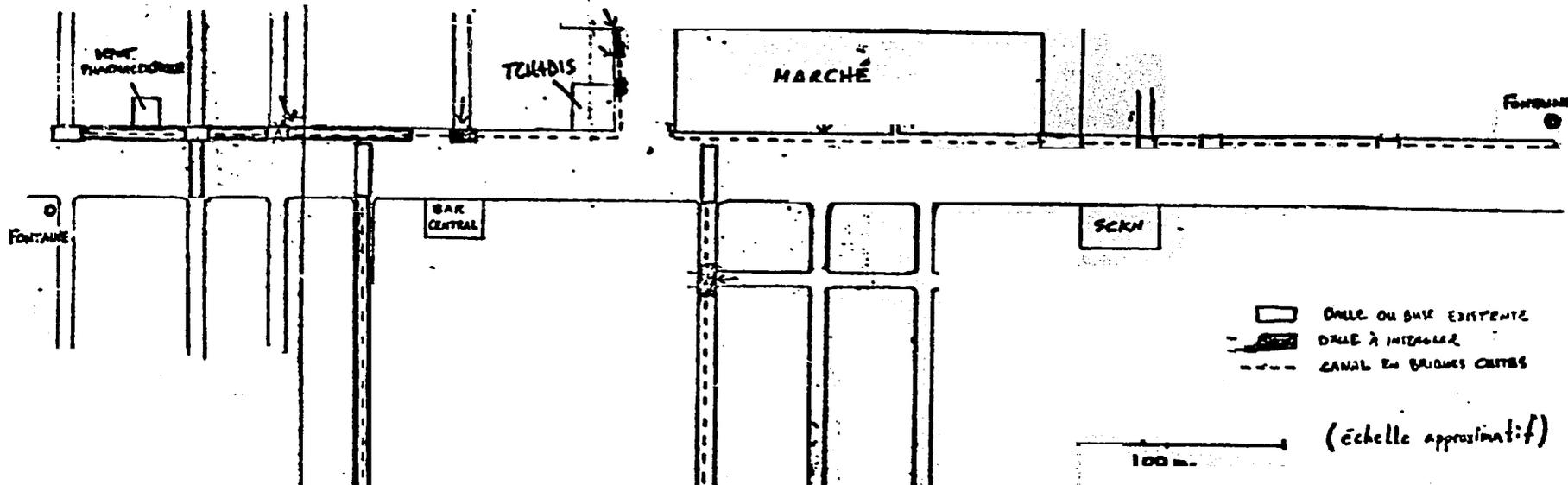
## INTERNATIONAL STAFF VISITS (Mark - Techn. Adv./IDM - Admin. Asst./Kevin - Asst., D)

April 4 - 8      Mark, Tom  
April 22          Tom  
April 1 - 3      Mark  
May 4            Mark, Kevin  
May 27 - 29     Mark

## PROBLEMS/DELAYS

Early rain slowed the pace of work. Consequently, only 80% of the planned system was completed by the end of May.

CANAL D'EVACUATION DES EAUX  
LA VILLE DE DOBA



W NOT COMPLETED

III. SITE DATA SHEETS

SITE: Mao - Erosion Control  
Cancelled  
REPORT PERIOD: 1 April - 30 June

Resident Supervisory Staff:

Work Start-up Date: \_\_\_\_\_ - \_\_\_\_\_ Completion Date: \_\_\_\_\_

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months: 900

Food Distributed: 1800

Tasks:

- 1) Fill-in and reinforce banks of ravines in town.
- 2) Install drainage canal

This activity was cancelled for the following reasons

- a) Time and resource considerations
- b) Unfavorable cost-benefit situation.

III. SITE DATA SHEETS

SITE: N'DJAMENA -URBAN SANITATION  
CLEANING AND REPAIRING DRAINAGE SYSTEM  
REPORT PERIOD: 1 April - 30 June 1984

Resident Supervisory Staff: 1-BOUBAKARI; ADOUM Rahamat from May 25

Work Start-up Date: 21 February Completion Date: 24 June

(will be extended)

PROJECT DEFINITION

Original Targets:  
(as per proposal)

Modified Targets:  
(as per workplan)

No. Worker-months:	2600	1008
Food Distributed:	5200 sacks (236,4 MT Sorghum) " cans (19,5 MT Oil)	2218 sacks (100,9 MT sorgh) " cans (8,3 MT Oil)

Tasks:

- |   |  |
|---|--|
| 1) Covering a 250 m length of major drainage canal at "marché de mil" | 1) Cleaning 1.9 Km of secondary drainage/sewage canals.  |
| 2) Covering up to 400 m. of secondary drainage/sewage canals.         | 2) Manufacture 1800 reinforced concrete slabs to cover 540 m open sewer.   |
|   | 3) Construction of protective embankment on Chari River (80 m).  |
|   | 4) Construction of brick-lined drainage ditch to replace damaged section which discharges into the Chari River (60 m). |

ACCOMPLISHMENTS

Current Period:

Cumulative:

No. Worker months:

Food distributed:

Tasks:

INTERNATIONAL STAFF VISITS

(Previous period)

Jan. 8 Tom (Asst. Admini.)

Feb. 6 Tom

PROBLEMS/DELAYS

## ACCOMPLISHMENTS

### Current Period:

### Cumulative:

No. Worker-months:	Specialized - 100	Specialized - 133
Food distributed:	Non-spec. - 547	Non-spec.- 689
Tasks:	1394 sacks sorghum (53,4MT)	1777 sacks (80.8 mt)
	" cans oil (5,2 MT)	" cans (6.6 mt)
1) Clean sewage canals		1) 32 Kms cleaned
2) a. Manufacture concrete sewer covers		2) a. 1400 manufactured
b. Install covers on open sewers		b. 100 m covered
3) Construction of protective embankment on Chari River.		3) Embankment 30% completed
4) Construction of drainage ditch discharging into river		80% completed.

## INTERNATIONAL STAFF VISITS

Frequent visits during this period by Techn. Adv., Asst. Adm., and Asst. Director.

## PROBLEMS/DELAYS

The late delivering of split-palm logs delayed start-up on the embankment. The amount of time for this task was underestimated, so the completion date will be advanced to the end of July.

#### IV. PROBLEMS/DELAYS

Progress at the southernmost sites (Lai, Uoba) was hampered by the early arrival of rains (April rather than June). Work on the construction of drainage channels slowed down, and timely truck deliveries of materials were jeopardized.

Procurement of project materials originating from Nigeria continued to be a problem due to border closures.

- frontiere
- limite de préfecture
- - - limite de sous-préfecture

- Capitale
- BOL Chef-lieu de préfecture
- Fada Chef-lieu de sous-préfecture

ATTACHMENT TWO

AGRICULTURE RESTORATION FOOD-FOR-WORK PROJECT  
PROPOSED SITES 1983-84



● AGRICULTURE

★ SANITATION

47

Ames El Gos

Zongo

en plus  
 un réseau de la ville  
 pour dans  
 en du  
 de l'entrepôt  
 de publics et administratifs  
 rto et marchés  
 d'eau ou réservoirs  
 vers  
 et bâtiments militaires  
 ne  
 l'école  
 sable suburbaines  
 y  
 ne de berge

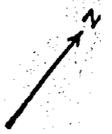
CLEANED SEWERS

BERGE

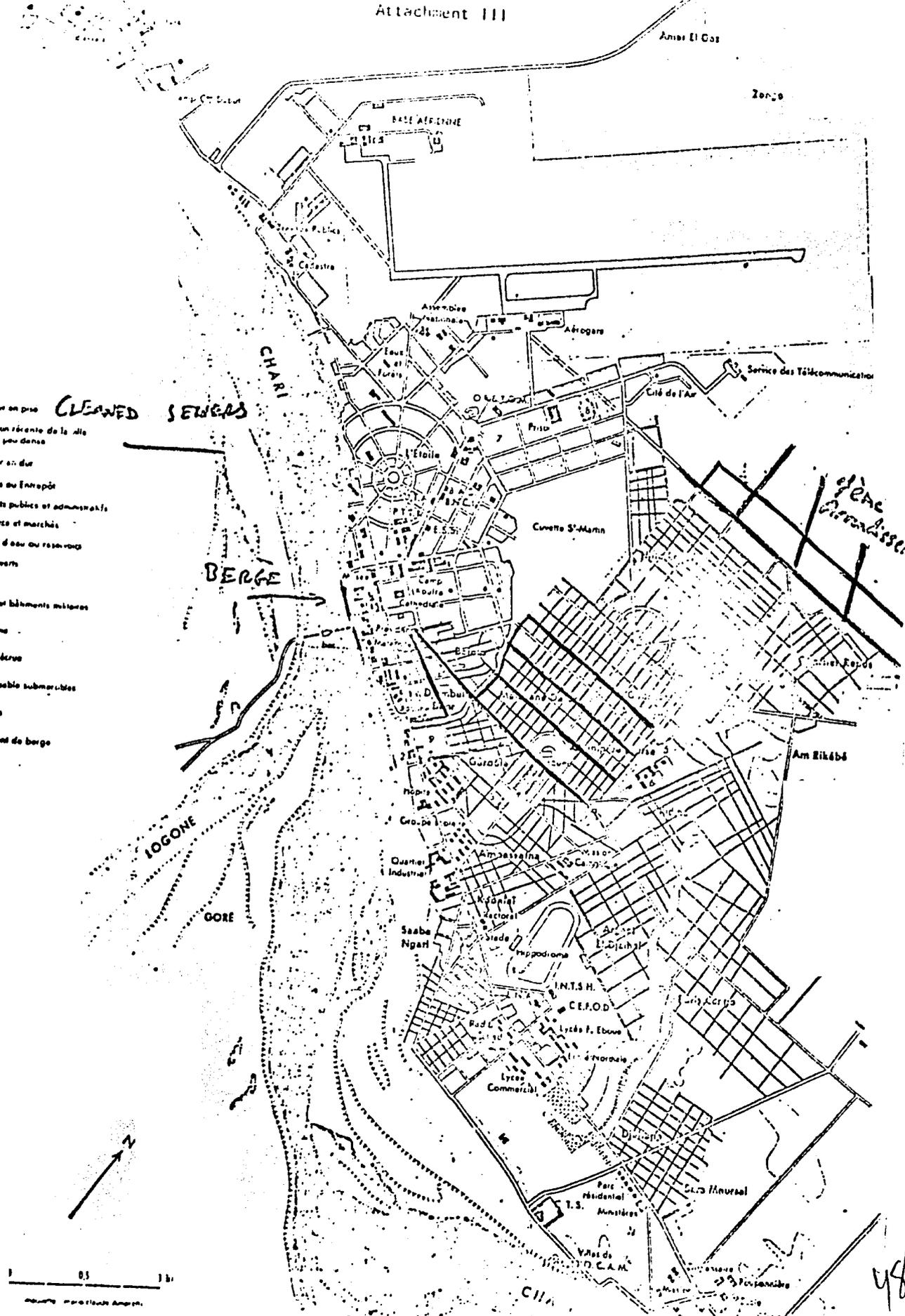
LOGONE

GORE

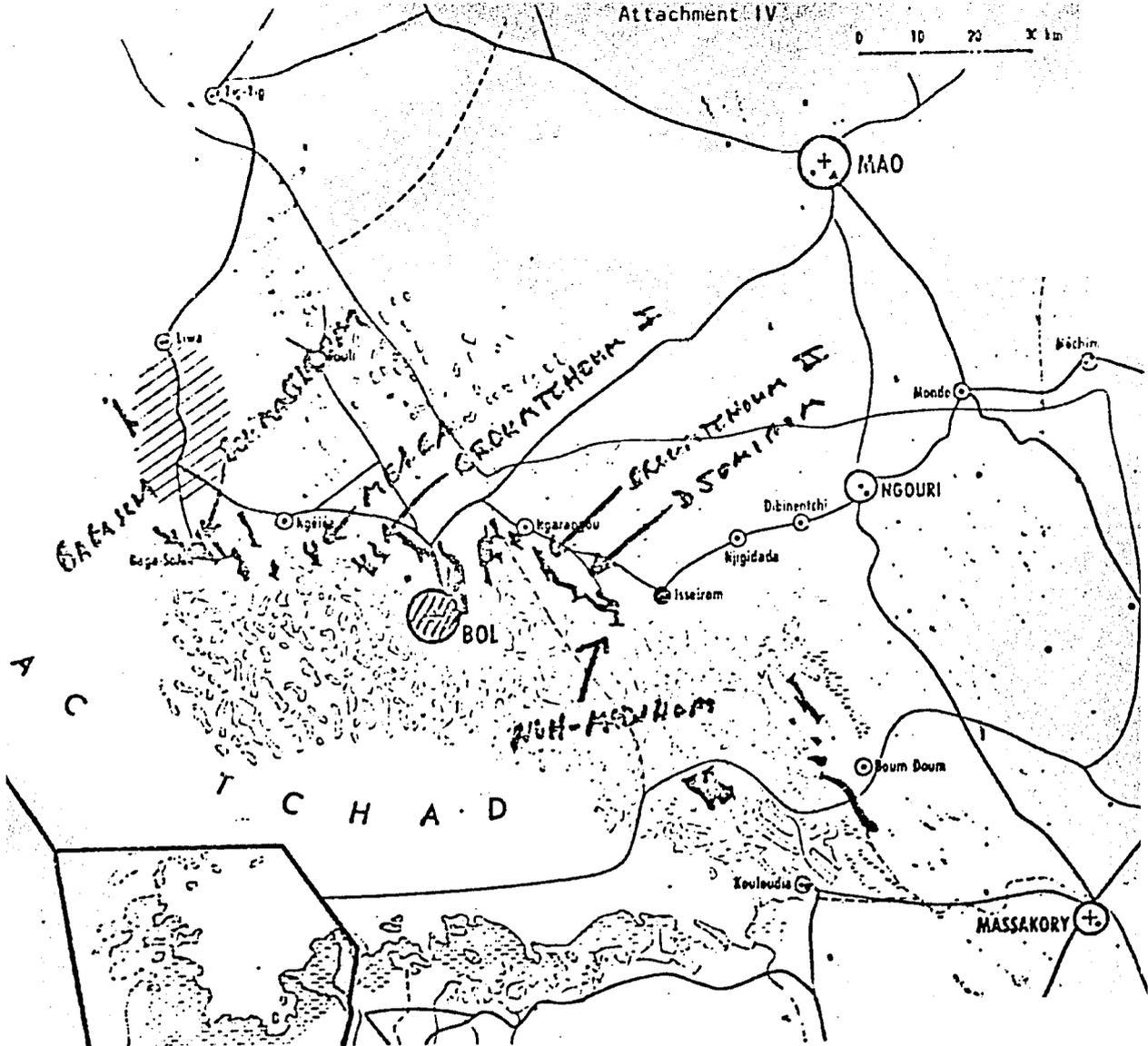
CHARI



0 0.5 1 km



48



Terrains de parcours

Culture du mil sur dunes associée à l'élevage

Culture du mil

Mil et sorgho

Mil, sorgho et arachide

Mil, sorgho, arachide et coton

Terre d'ouadi : légumes, cultures irriguées

Polder : blé, maïs, légumes

Digue de polder

Commerce

Zone inondable

Extraction du natron

Limite d'état

Limite de préfecture

Limite de sous-préfecture

Chef-lieu de préfecture

Chef-lieu de sous-préfecture

Autre localité

Route

Piste importante

Autre piste

Hôpital

Centre médical

Infirmierie

Dispensaire

Ecole normale

Lycée

Centre d'apprentissage

C. E. G.

Ecole primaire

de Ruines

maquette : marcel-claude Cribier