PD-ACC-820

AGENCY FOR
INTERNATIONAL
DEVELOPMENT

ANNUAL BUDGET SUBMISSION
FY 1979

USAID CHAD

DEPARTMENT
OF
STATE

JUNE 1977

CHAD ANNUAL BUDGET SUBMISSION

FY 1979

July 1, 1977.

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*Relates to national component of Club du Sahel initiatives.

SUMMARY STATEMENT NARRATIVE

Background

Chad's major potential for economic growth lies in its agriculture sector. In years of normal rainfall Chad has the potential to be self-sufficient in the production of basic food crops and to export limited quantities of rice, wheat and corn. Chad is already the sub-Sahara's largest exporter of cotton. Although often described as a Sahelian country, more Chadian land is located in the Sudanian and Guinean zones (30%) than in the Sahelian zone (20%). Two major rivers (the Chari and Logone) traverse southern Chad and with Lake Chad constitute a major, largely untapped potential for irrigated agricultural production. The country benefits from major livestock (the second largest herd in West and Central Africa) and fish resources which can be more fully exploited, both for domestic consumption and for export. The only major mineral resource discovered to date is petroleum, and there appears to be uranium prospects. In the case of oil, it is not yet known whether oil reserves are limited or significant.

Development of Chad's significant agricultural potential is hampered by the country's landlocked geographic location far from major ports, by inadequate transport and communications infrastructure, and by uncertain rainfall. The effectiveness of government agriculture services is limited by the poor communication and transportation links, the small number of qualified government personnel and major budgetary constraints. Security problems in the north, east and central regions of the country severely limit public access to government services and have led to increased allocation of scarce financial resources to the military and police.

The new military regime which overthrew the Tombalbaye government in April 1975 has made only modest headway in the task of establishing development priorities and elaborating a development plan. Planning is still ad hoc, relying primarily on the expressed interests of the donor community. There is progressively coalescing, however, through the combined efforts of the donors and the GOC, a sort of a posteriori planning based on joint experiences and designs for the future. Initial work of the Club du Sahel working groups

has helped to bring these efforts into sharper focus. The new government has announced on various occasions that social programs including education and health would receive a higher priority than in the past, with educational reform, both at the primary and adult levels given special treatment. The government has also undertaken actions to foster a diversified economy based on agriculture and livestock, particularly with respect to agriculture integration in the cotton-producing zone.

Chad's development prospects over the short term are limited by: a) the aftereffects of the drought in some sectors (especially livestock and fishing); b) continuing and anticipated future drought conditions; c) security problems; and d) the precarious financial position of the government which makes the government financing of ongoing operating expenditures difficult and prevents the government from establishing a self-financed investment budget. Chad will be almost totally dependent on donor assistance for financing public investments for the immediate future. Mineral discoveries or a relaxation of internal political tensions could, however, alter present prospects.

Prior to the initiation of AID drought-relief programs in 1973, only limited U.S. assistance to Chad was provided through regional programs (LCBC, OCEAC). Because of the drought and subsequent concern regarding the development of the Sahelian region, the U.S. in FY 75 began to undertake steps to initiate major bilateral assistance programs. As in other countries of the Sahel, the overall AID program goal in Chad is to help increase local agricultural production capacity with a view to alleviating or eliminating the food deficit, while keeping in mind social and economic equity. A parallel and supporting long-term goal to the equitable increase of food production is the imperative halting and reversing of ecological deterioration which is occurring in the region. But major effort in this direction will require the attention of the Club du Sahel.

As noted above and described more fully in the sectoral analyses which follow, Chad has considerable agricultural potential and can become self-sufficient in the production of basic food crops. Chad's livestock and fish resources can also be more fully exploited both for domestic consumption and for export.

Constraints

Analysis indicates that in addition to the aforementioned problems of security and the lack of public finances the major constraints to the development of these resources and progress toward AID program goals in Chad are:

a) the poorly developed human resource base in Chad, especially at the government and producer levels;

b) the use of inefficient and ineffective agricultural and other technologies in most areas of Chad, and the absence of low-cost distribution systems that can make improved technology available in rural areas;

c) underdeveloped food (grain and livestock) marketing systems;

d) continued deterioration of the natural resources base;

e) the embryonic state of domestic and regional transportation and communications systems.

AID program activities in Chad are related to these major development constraints as follows:

1. Strengthening of food production capability and increasing actual output. Development of low-cost technologies which can improve the productivity and standard of living of the rural poor and development of delivery systems to make these technologies more readily available to the rural populace. To these ends, AID assistance will be directed toward development of:

- improved sorghum, millet, rice and peanut seed varieties and seed multiplication.

- irrigation and water control systems for intensified food crop production; improved dryland farming techniques; and flood rice production.

- an effective extension system for agriculture and livestock production.

- improved methods of health care delivery.

2. Human Resource Development. An important constraint to development of Chad's natural resources base is the low skill levels of government cadre and rural producers. The AID program will concentrate on three levels of human resources development: a) improving the planning and management capacity of government officials dealing with AID sectors of emphasis; and b) improving the skills of government cadre who deal directly with the rural producer (the agriculture agent ("encadreur"), livestock agent, teacher, rural health worker, fisheries and forestry agent). Given Chad's limited budgetary resources and already high proportion of the budget allocated for salaries, emphasis will be placed on improving the quality and effectiveness of these cadre rather than increasing the quantity of government functionaries; c) improving the skills of the rural producer through development of more practical primary and community education programs and through culturally-sensitive training programs for agriculture and livestock producers conducted near or in their home villages.

3. Major Infrastructure Development. Due to the magnitude of potential projects and their funding requirements, AID will not engage in major bilateral activities addressed to this constraint, but will seek active collaboration with other donors and the Club du Sahel which will hopefully concentrate major resource flows from many donors on selected large-scale infrastructure projects in Chad. It is anticipated that U.S. resources provided to the Club will be used in conjunction with other donor resources for large-scale infrastructure development programs which are presently beyond the financial and programmatic constraints of AID. AID will encourage the Club and other donors to consider the following high-priority investments in Chad and the Lake Chad Basin:

- Maintenance of selected portions of the Chadian domestic transportation network;

- Construction of priority domestic and international routes;

- Development of Lake Chad/Logone River Basin following extensive economic feasibility and environmental studies.

4. Marketing. The present state of both the traditional and government regulated marketing systems and official pricing policies

in Chad often discourage rural producers from expanding their production. Although a major effort in marketing is not contemplated under the present program, AID, through various projects, will direct modest attention to this constraint by encouraging the development of a national grain reserve stock, improved on-farm and village grain storage capacity, livestock marketing (to encourage early destocking of the range with satisfactory returns to the traditional producer) and fish marketing. In the short term, the marketing constraint will not adversely impinge upon the success of our program addressed initially primarily to the first two constraints. AID will remain alert to the potential impact of the marketing constraint, and as the program matures and experience is gained with the government, greater attention will be directed toward marketing policies and practices.

5. Conservation and improvement of Chad's natural resource base. Resources conservation will necessarily be an essential consideration in the design of any AID project in Chad and a prime factor in the selection of technologies to be propagated in the rural areas of Chad. Initially, specific project interventions directed toward this constraint will be limited primarily to improved management of pastures, due to the magnitude of funding requirements and the need to elaborate appropriate schemes. We contemplate collaborating actively in the development of such schemes with the Club du Sahel, particularly with respect to afforestation/reforestation, protection of existing wood resources and improved utilization of cut wood. We also plan to continue our joint interest with the UNDP concerning conservation and replenishment of water resources, including studies of the Lake Chad/Logone River water resources network.

I. AID STRATEGY FOR CHAD

The overall goal of the AID program in Chad is to increase Chad's capacity for achieving national food self-sufficiency while improving the quality of life of the rural population.

AID program strategy is based on directives from the U.S. Congress which indicate that it is not sufficient for AID to assist in increasing production levels. Its program goal must also encompass activities designed to improve the life situation of a substantial portion of the rural population. AID's development approach should be in direct support of the longer-term structural changes needed to increase the productivity of the small farmer. The AID program therefore opts for schemes which will induce incremental production increases of individual farmers through better land use, improved methodology, seeds, manures, animal traction tools, storage practices, credit facilities, etc. Our projects will be designed to support directly the GOC's efforts to better the lives of the Chadian peasant. The intent of the AID program is not to change fundamentally Chadian society, but we do recognize that no meaningful development program can be sustained without improvements in host country institutions and the continued development of indigenous human resources. This strategy must be followed if the substantive agricultural development and the food self-sufficiency desired by the GOC are to be realized.

In recognition of the understanding that rural development and improvement in the quality of life of the rural population, as well as development of a meaningful GOC capability for a sustained effort toward goal attainment, can only take place through a comprehensive approach to the multifaceted problems involved, AID will collaborate with the various GOC agencies responsible for agriculture, health, education and public works, as required for goal attainment. The AID program is, therefore, multisectoral in scope. It will be oriented toward both rural development and institution building at the ministerial level in keeping with AID's congressional mandate.

The AID program will address the sine qua non requirement to develop the capabilities of the principal GOC technical services involved in rural development. The weak institutional base of the various GOC technical services calls for immediate strengthening

of the central offices of these services as well as their field elements. Thus, the importance and fundamental requirement for the basic institutional development projects in the sectors of priority. Direct support of these services is the most effective and direct manner of assisting the largest number of subsistence farmers in increasing local food availability, in improving individual earning capacity, and in addressing needs relating to the overall welfare of the rural population.

Improvement of Chad's capacity for national food self-sufficiency requires that attention be directed toward increasing cultivated food crop production by intensive means as well as extension. AID proposes to participate in the expansion of at least one major ongoing capital project, financed by other donors, while developing at least one additional large-scale intensive agriculture production scheme. In addition AID will pursue increased food production goals through extensive agricultural means and related activities such as seed multiplication, research and extension services. These projects reflect the GOC's highest priorities in the field of intensified agricultural production and are the foci of food crop production activity. They are oriented toward providing improved lands for exploitation in small plots by local peasants. AID interest in intensified food production schemes is directed toward those activities which maximize the direct involvement of the rural masses.

Future livestock activities will relate to Club strategy and will be coordinated to the extent possible with the programs of other donors; initially, this will principally be with the IBRD. Orientation

[redacted]

of sector activity will be directed toward the role of livestock in integrated agriculture schemes, range management and land use, and marketing aspects. Interventions in the field of fishing will be correlated with Club strategy and related program development and implementation.

Rural development aspects of the AID program will, for the most part, be oriented to specific geographic areas within Chad. In particular, focus will be on, but not necessarily limited to the following zones.

— The Sahelian zone extending in an arc southeast of Lake Chad from the polder area to N'Djamena. Concentration of effort in this particular area recognizes the restrictions imposed by

— The Southern cotton-producing zone (largest concentration of population, highest population density, greatest agriculture production potential, area where security problem considerations are of least concern).

AID will give priority attention to the identification and development of project activities in the Sahelian zone, while recognizing that the potentialities of the south are much greater than those in the Sahelian zone. Development activities will be undertaken in other areas of Chad on a limited ad hoc basis as required to be responsive to needs of priority targets of opportunity identified during the design and implementation of the overall rural development effort.

It is recognized that goal attainment — indeed any meaningful development in specific geographic zones — will require improvement of certain critical routes of communication requiring construction of transportation infrastructure. Therefore, attention will be given to road construction requirements in relation to national agriculture production activities. This project activity will be in addition to AID's participation with IBRD in a Club-sponsored national road maintenance project.

With the exception of the multidonor integrated livestock and agriculture project currently under development, the future AID program with LCBC will be dependent upon a specific policy determination concerning future U.S. Government support to the LCBC as well as the outcome of the multidonor planning to result from continuing dialogues with UNDP with respect to the integrated development and exploitation of Lake Chad/Logone River basin resources.

The AID program in Chad will be oriented to overall Club strategy. Although a substantial part of the program, i.e., first generation sectoral institutional development projects, will in the short term continue within the traditional bilateral format, new activities in a number of fields will be developed essentially as Club-sponsored endeavors. Activities for which substantial planning has already taken place and which will result in Club-sponsored AID-financed national programs in Chad include crop protection, road maintenance, fisheries development and livestock related activities. Hopefully, within the next two years, specific Club-sponsored AID-financed

project activity will be designed also for agriculture marketing, women in development, rural health delivery, and human resources development activities. Major environmental improvement projects will be developed only in the context of the Club program in that field. Major infrastructure construction for transportation and water basin development will also be limited to AID participation in multidonor interventions, probably with Club sponsorship.

The problem of Chad's absorptive capacity will be addressed in a number of ways, ie.: (a) direct support to GOC technical services to allow them to undertake implementation of rural development field activities on their own; provision of expatriate technical assistance for planning and management at the national level; (b) utilization of unit contracts (turnkey) for major infrastructure construction, e.g., road building where host country/AID management is not critical; (c) participation in multidonor schemes where management is being provided by others; and (d) maximizing the use of Peace Corps and voluntary agency resources.

It should be noted that under the substantial programs being planned for SDP financing, the burden of management will fall on the entire donor community, not exclusively on AID or the host country. The SDP legislation also allows for financing of recurrent operating costs.

The AID program can be substantially enlarged with disproportionately lesser management input than is currently required for the present more modest program.

The pace of the program will, for the most part, be reflective of the maturing process of GOC development plans and joint GOC/AID ability to transform these plans into specific project designs. It is believed that appropriate priority activities reflecting both GOC and AID development priorities can be jointly developed on a timely basis in the financial magnitude anticipated to become available through SDP. As indicated in the discussion above concerning absorptive capacity, the management mode utilized by the AID program will facilitate implementation of that program in the scope and financial magnitude planned. The overall scale of program size will be limited through the geographic concentration indicated above.

II. SECTORAL STATEMENTS

Agriculture

The agricultural development strategy of the GOC emphasizes:

(a) Increased production to be achieved by introduction of improved cultivation techniques, introduction of animal traction, seed improvement and multiplication and better crop protection systems;

(b) Improved processing, preservation and storage to assure that a larger proportion of what is produced reaches poor rural populations;

(c) Improvement of infrastructure to insure equity in the distribution of goods and services and greater access by the rural poor to the increased benefits being generated through development;

(d) Increased effectiveness of governmental institutions in coordinating programs that reach the rural poor.

In all respects this strategy is compatible with the agricultural development policy of USAID and with the Africa Bureau Development Strategy and policy guidelines promulgated in May 1977. The strategies of CILSS and the Club du Sahel are still evolving, but it is already clear that the general direction of their strategy will follow the principles enumerated above.

Our analysis of the development potential and existing government infrastructure in Chad's agriculture sector suggests three main interrelated foci for AID agriculture assistance to Chad:

(a) strengthening GOC institutional capacity to plan and execute agricultural projects;

(b) appropriate actions in the Sahelian zone, aimed at improving the production and marketing of subsistence crops (sorghum, millet, and peanuts) and at developing the agricultural potential of the Lake Chad polders for the cultivation of wheat and other food crops;

(c) AID agricultural investments in the southern zone along the Logone River, which is the main agricultural region of the country, with the aim of improving the production and marketing of basic agricultural crops, i.e., millet, sorghum, peanuts and rice.

The geographic area affording the highest potential return on a given agricultural investment is that lying in the Sudanian zone south of the capital city of N'Djamena (twenty percent of the land area of the country). It is in that zone, too, that the population density is greatest and rural unemployment is the most notable. This fertile southern zone is furthermore the most secure in Chad, and developmental initiatives there can be expected to continue without serious interruption, whereas in the north, east and central regions, security fluctuates and the future is less predictable.

Among the most persistent constraints to development in the southern zone are:

(a) An extremely primitive rural road system that limits small growers' access to government services and to commercial market centers.

(b) Lack of effective outreach or extension services for new, improved agricultural techniques for food crop production.

(c) An ancient and decaying water control system along the Logone River which leaves vast agricultural areas under threat of seasonal inundation.

(d) Concentration on cotton production on a commercial scale at the expense of food crop production and at a great cost in depletion of the natural fertility of the soil.

The first two constraints apply equally to the Sahelian zone, which also is adversely affected for agricultural exploitation by hostile growing conditions (except for the area of the polders) and the sparse nomadic population with customs for the most part badly adapted to stabilized habitation required for sustained crop production.

AID activity in the agriculture sector falls into two general, somewhat overlapping, categories:

(a) first generation sectoral support activities; and

(b) food crop production projects.

The Agricultural Institutional Development project (FY 78) is to provide first generation assistance to several GOC units responsible for agriculture sector planning and program execution in order to help develop an agricultural institutional infrastructure capable of responding at least minimally to the development needs of the agricultural sector, i.e., agricultural education, extension services, agricultural planning, agricultural statistics and agricultural research.

A second project will provide three production support interventions:

(a) Seed multiplication with adaptive research, multiplication and distribution of sorghum, peanut and rice seed in both the Sudanian and Sahelian zones of Chad;

(b) Grain marketing directed toward establishment of grain security stocks and on-farm and village storage activities;

(c) national agricultural research efforts to support the national agricultural production program.

We contemplate two major irrigated agriculture production schemes:

(a) The first (to begin in FY 1977) in the polder area north of Lake Chad, where we propose to engage in research and support activities in collaboration with the IBRD intervention, to strengthen SODELAC, the responsible GOC implementing agency, and to bring into production a polder developed by AID;

(b) The second (to begin in FY 1978) would be an irrigated rice intervention in the area around Bongor in connection with repair work to the Logone dike in the area, an intervention that would stabilize and increase the farm production of a population significantly larger than that residing within the confines of the irrigated perimeter. This population would benefit not only from the stabilizing effect of the dike, but also from the extension and research services provided.

A FY 1979 food crop proposal would enhance dryland production of sorghum, millet, and peanuts in both the southern area and in one

Sahelian area of concentration. In addition, a program to improve flood rice cultivation would take place in the southern project area.

AID is also financing a national crop protection project on a regional basis. This project is scheduled for substantial increase under the auspices of the Club. We also plan to be able to fund small irrigated perimeters and bas-fonds, among other activities, under a rural development fund designed to respond to targets of opportunity in rural areas.

Livestock

The prolonged drought has had an extremely deleterious effect on the livestock industry upon which the major portion of the population of the Sahelian zone of Chad depends for its livelihood. The herds have been badly depleted. Large numbers of cattle have perished for lack of forage and water. Herders have been forced to sell for slaughter large numbers of animals they could not sustain under drought conditions. Patterns of transhumance have changed putting enormous pressures on the shrinking range land that can still support animal life. Great expanses of rangeland have suffered severe damage and a well defined long-term trend toward desertification has accelerated notably. Delicate ecological balances in these areas are being destroyed by the combined impact of severe drought, overgrazing, uncontrollable fires and sterilization of the soil through the action of sun and wind.

The Chadian livestock industry has a potentially bright future. It can continue to earn substantial foreign exchange through increased exports, can provide low-cost protein for Chadian diets and can provide income and employment for a large segment of Chad's rural population. As a relatively new donor in an already crowded sector, AID will carefully select projects where additional donor resources can have a significant impact on the performance of the sector in order to complement rather than duplicate or oversubscribe other donor and GOC activities.

AID livestock programs in Chad are concentrating on the following objectives:

(a) strengthen the planning and management capacities of the GOC livestock service through training and technical assistance

and encourage the broadening of GOC program perspectives to include concepts of range management, animal husbandry and livestock extension;

(b) develop ecologically sound technical packages which can increase the productive efficiency and incomes of traditional herders;

(c) increase the domestic supply of meat through the efficient production of small ruminants;

(d) study and apply practical interventions which can conserve or improve the ecological status of the Sahelian and Sudanian rangeland;

(e) encourage financial self-sufficiency in the Livestock Service;

(f) integrate livestock development activities with food crop activities in the cotton producing zone.

These activities are being undertaken, in part in the ongoing, first-generation Chad Range and Livestock project; expanded activities, a number of which will be undertaken in context with the World Bank, will be the subject of a second generation project. Various range management interventions are planned for the Assale area in Chad (as well as the similar activities in the Serbewel and Borno regions of Cameroon and Nigeria) within the context of a multidonor regional livestock project with the LCBC.

Fishing

Fishing is a sector which provides part-time or full-time employment for almost 10% of the economically active population and which provides a substantial part of the protein for the local population (equal in weight to 2/3 the per capita consumption of meat and offals). It accounts for 4% of GNP, and provides substantial export earnings and tax revenues for the country. Development of the fish sector is of increasing interest to the Government of Chad. It is likely that relatively small-scale donor investment projects in this sector can be designed to affect an important segment of the rural poor directly without major overhead costs. CDO has developed a

proposal for an initial national project, which we see as a multidonor intervention under the auspices of the Club.

Forestry and Ecology

AID program opportunities in forestry and ecology conservation, like those in other sectors, are constrained by the limited human resource base of the Forestry Service and by severe GOC financial limitations. Eventual AID-financed Club programs would, in addition to making concrete environmental interventions, concentrate on improving the planning, management and extension capacity of the Forestry Service and on collecting and analyzing data related to ecological degradation in Chad. Currently AID is working with private voluntary organizations, such as CARE, other donors, the Peace Corps, and the Forestry Service to identify pilot, village-level approaches to forestry and natural resources conservation and amelioration with maximum local participation in project planning and implementation. It is anticipated that activities will be eventually designed and carried out within the context of a national activity as part of a regional project under the auspices of the Club. CDO is submitting with the ABS a strategic proposal for consideration by the appropriate Club working group as an initial discussion concerning the type of national intervention which might be appropriate for further development within the Club framework.

Human Resources

The existing low-level of technical, administrative and managerial infrastructure extant in the ministries and services of the Government severely limits its absorptive capacity and reduces the speed with which requisite technological transfers can occur. Yet, paradoxically, developmental actions that increase the governmental infrastructure and consequently add to the recurring costs of government are clearly counterproductive and are beyond the foreseeable long-term capability of the government to sustain. The government must, nonetheless, develop a capacity to conduct broad sectoral analyses, to interrelate several sectoral objectives and to evaluate alternate developmental options in order to enunciate rational national policies, establish relative priorities and impose logical sequencing to create an integrated, multisector developmental plan for multidonor consideration.

A major constraint to development in virtually every sector of the economy in Chad is the lack of sufficient numbers of trained cadre capable of institutional planning, major project management or of technical supervision of project implementation. Formal educational and functional literacy levels are also low, particularly among rural technical extension agents. Because this is true, almost every major technical project in Chad of necessity includes a training component which is considered essential to proper technical implementation.

A strategic consideration for the Government of Chad and the CDO has been to choose between two courses of action:

(1) delay productive activities in all sectors until the requisite numbers of technically trained cadre are available to assure success or,

(2) phase the implementation of production activities in each project in such a way as to provide on-the-job supervisory and managerial experience, while assuring intensive opportunities to a sufficient number of selected leaders to utilize locally supervised training activities, Pan-African training institutions or U.S. training to provide by project end the managerial competence required to sustain project activities. Few if any additions to existing numbers of government employees are proposed. Instead, present employees will be retrained and developed to an acceptable level of competence. In the latter approach one accepts lower-than-optimum performance by the government agents in initial activities, depending upon temporary expatriate advisors in early stages of the project but working toward the gradual and continuous improvement of indigenous managers throughout the life of the project.

In deference to GOC political demands for practical projects that directly contribute to improvement of the economy and that provide intermediate evidence of progress, the CDO and the GOC have opted for the second, slower and less efficient alternative because, in fact, postponement of development activities is not in the current political environment of Chad a viable option for the government.

The fundamental need for competent project managers extends throughout the government. It is the objective of the Chad Comprehensive Human Resources Development (HRD) project to develop

project management skills by providing management training across the entire spectrum of GOC Ministries. Technical training of a specialized nature peculiar to a technical agency will be provided by separate sectoral projects addressing specific technical disciplines. These two approaches are mutually reinforcing and not duplicative. While the AID HRD project and the UNDP training project will both train Chadian planners, regardless of technical discipline, the training components of several USAID technical projects will provide technical planning competence unique to a given sector. The proper synchronization of such training is naturally a major concern of the government and of all interested donors including the CDO. The AID HRD project provides to AID a mechanism for leadership and influence in this critical developmental area in Chad.

Important training components compatible with the overall human resources development objective are planned for sector technical projects. For example, agriculture projects will stress improvement of government agricultural services to rural herders/farmers through the training of existing agricultural extension cadre. Various other donors also support agricultural training centers that train annually a limited number of rural adults to spread selected new technologies and to make better use of existing governmental services and facilities.

Reinforcing and extending these technical training ventures, the AID HRD project will assist the National Institute of Educational Sciences (INSE) to strengthen the planning and evaluation of the Chadian primary school system reform with special emphasis on the development of community education programs for farmers and women. This project will also foster rural extension of adult education into all villages under provisions of the Chadian educational reform program, a very high priority interest of the GOC, the purpose of which is to spread functional literacy and encourage self-education beyond the framework of formal governmental institutions.

Another important component of the AID HRD project alluded to earlier is a project management activity that will attempt to encourage application of management techniques learned in formal seminars to

specific field actions funded under independent technical projects. In this way, the impact of central management training on the actual conduct of other project activities will be the measure of success of the HRD project.

The human resources development strategy of the GOC and CDO is highly flexible and provides mechanisms to review annually the professional and skilled manpower availability against projections of Chadian future manpower requirements and to adjust manpower training plans accordingly. It is expected that emphasis may shift over the life of the project from relief of skills shortages to an increasing emphasis on improving the efficiency and upgrading the quality of existing manpower in the government services.

Public Health

The health strategy developed by the Club du Sahel focuses on the major weaknesses of all Sahelian health services: their inability to provide adequate attention to the majority of the population living outside the major provincial town and urban areas. Resources do not exist to expand significantly and still maintain the present public clinic mode of rural health service delivery.

The solution seems to be to establish a new or extended, village-based system, staffed by unpaid members of the community, which would offer a variety of preventive services and very basic curative services. Through such a structure, the rural farm or herder family might have access to nutrition education, health care for mothers and children, clean water and environmental sanitation services, and this will be achieved without adding additional cadre with associated recurrent annual costs.

The strategy also recommends two additional activities to complement the development of the rural health system. The first is the development of national health planning capabilities in each country. The second is the creation of a demographic data collection and analysis capability.

The health strategy enunciated in the DAP for Chad has exactly the same focus as that of the Health Sector Analysis of Club du Sahel. The GOC, recognizing its basic health system deficiencies,

requested AID assistance in developing a national health planning division and a village-based rural health system.

Project development in these areas is well under way, and CDO believes it should benefit from the increased technical and financial resources being made available through SDP and the Club. A four-year project to establish a national health planning unit in the Ministry of Health has already been approved as part of the bilateral AID program. It will bring together a team of four U.S. technicians and six Chadian counterparts to establish the new planning unit, tackle the problems of poor data and management practices, and assist the MOH in drawing up comprehensive national health plans and projects. It is hoped that the development of a national rural health delivery system can be accomplished through a regional project associated with Mali and Mauritania, each taking advantage of the experience of the others. Such a system would emphasize paramedical training and improved supervision and material support for the repair and equipping of existing rural health facilities.

Tests of the basic village health models have already been made a part of the plans for major agricultural development projects such as the Lake Chad Irrigated Agriculture project in the Bol polders and will be validated in those areas preparatory to a more comprehensive health system project that could be a Club-sponsored regional project or a bilateral project under SDP funding. Collaborative public health planning between CDO and GOC is rather advanced, and it may therefore be possible to initiate in Chad the first program elements of a larger-scale Club-sponsored rural health delivery system. CDO will be exploring this possibility with the Club's public health working group and with AID/W.

An important health-related activity in the AID program is the provision of adequate sanitary water supply at the village level. Because of the generally inadequate nature of the rural water supply, characterized by polluted, disease-inflicting waters, the Peace Corps, operating with AID funds provided through the now completed drought relief R&R program, has developed considerable experience in Chad with the drilling and maintenance of an AID-designed small-bore well and pumping system. We are proposing expansion of this activity into a full-scale project with multiyear funding that

will allow Peace Corps to program the assignment of volunteers on an effective basis. This project is the major focus of AID/Peace Corps collaboration.

Women in Development

Socioeconomic obstacles have hampered spontaneous responses from Chadian women to governmental initiatives, although the GOC, through several ministries and in cooperation with multiple donors, is sponsoring some actions to upgrade the education of Chadian women and improve their economic contribution to the development of the nation. Severe budgetary constraints have forced the GOC to place the needs of women low on the list of development priorities while welcoming assistance from interested donors. On the whole, Chad's geographic variety, compounded by important ethnological differences, would call for varying emphasis in training programs for women as elements of several other technical programs.

Among the semi-nomadic people of the north, women are responsible not only for dairy production but for sales as well. They sometimes own cattle of their own. Training in animal husbandry and in dairy production should be conducted separately for women. The social structure appears not to invite coeducational activities, and CDO will be exploring with GOC various modalities for including women in training related to animal husbandry.

Farther south around the Lake Chad and Chari River areas, women are major contributors to the fishing industry. They are responsible for the cleaning, preservation and sale of fish. In attempting to preserve the fish by smoking and at times by expensive salting, the women use ancient, ineffective procedures that lead to excessive waste which reduces income and contributes to a loss of important protein in the Chadian diet. Because the woman's role in the fishing industry is well defined, women should be given localized training courses in the conservation of fish. In this respect, we anticipate development of a fisheries project which will include elements specifically addressed to fisherwomen. FAO Rome has been asked by AID/W to provide technical assistance in the preparation of a PP for this project.

In the south, women are active in cooperation with their farmer husbands. They also on occasion cultivate their own plots of land.

Women are in charge of agricultural marketing, sharing money with their husbands for what they have jointly produced but retaining control over the sale of what they produce by themselves. Courses in crop production and the creation of cooperatives should be part of the curriculum for women in adult education centers. The GOC Ministry of Health provides training for nurses and some education for social workers. These young women upon graduation find employment opportunities in hospitals and as "extension workers" in educational centers sponsored by ministries.

For the few remaining women who obtain an elementary or higher education, employment opportunities are very limited, as they are for men. There exist some low-level secretarial and commercial schools for girls, but considerable improvements are required to raise the efficiency of graduates.

The response from Chadian women to educational opportunities has not been encouraging. UNDP Chad finally decided to exclude women from handicraft training because of their irregular attendance. The UNDP experience in Chad highlights the contradictory position of Chadian women today. Chadian women continue to play an important role in agriculture and in fisheries. They have a dominant role in the marketing of produce and milk products while taking care of home and family. They work with their husbands in cultivating the land and also take care of their own agricultural plots. It is precisely these heavy domestic and economic burdens which occupy their time and do not permit regular attendance at available training centers. They remain unaware of available opportunities to adopt more modern methods to help them lead easier, more productive lives. Having perceived little advantage to themselves where development efforts were concerned in the past, they withdraw their daughters from school during the early years to help in domestic and farming chores, thus perpetuating the circle of women's apparent apathy towards socioeconomic development.

For some time to come, special W.I.D. projects are needed before men and women can be integrated into training programs of the same level. Chad's literacy rate is estimated at 10%. Most of the literate are men.

W.I.D. projects in Chad have two parallel strategic goals:

(a) to motivate women by demonstrations and training to raise hygienic and nutritional standards while teaching them better and more successful production methods;

(b) to facilitate accomplishment of daily chores by providing water wells and other labor-saving devices.

It is imperative, however, that there be training centers for these women in their villages where they can productively utilize the time saved. Until these women are helped to overcome their present handicaps such as overwork, ancient working methods, and their centuries old ignorance regarding sanitation and family care, the development of Chad will be hampered by a waste of valuable women power.

The CDO has attempted to weave opportunities for women as appropriate into technical projects. In addition CDO has developed a number of specific national activities financed with regional funds which concentrate exclusively on opening development opportunities for women. One such activity emphasizes hygiene, nutrition and literacy training for women and young girls; another attempts to encourage income-producing handicrafts among women and to integrate them with literacy training; a third proposal will provide wells, introduce animal traction and build small grain mills for use by women in selected communities.

We anticipate that future Women-in-Development activities for Chad will be forthcoming through the Club mechanism in accordance with the above-described sectoral analysis.

Transportation Infrastructure Development

Great expanses of the potentially most productive land in Chad are inaccessible during most of the year because of an extremely primitive internal transportation system. The inadequacies of the transport system also adversely affect the marketing and distribution of available goods, limit the extension of government services and act as a disincentive to substantial private sector investment which will be essential to the achievement of national food production goals.

The landlocked geopolitical situation of Chad, without reliable direct access to West African ports or major railheads, diminishes the potential market for Chadian products and further adds enormously to the cost of all goods and thus to the costs of internal economic development.

Economic development in Chad cannot proceed unless the constraint of primitive internal and external transportation networks can be overcome.

The present distinctly limited capability of the government to maintain its present embryonic communications system has inhibited donor investment in additional major road construction. This has led to the design of a program to create mobile maintenance brigades as a first step in building adequate maintenance and road construction infrastructure to support further economic development.

This concept developed in collaboration among the GOC, IBRD and CDO was presented at the second meeting of the Club du Sahel as a model maintenance program for the Sahel. CDO N'Djamena anticipates early FY 1978 funding of this project under Sahel Development Program Funds. Successful implementation of the project will be a precursor to major Sahelian transportation system development by the Club du Sahel and to selected construction of internal feeder roads and farm-to-market roads that are expected to become key elements of a multidonor effort in Chad.

The Club du Sahel has considered the need for a definitive study of the regional transportation system in the Sahel to identify and to determine the priorities of the major trunk routes and the most economically justifiable feeder roads extensions required for systematic development of the region. It is anticipated that such studies and any following action would be subject to the interest of an ad hoc international consortium of donors.

While planning has proceeded at the broad level of the Club, continuous joint study and collaborative planning between the GOC and the CDO have identified five important road links that are considered essential for economic development in Chad. A summary description of these road links is attached as an appendix to the ABS.

Water Resources Development Strategy for Lake Chad and Logone River Basins

One of the potentially most valuable natural resources in the Sahel is the vast water system of Lake Chad and the Logone River Basin. This entire water system remains largely undeveloped and essentially uncontrolled throughout much of its length while the surrounding region annually suffers alternating parching drought and extremely destructive seasonal flooding. The potential of the Lake and the Logone River, properly controlled and regulated, to provide the means of extending and intensifying irrigated agriculture in order to increase food crop production, to increase fish harvests and improve livestock production has long been recognized by the countries that share access to the water system as well as by a succession of interested international donors. Its proper development and intelligent exploitation are recognized as essential to the achievement of Sahelian agricultural self-sufficiency. Potential donors insist on the completion of comprehensive research into alternative means of exploiting the water resources, ecological and sociological ramifications of doing so, and the need for a technically sound plan for systematic development. The countries concerned prefer to begin development without waiting for further time-consuming studies.

For more than thirty years, but most particularly in the last decade, Lake Chad and the Logone River Basin have been the subject of numerous studies. Two of the most important were funded by UNESCO and by FAO in the late nineteen sixties. The UNESCO study was a preliminary analysis of the hydraulic resources and the behavioral patterns of the water system. The FAO study was roughly complementary and consisted of a feasibility investigation of a group of sectoral projects suggested by the countries contiguous to the water system.

The Lake Chad Basin Commission (LCBC), formed by the four states bordering the lake has never developed the technical competence to design acceptable projects for international donor consideration nor has it devised a coherent plan for water system development. In 1975 AID put forward to the LCBC a proposal for a comprehensive study including the creation of modeling system of the Lake Chad Basin. The purpose of the proposal was to provide to LCBC a

sound base of data upon which rational water resources development policies could be established. The LCBC rejected the proposal at that time.

Meanwhile, attempting to attract donor contributions outside the framework of the LCBC, Chad and the Cameroon have formed the "Joint Chad/Cameroon Mixed Commission for the Logone Basin". This was, in effect, another expression of impatience with the slowness of the donor contribution through the LCBC and of that Commission's apparent lack of a viable mandate and dependable technical competence.

In 1976 the new Executive Secretary of the LCBC requested a multidonor technical mission to visit the area to prepare draft terms of reference for a technical study that will lead to the establishment of a master system development plan. The Executive Secretary has urged that the plan be prepared by the end of 1977. A preliminary draft of the frame of reference for the proposal study was prepared by the Water Strategy Working Group of the Club du Sahel. The target date for completion of this plan may now be impractical, but it will be critically important for the potential donor participants - UNDP, FAO, USAID and CIDA - to make a special and accelerated effort to put into the field a sizeable and technically balanced study team as soon as possible.

The financial magnitude required for implementation of this activity is such as to preclude an individual AID venture, and the appropriate anticipatory work with other donors will need a period of time prior to presentation of a project proposal. It is anticipated that the SDP unit will retain primary responsibility for advancing donor coordination and project design, and that funding for initial studies required through FY 1979 can be provided from regionally allocated study monies. Therefore the ABS does not contain project documentation nor a funding request for this activity.

III. RELATIONSHIP OF AID PROGRAM TO CLUB/CILSS INTERVENTIONS

The following remarks are based on an analysis of AID strategy as well as the project and budget proposals contained in this ABS compared with:

(a) the CILSS List compiled for the May 1977 Club du Sahel meeting in Ottawa based upon preliminary consultations of the Club working groups with the GOC and the donor community; and

(b) the views expressed by GOC officials with respect to activities they wish to see developed within the context of the Club.

Dryland Agriculture

The AID bilateral program satisfies current GOC aspirations in this category almost completely. An approved FY 1978 PRP meets the seed multiplication requirements. A FY 1979 PID submitted with this ABS was designed to respond to the GOC proposals for food crop development in the south and in the Sahel. We propose to develop the two PPs concerned as bilateral projects, although both projects will be closely tied to activities of other donors. The seed multiplication PP will be developed in collaboration with the FAO, and will dovetail with their project. The food crop production PP will augment already designed FED and FAC activities in the south and IBRD-financed activities in the Sahel.

Irrigated Agriculture

The FY 1977 PP for Lake Chad Irrigated Agriculture and the revised FY 1978 Bongor Irrigated Food Crop Production (Logone Dike) project respond to two priority items listed under this category. Both of these projects are bilaterally financed undertakings; however, the former is a joint project with IBRD. Two other major items in this category, Lake Chad Basin and Logone River development activities, are of interest to AID as a joint venture with UNDP and other possible donors. These items are at the preliminary study stage. UNDP is taking the lead. AID also anticipates delving into irrigated perimeter development through the vehicle of a rural development fund in collaboration with the IBRD. This proposal is further elaborated in a FY 1979 PID submitted with this ABS.

Livestock

Most of the interventions contained in the CILSS list are included either in the first generation AID bilateral range and livestock project or are contemplated in a second generation project proposed in a FY 1979 PID included with this ABS. We foresee collaboration with the IBRD in design and implementation of most of the interventions contained in the PID. The other portion of our PID proposal will be undertaken separately from the IBRD. Although we submitted a PID for this project and included its financial requirements as an add item in our ABS budget, we anticipate that this project will be absorbed into the Club programming mechanism within the next year or two. We are following Club working group strategy in the development of this project. Interventions included inthe CILSS List that do not correlate with AID range and livestock policy were not included in the PID.

Fisheries

AID approved a FY 1978 PRP for design of a national element within the context of a Club regional project. We have included the funding requirement for this project in the budget of the ABS; however, development and design of this project will take place through the Club mechanism. We anticipate collaboration of other donors, such as CIDA, FAO and ORSTROM, in the design and implementation of this project.

Plant Protection

AID has been assisting the GOC for the past two years through a regional project with a national element for Chad. We look forward to increased assistance through the new Club intervention. As this new activity has been designed and budgeted for as a Club intervention, the ABS contains no budget request nor other reporting concerning this activity.

Road Maintenance and Construction

CDO participated actively in the initial discussions and design activities for development of this activity as a multidonor project,

with the IBRD taking the lead, and the selection of the activity as a model for the FY 1978 Club road maintenance program. Inasmuch as this activity is fully integrated, however, into the labors of the Club working group, CDO has not included this activity in the ABS budget. Final project documentation is being prepared by the SDP unit. Elsewhere in the ABS, we have discussed a proposal to enter into discussions with other donors concerning a program involving major road construction. We foresee the requirement for an early decision on the part of the Club concerning whether or not the Club will, in the near future, go beyond sponsoring a road maintenance program to include major road construction within its realm of interest. If not, AID should enter directly into discussion on this subject with other donors outside the Club framework.

Environment and Ecology

It is CDO's understanding that AID will enter into major forestry and/or ecology interventions only within the context of the Club program. This ABS contains an environmental strategy proposal discussing possible national interventions for Chad as a part of a Club-sponsored regional project. As any such project will be designed and budgeted for through the Club mechanism, this ABS contains no budget request for such an activity.

Hydrology

Although CDO has no activities directly related to Club-sponsored projects in this category, we see a potential future relationship between those projects concerned with pasturage watering points and eventual AID range management and livestock activities. Our FY 1978 sanitary water supply project with the Peace Corps is similar to other small-bore well activities being undertaken by the government, and conceivably there may be a closer relationship among the various GOC well activities in the future.

Human Resources

We find the initial Club undertaking in this category to be somewhat spotty and still not fully defined. For example, fully half of the items contained in the CILSS list under this category involved agriculture technical training, rather than more generalized human resources development. The better part of those agriculture training ideas are contained in our yet-to-be-approved FY 1977 PP for agriculture institutional development.

Health

Most of the other items contained in the CILSS list for human resources have to do with small disparate health activities inappropriate to our interests; however, since the main objective of the health sector strategy for Chad is the development of a national, low-cost, rural health system, many of the CILSS proposals will be intrinsic components of CDO's health activities. CDO has recently corresponded with the SDP unit about the possibility of moving ahead with rural health system development in the context of a proposed national activity within a Club-sponsored regional health project. The Chad component of a regional Club du Sahel rural health project is included in Appendix C. We anticipate the bulk of any new AID-financed health activity in Chad will come under Club auspices; therefore, we urge the development of Club interest in the health sector.

Women in Development (WID)

CDO recently collaborated in the development of the SDP strategy statement for WID activities under the Club's aegis. The CDO contribution included specific ideas germane to potential WID activities on a national level in Chad. We look forward to the Club's taking an active role in WID activities and anticipate specific project activity evolving to Chad.

CDO specifically recommends that the Club concentrate its efforts on bringing the basic sociological and economic knowledge of Chadian women's role up to the level of that attained in other Sahelian countries, such as in Upper Volta. Of particular importance to the Sahel is the major role played by women in the fishery industry.

The Club du Sahel can anticipate full cooperation from GOC and CDO in systemizing Chadian WID research and development activities, including the creation of a national WID organization. To this end in anticipation of the Club's WID involvement, Chad is nominating to its CILSS delegation a woman of substantial ability and prominence. Once an appropriate WID strategy is adopted by the SDP unit for advancing a WID program within the Club du Sahel framework, CDO stands ready to collaborate with Club du Sahel representatives and the GOC in the development of a specific national component for the regional endeavor.

IV. ZERO BASE BUDGETING CONSIDERATIONS

As suggested earlier in this narrative, the Minimum Decision Package represents an early evolutionary stage of interventions into the developmental sectors. Workforce and concomitant operating expenses expressed at the Minimum Package level represent the ability to continue these first stage activities and to assist in the management of country-specific elements of AID participation in Club du Sahel activities which are not reflected in the CDO Chad budget request.

Above the Minimum Decision Package level, the program represents the additional interventions within priority sectors. The Current Decision Package delineates the expansion of operational food production programs, reinforcement of institutional capacities, and utilization of PVOs to increase the number of investment opportunities. The Proposed Package represents major country-wide undertakings in food production and an endeavor to program resources at smaller targets of opportunity which might otherwise be overlooked within a rigidly defined system of resources transfers. At both levels, projects are designed to complement the regional Club program, building upon Club-generated initiatives, where appropriate, and harnessing regional resources flows in specific development arenas. The Current and Proposed levels therefore represent the country-specific interface of the AID program with Club activities.

At the Current Decision Package level, operational expenses and manpower levels are tied virtually directly to initiatives in large-scale operational projects. A significant portion of that Decision Package will be support of PVOs, requiring little increase in levels of manpower and expenses of mission operations. Of particular note, is the fact that because of significant expansion proposed for FY 1978 starts, the viability of those starts hinges upon approval of the FY 1979 Current Decision Package. For the Proposed Decision Package, operational costs and manpower requirements are minimal because investments are proposed for activities in which major functional and managerial roles are being assumed by other donor participants.

CHAD

Table I

Long Range Program Plan
($ millions)
(grants)

	1978	1979 Request	Planning Period 1980	1981	1982	1983
Food/Nutrition	2					
Health	0.4					
Education	1.6					
Sub-Total Functional Accounts	4					
Sahel Development Program	10.4	22.4	21.1	28	29	29
Country Program Total	14.4	22.4	21.1	28	29	29
PL 480	(.6)	(.6)	(.6)	(.6)	(.6)	(.6)
Title II	(.6)	(.6)	(.6)	(.6)	(.6)	(.6)

CHAD

Table IA

Sahel Development Program

Long Range Program Plan
($ millions)

	1978	1979 Request	Planning Period 1980	1981	1982	1983
Rainfed Agriculture	2.1	6.6	4.2	4.0	3.7	3.0
Livestock	2.6	4.9	5.2	2.5	1.4	1.0
Human Resources	1.0	2.7	1.2	2.7	2.3	2.0
Health	.9	1.1	0.5	.6	.3	
Infrastructure	.4	1.5	5.5	14.7	19.3	20.0
Institutional Development	1.8	2.6	1.5	1.5	1.5	1.5
Irrigated Agriculture	1.5	3.0	3.0	2.0	.5	1.5
Program Totals	10.4	22.4	21.1	28	29	29

CHAD

DAP DOCUMENTATION SCHEDULE

PROGRAM YEAR	DOCUMENTS TO BE USED AS BASIS FOR PROGRAM PLANNING	DATE APPROVED OR SENT TO AID/W
FY 1979	Original DAP	May 1977
	DAP Revision	
	Analytical Description of Poor Majority	
	Summary Strategy Statement	
	Sector Assessment	
	Other: Club du Sahel National Sector Strategies	Nov. 1978

CHAD

Table II

Funding Levels for FY 1977, FY 1978, FY 1979
(in $000)
(grants)

	FY 1977	FY 1978	FY 1979
Food/Nutrition	3,157[1/]	2,000	
Population/Health	768	411	
(Health)	(768)	(411)	
Education	1,542	1,592	
Functional Accounts Sub-Total	5,467[1/]	4,003[2/]	
Sahel Development Program	-0-	10,375	22,397
Country Program Total	5,467[1/]	14,378[2/]	22,397[2/]
PL 480	3,774	636	636
Title II	3,774	636	636

1/ Of amount shown, $1,973,000 was funded out of Disaster Relief appropriation. Regular program funds totaled $3,494,000.

2/ Totals do not reflect requirements for Operational Program Grants.

AGENCY FOR INTERNATIONAL DEVELOPMENT

ABS/CP SUMMARY - TABLE III

1. TRANSACTION CODE: [A] (A = Add, C = Change, D = Delete)

2. ABS/CP DOCUMENT CODE: 6

3. COUNTRY/ENTITY: CHAD

4. DOCUMENT REVISION NO.: [ ]

5. OPERATIONAL YEAR FY: 78

6. BUREAU/OFFICE: A. SYMBOL: AFR; B. CODE: [1]

7. GEOGRAPHIC CODE: [677]

8. TYPE DATA: [1] (1 = ABS, 2 = ABS Revision, 3 = CP, 4 = CP Notification)

9. TYPE ASSISTANCE: [1] (1 = Project, 2 = Program)

10. PROJECT SEQUENCE NO.	11. PROJECT TITLE (40 CHARACTERS MAXIMUM)	12. QTR. FOR OBLIG	13. EST. FY AUTH. OBLIG FINAL	14. APPROPRIATION	15. PRIMARY PURPOSE CODE	16. LOAN/GRANT INDICATOR	17. BUDGETS (IN $ 000) AY	OY	BY	LOP
0201	Chad Range and Livestock Development	2	80	F/N	100	GC	992	500		4,470
0001	Lake Chad Irrigated Agriculture	1	80	F/N	100	GC		1,500		6,900
0008	CARE Acacia Albida Expansion (OPG)	3	78	F/N		GC		(666)		1,110
0009	SAWS Irrigated Agriculture (OPG)	3	78	F/N		GC		(85)		292
0020	CARE Rural Grain Storage (OPG)		79	F/N		GC	192		(234)	
	SUBTOTAL FOOD AND NUTRITION					G	1,184	2,000		
0004	Rural Health Planning and Management	2	80	PH	580	GC	768	411		1,693
	SUBTOTAL HEALTH					G	768	411		
0005	Comprehensive Human Resource Development	4	80	EH	600	GC	1,400	1,592		4,731
0021	CARE Rural School Construction (OPG)		77	EH		GC	142			142
	SUBTOTAL EDUCATION/HUMAN RESOURCES					G	1,542	1,592		
0001	LCBC Irrigated Agriculture		81	DR	100	GC	1,780			6,900
NA	End-Use Checkers		-	DR	900	G	110			110
NA	Support to Seed Production (AIP)			DR	900	G	83			83
	SUBTOTAL DISASTER RELIEF					G	1,973			

18. DATE DOCUMENT RECEIVED IN AID/W: MM | DD | YY

AID 1330-7 (2-77)

AGENCY FOR INTERNATIONAL DEVELOPMENT

ABS/CP SUMMARY - TABLE III

1. TRANSACTION CODE: [A] (A = ADD, C = CHANGE, D = DELETE)

2. ABS/CP DOCUMENT CODE: 6

3. COUNTRY/ENTITY: CHAD

4. DOCUMENT REVISION NO.: [ ]

5. OPERATIONAL YEAR FY: 78

6. BUREAU/OFFICE: A. SYMBOL: AFR; B. CODE: [1]

7. GEOGRAPHIC CODE: [677]

8. TYPE DATA: [1] (1 = ABS, 2 = ABS REVISION, 3 = CP, 4 = CP NOTIFICATION)

9. TYPE ASSISTANCE: [1] (1 = PROJECT, 2 = PROGRAM)

10. PROJECT SEQUENCE NO.	11. PROJECT TITLE (40 CHARACTERS MAXIMUM)	12. QTR. FOR OBLIG	13. EST. FY AUTH. OBLIG FINAL	14. APPROPRIATION	15. PRIMARY PURPOSE CODE	16. LOAN/GRANT INDICATOR	17. BUDGETS (IN $ 000) AY	OY	BY	LOP
0201	Chad Range and Livestock Development		80	SH	100	GC			929	4,470
0001	Lake Chad Irrigated Agriculture		81	SH	100	GC			2,310	6,900
0002	Agricultural Institutional Development	2	79	SH	283	GC		1,509*	1,891	3,400
0004	Rural Health Planning and Management		80	SH	580	GC			456	1,693
0005	Comprehensive Human Resource Development		80	SH	600	GC			1,510	4,731
0012	National Fisheries	4	81	SH	112	GC		285	715	4,500
0014	Crop Production Research	2	82	SH	121	GC		2,125*	2,760	9,972
0016	Bongor Irrigated Crop Production	4	82	SH	143	GC		1,500*	3,000	10,000
0022	Rural Sanitary Water	2	82	SH	513	GC		916*	669	2,906
0023	Food Delivery and Rural Works (PVO)	2	80	SH	200	GC		434*	484	1,454
0024	Rural Pilot Workshops (PVO)	3	82	SH	610	GC		338*	498	1,720
0025	Rural Communications Training (PVO)	3	82	SH	600	GC		624*	676	2,728
0028	Chad Range and Livestock Development II		82	SH	100	GN			2,198	7,425
0029	Sudano-Sahelian Food Crops		83	SH	144	GN			1,500	10,000
0030	Rural Projects Fund		83	SH	200	GN			1,000	5,000
627-0130	LCBC Livestock and Mixed Agriculture	2	81	SH	100	GC		2,644*	1,801	6,763
	SUBTOTAL SAHEL DEVELOPMENT PROGRAM							10,375	22,397	

* Deviation from FY 1978 CP funding request.

18. DATE DOCUMENT RECEIVED IN AID/W: MM DD YY

AID 1330-7 (2-77)

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED	REVISION	DATE PP/REVISION
Chad	Lake Chad Irrigated Agriculture			FY 77	FY	Aug. 77
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 82	REVISION FY	DATE LAST PAR
	PROJECT NUMBER 677-0001	APPROPRIATION F/N *	TOTAL COST ▶	AS APPROVED 6,900	REVISION	DATE NEXT PAR

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIG-ATION	EXPEN-DITURES	PIPE-LINE	ESTIMATED FY 1978 OBLIG-ATION	EXPEN-DITURES	PIPE-LINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIG-ATION	EXPEN-DITURES	PIPE-LINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL	1780	400	1380	1500	2415	465					
Personnel:											
Long-term technicians	35	35	-0-	160	120	40					
Short-term consultants	-0-	-0-	-0-	30	30	-0-					
Training:											
Short-term, third country	-0-	-0-	-0-	30	15	15					
Commodities:											
Heavy equipment for polder construction; equipment for research and laboratory	695	-0-	695	250	800	145					
Other Costs:											
Construction; utilities, local salaries, operating expenses; local travel and training	1050	365	685	1030	1450	265					
HOST COUNTRY INPUT	10			100							

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		2	

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

* To be shifted to Sahel Development Program in FY 1979

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED FY 77	REVISION FY	DATE PP/REVISION
Chad	Lake Chad Irrigated Agriculture		FINAL OBLIGATION ▶	AS APPROVED FY 81	REVISION FY	DATE LAST PAR
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 677-0001	APPROPRIATION SH*	TOTAL COST ▶	AS APPROVED 6,900	REVISION	DATE NEXT PAR

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL								2310	2440	335	
Personnel:											
Long-term technicians								80	120	-0-	
Short-term consultants								50	50	-0-	
Training:											
Short-term, third country								30	30	15	
Commodities:											
Heavy equipment for polder construction; equipment for research and laboratory								145	290	-0-	
Other Costs:											
Construction; utilities, local salaries, operating expenses; local travel and training								2005	1950	320	
HOST COUNTRY INPUT								100			

3/ PERSONNEL ON BOARD AS OF	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT			2

3/ PARTICIPANTS PROGRAMMED	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			
SHORT-TERM			3
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

*Previously funded from Foreign Disaster Assistance Funds

COUNTRY/PROGRAM	PROJECT TITLE			AS APPROVED	REVISION	DATE PP/REVISION
Chad	Chad Range and Livestock Development		INITIAL OBLIGATION ▶	FY 75	FY	6/14/76
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	FY 79	FY 80	DATE LAST PAR -
	PROJECT NUMBER 677-0201	APPROPRIATION F/N *	TOTAL COST ▶	2,043	4,470	DATE NEXT PAR Nov. 78

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/			ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIGATION	EXPENDITURES	PIPELINE	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL	992	1084	1132	500	1099	533					
Personnel:											
4 long-term technicians	-0-	356	114	300	387	27	9/76-9/78				
Training:											
11 long-term U.S.	176	121	176	176	176	176	3/77-3/79				
2 long-term third country	10	7	10	10	10	10					
4 short-term third country	14	20	14	14	24	4					
Commodities:											
Vehicles (3), audio-visual equipment, veterinary medicines, barbed wire, office supplies, etc.	300	148	326	-0-	118	208					
Other Costs:											
Inservice training, local construction, operational costs	492	432	492	-0-	384	108					
HOST COUNTRY INPUT	25			25							

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA	1	1	
CONTRACT	3	3	

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM	11	13	
SHORT-TERM		4	
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

* To be shifted to Sahel Development Program in FY 1979

COUNTRY/PROGRAM	PROJECT TITLE			AS APPROVED	REVISION	DATE PP/REVISION
Chad	Chad Range & Livestock Development		INITIAL OBLIGATION ▶	FY 75	FY	6/14/76
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 79	REVISION FY 80	DATE LAST PAR -
	PROJECT NUMBER 677-0201	APPROPRIATION SDP *	TOTAL COST ▶	AS APPROVED 2,043	REVISION 4,470	DATE NEXT PAR 11/78

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL								929	942	520	
Personnel:											
4 long-term technicians								454	415	66	9/78-9/79
Training:											
11 long-term U.S.								124	180	120	3/79-4/79
2 long-term third country								10	10	10	
4 short-term third country								29	15	18	
Commodities:											
Veterinary equipment and medicine vehicle (1), chemicals, spare parts								90	65	233	10/78-10/79
Other Costs:											
Inservice training, operation of training center, demonstration materials, operational costs.								122	157	73	9/78-9/79
HOST COUNTRY INPUT											

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			1
CONTRACT			3

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			13
SHORT-TERM			4
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

* Prior Funding from Food and Nutrition Appropriation

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED FY 77	REVISION FY —	DATE PP/REVISION —
Chad	Comprehensive Human Resources Development		FINAL OBLIGATION ▶	AS APPROVED FY 80	REVISION FY —	DATE LAST PAR —
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 677-0005	APPROPRIATION EHR*	TOTAL COST ▶	AS APPROVED 4,731	REVISION —	DATE NEXT PAR 8/78

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 [1] OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND PERIOD [4] (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND PERIOD [4] (FR-TO)
PROJECT TOTAL	1400	-0-	1400	1592	1481	1511					
Personnel:											
11 long-term technicians	790	-0-	790	802	790	802	9/78-				
Short-term consultants	36	-0-	36	68	36	68	9/79				
Training:											
8 long-term U.S.	12	-0-	12	84	12	84	9/78-9/79				
4 short-termU.S.	-0-	-0-	-0-	21	21	-0-	1/78-9/78				
20 in-country inservice	-0-	-0-	-0-	30	30	-0-	1/78-9/78				
Commodities:											
Vehicles, office supplies, instruction equipment	112	-0-	112	132	142	102	6/78-6/79				
Other Costs:											
Workshop construction and staff salaries	450	-0-	450	455	450	455	9/78-9/79				
HOST COUNTRY INPUT	20			70							

[2] PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		15	

[3] PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM	1	8	
SHORT-TERM		4	
CONTRACT: LONG-TERM			
SHORT-TERM			

[1] SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

[2] EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

[3] LONG-TERM - INCLUDES 9 MONTHS OR MORE

[4] For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION	AS APPROVED	REVISION	DATE PP/REVISION
Chad	Comprehensive Human Resources Development			FY 77	FY –	–
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION	AS APPROVED FY 80	REVISION FY –	DATE LAST PAR –
	PROJECT NUMBER 677-0005	APPROPRIATION SH*	TOTAL COST	AS APPROVED 4,731	REVISION –	DATE NEXT PAR 8 Aug. 78

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL								1510	1656	1365	
Personnel:											
11 long-term technicians								1004	802	1004	9/79 - 12/81
Short-term consultants								70	98	40	9/79-9/80
Training:											
8 long-term U.S.								101	84	101	9/79-9/80
20 in-country inservice								30	30	-0-	9/78-9/79
Commodities:											
Vehicles, office supplies, instruction equipment								35	117	20	6/79-1/80
Other Costs:											
Workshop construction and staff salaries								270	525	200	9/79-7/80
HOST COUNTRY INPUT											

2/ PERSONNEL ON BOARD AS OF	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT			20

3/ PARTICIPANTS PROGRAMMED	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			7
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

*Funding continued from EHR program begun in FY 77.

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION	AS APPROVED	REVISION	DATE PP/REVISION
Chad	Rural Health Planning & Management			FY 77	FY -	-
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION	AS APPROVED FY 80	REVISION FY -	DATE LAST PAR 2/79
	PROJECT NUMBER 677-0004	APPROPRIATION H*	TOTAL COST	AS APPROVED 1,693	REVISION	DATE NEXT PAR 2/79

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/			ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIGATION	EXPENDITURES	PIPELINE	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL	768	138	630	411	406	635					
Personnel:											
4 long-term technicians	493	12	481	275	263	493	10/77-				
Short-term consultants	59	10	49	43	22	70	9/78				
Training:											
Long-term training	39	24	14	32	27	19					
Short-term training	17	6	12	-0-	5	7					
Commodities:											
Office Equipment, furniture and vehicles; building repairs; other costs	51	51									
Other Costs:											
Operating costs, supplies, repairs, contingencies.	109	35	74	61	89	46					
HOST COUNTRY INPUT	60			61							

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT	2	4	

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM	2	2	
SHORT-TERM	1	4	
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

*Future funding to be provided from SDP

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED FY 77	REVISION FY -	DATE PP/REVISION -
Chad	Rural Health Planning & Management		FINAL OBLIGATION ▶	AS APPROVED FY 80	REVISION FY -	DATE LAST PAR -
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 677-0004	APPROPRIATION SH*	TOTAL COST ▶	AS APPROVED 1,693	REVISION -	DATE NEXT PAR 2/79

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL								456	522	569	
Personnel:											
4 long-term technicians								275	320	448	10/78-
Short-term consultants								25	40	55	9/79
Training:											
Long-term training for counterparts								29	31	17	
Short-term training for counterparts								-0-	3	4	
Other Costs:											
Operating cost, supplies, repairs, contingencies								127	128	45	
HOST COUNTRY INPUT								61			

2/ PERSONNEL ON BOARD AS OF	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT			4

3/ PARTICIPANTS PROGRAMMED	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			2
SHORT-TERM			4
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77) *Project previously funded from Health & Population Appropriation

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED FY 78	REVISION FY –	DATE PP/REVISION –
Chad	Rural Sanitary Water		FINAL OBLIGATION ▶	AS APPROVED FY 81	REVISION FY	DATE LAST PAR
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 677-0020	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 2,906 *	REVISION	DATE NEXT PAR

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL				916	278	638		669	1050	257	
Personnel:											
1 long-term Project Coordinator				40	20	20	3/78-	40	40	20	3/79-
1 short-term consultant				50	25	25	2/79	-0-	25	-0-	2/ 80
Commodities:											
Drill rigs and parts, vehicles, materials, parts, equipment				613	110	503		413	773	143	
Other Costs:											
Construction, operational, contingency, inflation				213	123	90		216	212	94	
HOST COUNTRY INPUT				30				33			

2/ PERSONNEL ON BOARD AS OF	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		2	1

3/ PARTICIPANTS PROGRAMMED	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

* Project not shown in FY 1978 CP. See Narrative for details.

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED	REVISION	DATE PP/REVISION
Chad	Bongor Irrigated Crop Production			FY 78	FY -	-
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 82	REVISION FY -	DATE LAST PAR -
	PROJECT NUMBER 677-0016	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 15,000 *	REVISION -	DATE NEXT PAR 5/79

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL				1,500	1,345	155		4,590	4,450	295	
Personnel:											
3 long-term technicians				160	80	80	4/78-3/79	240	240	80	4/79-3/80
Training:											
5 long-term 3rd country				20	15	5	4/78-3/79	30	30	5	4/79-3/80
Commodities:											
Agriculture equipment, vehicles, construction, equipment.				700	650	50	-	1,500	1,400	150	--
Other Costs:											
Construction, operational cost, studies.				620	600	20	-	2,820	2,780	60	--
HOST COUNTRY INPUT				93				107			

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		2	3

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM		3	5
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

*Project not reflected in FY 1978 C.P. See narrative for details.

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED FY 78	REVISION FY -	DATE PP/REVISION 3/77
Chad	Agricultural Institutional Development		FINAL OBLIGATION ▶	AS APPROVED FY 79	REVISION FY -	DATE LAST PAR -
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 677-0002	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 3,400	REVISION -	DATE NEXT PAR 3/79

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 [1] OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND [4] PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND [4] PERIOD (FR-TO)
PROJECT TOTAL				1509	1258	251		1891	1823	319	
Personnel:											
7 long-term technicians				560	400	160	1/78-	640	600	200	1/79-
Short-term consultants				54	44	10	12/78	54	54	10	12/79
Training:											
19 long-term U.S.				75	-0-	75	6/78-	211	199	87	6/79-
12 long-term third country				35	29	6	5/79	117	107	87	5/80
16 short-term				10	20	-0-		38	32	6	
Commodities:											
Vehicles, office equipment, etc.				170	170	-0-	1/78-12/78	110	110	-0-	1/79-12/79
Other Costs:											
Construction of field offices, operating cost, etc.				605	605	-0-	1/78-12/78	721	721	-0-	1/79-12/79
HOST COUNTRY INPUT											

[2] PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA		2	2
CONTRACT		5	5

[3] PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM		12	31
SHORT-TERM		10	16
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED	REVISION	DATE PP/REVISION
LCBC-Regional	LCBC Livestock & Mixed Agriculture			FY 78	FY -	-
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 81	REVISION FY -	DATE LAST PAR -
	PROJECT NUMBER 627-0130	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 6,763	REVISION -	DATE NEXT PAR 9/78

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL				2644	2324	320		1801	1575	546	
Personnel:											
6 long-term technicians				128	64	64	10/77-	706	385	385	10/78-
5 short-term consultants				20	10	10	9/78	140	100	50	9/80
Commodities:											
Vehicles, nursery supplies, fencing materials, etc.				1410	1200	210		457	600	67	
Other Costs:											
Operational costs, local construction local training, local labor, etc.				1086	1050	36		498	490	44	
HOST COUNTRY INPUT											

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		2	9

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED	REVISION	DATE PP/REVISION
Chad	Crop Production Research			FY 78	FY –	–
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 82	REVISION FY –	DATE LAST PAR –
	PROJECT NUMBER 677-0014	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 9,972 *	REVISION –	DATE NEXT PAR 8/78

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/ OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL				2125	2027	98		2760	2752	106	
Personnel:											
7 long-term technicians				480	400	80	1/78-	560	560	80	1/79-
2 short-term				28	28	-0-	12/79	46	46	-0-	12/79
Training:											
2 long-term U.S.				38	24	14	6/78-	50	50	14	6/79-
1 long-term third country				8	8	-0-	5/79	48	40	8	5/80
25 short-term				12	8	4		28	28	4	
Commodities:											
Vehicles, office supplies				480	480	-0-		1020	1020	-0-	
Other Costs:											
Operation, maintenance, repair, construction of village grain storage, etc.				1079	1079	-0-		1008	1008	-0-	
HOST COUNTRY INPUT				89				107			

2/ PERSONNEL ON BOARD AS OF	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		6	7

3/ PARTICIPANTS PROGRAMMED	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM		3	7
SHORT-TERM		25	40
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM – INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

*Project in excess of amount requested in FY1978 C.P. See Narrative for details.

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED FY 78	REVISION FY -	DATE PP/REVISION -
Chad	Food Delivery and Rural Works		FINAL OBLIGATION ▶	AS APPROVED FY 80	REVISION FY -	DATE LAST PAR -
ONGOING PROJECT BUDGET DATA - TABLE IV	PROJECT NUMBER 677-0023	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 1,454 *	REVISION -	DATE NEXT PAR 1/79

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 [1] OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND [4] PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND [4] PERIOD (FR-TO)
PROJECT TOTAL				434	409	25		484	500	9	
Commodities: Vehicles, construction materials, etc.				253	243	-0-	12/77-11/78	275	275	-0-	
Other Costs: Salaries, fuel, office supplies, etc.				191	166	25		209	225	9	
HOST COUNTRY INPUT											

[2] PERSONNEL ON BOARD AS OF	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT			

[3] PARTICIPANTS PROGRAMMED	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

*This project not shown in FY 1978 C.P. See Narrative for details.

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED	REVISION	DATE PP/REVISION
Chad	Rural Pilot Workshops			FY 78	FY -	-
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 82	REVISION FY -	DATE LAST PAR -
	PROJECT NUMBER 677-0024	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 1,720 *	REVISION -	DATE NEXT PAR 7/79

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/			ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIGATION	EXPENDITURES	PIPELINE	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL				338	55	283		498	401	380	
Personnel:											
4 long-term technicians				188	40	148	7/78-9/78	308	228	228	Cont.
Commodities:											
Workshop equipment, training materials, vehicles				55	-0-	55	"	55	55	55	
Other Costs:											
Workshop and housing construction, staff salaries, trainee subsistence and transportation				95	15	80	"	135	118	97	
HOST COUNTRY INPUT				10				20			

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		2	4

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

*This project not shown in FY 1978 C.P. See Narrative for details.

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION	AS APPROVED	REVISION	DATE PP/REVISION
Chad	Rural Communications Training		▶	FY 78	FY -	-
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 82	REVISION FY -	DATE LAST PAR -
	PROJECT NUMBER 677-0025	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 2,728	REVISION -	DATE NEXT PAR 5/79

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 [1] OBLIGATION	EXPENDITURES	PIPELINE	ESTIMATED FY 1978 OBLIGATION	EXPENDITURES	PIPELINE	FUND [4] PERIOD (FR-TO)	ESTIMATED FY 1979 OBLIGATION	EXPENDITURES	PIPELINE	FUND [4] PERIOD (FR-TO)
PROJECT TOTAL				624	597	27		676	629	74	
Personnel: 6 long-term technicians				109	82	27	1/78-12/78	296	249	74	1/79-12/79
Commodities: Audio-visual equipment, office equipment, vehicles and spare parts				103	103	-0-		75	75	-0-	
Other Costs: Construction of training centers and ancillary structures, operating costs				412	412	-0-		305	305	-0-	
HOST COUNTRY INPUT				165				135			

[2] PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		2	6

[3] PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM			
SHORT-TERM			
CONTRACT: LONG-TERM			
SHORT-TERM			

[1] SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

[2] EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

[3] LONG-TERM - INCLUDES 9 MONTHS OR MORE

[4] For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

AID 1330-8 (2-77)

COUNTRY/PROGRAM	PROJECT TITLE		INITIAL OBLIGATION ▶	AS APPROVED	REVISION	DATE PP/REVISION
Chad	National Fisheries			FY 78	FY -	-
ONGOING PROJECT BUDGET DATA - TABLE IV			FINAL OBLIGATION ▶	AS APPROVED FY 81	REVISION FY 82*	DATE LAST PAR -
	PROJECT NUMBER 677-0012	APPROPRIATION SH	TOTAL COST ▶	AS APPROVED 2,608	REVISION 4,500*	DATE NEXT PAR

U. S. DOLLAR COST ($ 000)

PROJECT INPUTS	ESTIMATED FY 1977 1/			ESTIMATED FY 1978				ESTIMATED FY 1979			
	OBLIGATION	EXPENDITURES	PIPELINE	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)	OBLIGATION	EXPENDITURES	PIPELINE	FUND 4/ PERIOD (FR-TO)
PROJECT TOTAL				285	85	200		715	500	415	
Personnel:											
1 long-term technician								165	65	100	1/79-
4 short-term consultants				80	15	65	1/78- 1/79		50	15	1/80
Training:											
7 long-term U.S.				60	10	50	2/78-	125	80	95	10/79-
4 short-term third country							10/79	25	20	5	10/80
Commodities:											
Vehicles, outboard motors, spare parts, office supplies, etc.				100	50	50	11/77 10/79	200	150	100	11/79- 10/80
Other Costs:											
Construction, credit funds, salaries, transportation, operational costs, contingencies				45	10	35	10/77- 10/79	200	135	100	10/79- 10/80
HOST COUNTRY INPUT				15				35			

2/ PERSONNEL ON BOARD AS OF

	9/30/77	9/30/78	9/30/79
DH			
PASA			
CONTRACT		1	3

3/ PARTICIPANTS PROGRAMMED

	FY 1977	FY 1978	FY 1979
NON-CONTRACT: LONG-TERM		7	7
SHORT-TERM			4
CONTRACT: LONG-TERM			
SHORT-TERM			

1/ SHOULD BE CONSISTENT WITH LATEST APPROVED OYB LEVEL SHOWN IN TABLE II

2/ EXCLUDES CONSULTANTS PROGRAMMED FOR LESS THAN 90 DAYS

3/ LONG-TERM - INCLUDES 9 MONTHS OR MORE

4/ For funding period, indicate starting and ending date by month and year of obligations for each project element; e.g., 2/78-10/79.

*Expansion of this project is under consideration. See Project Narrative.

AID 1330-8 (2-77)

PROJECT NARRATIVE

Lake Chad Irrigated Agriculture

(677-0001)

In 1975 the World Bank put together a $ 13 million project for a gravity flow irrigation system on two empoldered areas on the northeastern shore of Lake Chad. AID agreed to finance a portion of the project including the agronomic research at a research station on one polder and some minor health activities. Other donors include the French aid organization (FAC) and the African Development Bank. Since 1975, AID's involvement in the development of the area has increased. The project now includes the following four components:

1. Development of a modern polder of 800 irrigated hectares. It will be double-cropped by 800 farm families and make a sizeable contribution to meeting Chad's internal food needs.

2. Agronomic research including testing of food grains; water use and control with special concern for lowering the cost of replicating the project, soil reclamation and salinity control; and socioeconomic research related to farmers' operations and the broader economic and social development of the area.

3. Health activities designed to check the incidence of schistosomiasis and malaria and to upgrade the health care and facilities in the polder area.

4. Improving the effectiveness of the Chadian institution charged with the overall development of the polders area with emphasis on improved management practices and upgrading their capacity to maintain the infrastructure in the polders area.

A PP was submitted in early June 1977, and the signing of an amendment to a project grant agreement is anticipated during last quarter of FY 1977.

In January 1977 CDO and the GOC signed a project grant agreement providing an advance of $300,000 for initial project costs including the construction of housing at the research station, the purchase of three project vehicles, etc.

PROJECT NARRATIVE

Chad Range & Livestock Development (677-0201)

This project was originally approved in 1974 with a life-of-project cost of $2,043,000. The project documentation included, however, provision for the subsequent revision of the project to finance the establishment of a herder training center to provide localized instruction and livestock-related services for a transhumant and nomadic population. The revised project was subsequently approved in 1976, bringing the life-of-project cost to $4,470,000 and extending the year of final obligation to FY 1980.

Under the livestock planning portion of the project, the range management advisor and a professor of range management arrived in 1976, and have undertaken their respective assignments. Introduction of range management into the curriculum of l'Ecole Nationale des Infirmiers Vétérinaires, however, has not been accomplished because of difficulties of scheduling. Two observation tours of the U.S. and Kenya have been carried out for a total of 10 participants. Also, an in-service training program of three two-week sessions per year is being conducted for the Livestock Service. Eleven long-term participants have begun study, two of whom are in veterinary schools, eight are studying range management and one is studying botony and agrostology. Three short-term non-degree participants are studying extension and teaching methods, specializing in the use of audio-visual equipment and presentations.

The Massakory Herder Training Center is presently 75% completed, and is expected to be fully completed by September 1977. It is planned that by that time the AID livestock specialist will have completed language training and be in country. Furthermore, by that time the Chadian Director of the Center will be on the job. The U.S. counterpart for the Director is presently working on the development of guidelines for the Center. It is expected that curricula will be completed and the Center will commence operations in the latter part of 1977.

PROJECT NARRATIVE

Comprehensive Human Resources Development

(677-0005)

FY 1977 funds are expected to be obligated by September 30, 1977. Project plans anticipate three contract teams composed of nine technicians to arrive at post during the final quarter of CY 1977. Construction of 12 workshop centers will begin with the advent of the dry season in October 1977. Detailed plans to meet the end-of-project conditions will be drafted upon assembly of the project technicians.

It is envisioned that this project will be shifted to Sahel Development Program funding in FY 1979.

PROJECT NARRATIVE

Rural Health Planning and Management
(677-0004)

The four long-term contract technicians are expected to arrive early in FY 1977. The Planning Office will have been established and initial activity will focus on the improvement of health statistics. Preliminary analyses and design of this activity will be carried out with the assistance of short-term consultants.

It is envisioned that this project will be shifted to Sahel Development funding in FY 1979.

PROJECT NARRATIVE

Rural Sanitary Water
(677-0022)

This project, the continuation of two successful Sahel Relief and Rehabilitation activities, did not appear in the FY 1978 C.P. It was originally included in the Chad FY 1978 ABS (pp. 146-155) as a discrete component of a proposed Chad Integrated Rural Development (IRD) project. While the IRD project was not approved at the PRP stage, there was no objection raised during the PRP review with respect to the "wells component", which, based upon successful ongoing operational experience, remains a viable and necessary part of the AID interventions into the health sector in Chad.

The R&R projects will terminate in 1978. This project will continue the AID/Peace Corps relationship. Early approval is required in order to provide an operational capacity for the PCV's now on the job and to keep pace with Peace Corps program planning calling for additional PCV's to implement the AID-financed activity.

The Rural Sanitary Water (RSW) project is one of those specifically noted by the Ambassador as being of priority interest for immediate PP development for FY 1978 funding. The purpose of the following narrative is to revise the basis for the preparation and approval of an FY 1978 for this project.

1. Description of the project

A. Problem

Section VI of Dr. Arne Barkhuus' report written in 1976 describes the frightening incidence of intestinal parasitosis, schistosomiasis, and onchocerciasis in Chad. The 1974 annual report of the Ministry of Health places dysentery first and schistosomiasis third on the list of the ten principal causes of morbidity. While locally available health statistics are far from satisfactory, the magnitude of the problem is indicated by a 1967 Johns Hopkins sample survey which found that in certain areas in southern Chad the prevalence of onchocerciasis was 42%. Throughout the country, 25% of the children between ages 0-9 have diarrhea on any one day.

The above diseases are contracted in and through water. As indicated by the Johns Hopkins survey, most of the rural water sources in Chad which have been tested have been found to be contaminated. Dr. Barkhuus states that :"most village wells are anything but safe". Worse even is the use of marsh , river and lake water, since defecation often takes place near the water. "In sum, the lack of potable water is a problem of major proportions in Chad.

B. Project Purpose

The proposed solution to the above problem is the provision of wells that are free from contamination. The project proposes to install a total of 500 closed, small-bore tube wells, of which 200 would be drilled in the Sahelian zone and 300 in the heavily populated southern region. These wells would provide potable water to over 400,000 villagers. These people would not have to draw water from polluted sources and therefore would avoid, or at least greatly reduce the risks of contracting intestinal parasitosis, schistosomiasis, and onchocerciasis. In short, this large number of poor rural Chadians will enjoy improved health.

This project would not be a new undertaking. It would simply be the continuation of a very effective well-drilling project begun by Peace Corps volunteers in 1967.

At that time, an AID engineer, Mr. Henry Tysen, designed a type of well and pump specifically for use in rural Sahelian areas. It is a closed, small-bore (2-3") well, operated by a manually controlled pump mechanism. The term "closed" refers to the fact that water is encased in piping from the source and that the well is covered at the top, which prevents contamination by contact with surface water, waste products or other foreign substances. The pump is constructed of locally obtainable materials, and its operation and maintenance are simple. The well itself, especially with regard to the screen and cylinder, was designed to suit the specific subsoil conditions of Chad, namely the widespread occurrence of a sand aquifer. Experience has established the utility, adaptability, and dependability of the Tysen design to existing geohydrological conditions to a depth of 40 meters, which is deeper than the water table in the proposed project areas.

The well-drilling activity in which the Peace Corps volunteers are presently engaged is being financed by AID under two R&R projects, 677-125-IV-H and 677-125-IV-L. These projects are being carried out by the Chadian agency Fonds de Développement et d'Action Rurale (FDAR) which has in turn engaged P.C. volunteers to train Chadian personnel in the administration of the program and in the installation and maintenance of wells. To date, 220 wells have been installed and are being maintained under these projects. By the end of the present projects in June 1978, three hundred wells will have been installed and a supply of spare parts for five years will be available for maintenance of the wells by trained personnel of FDAR.

C. Outputs

At the end of this proposed project in 1982, five hundred additional small-bore wells will have been installed and maintained by FDAR and Peace Corps. About 400,000 rural poor will have a secure source of potable water and will not have to draw water for their personal use from contaminated sources. The project will also provide a five-year supply of spare parts for repair and maintenance. Moreover, eight Chadians will have been fully trained in the installation and maintenance of these wells and FDAR will have the administrative capability to continue the maintenance of all existing wells on its own.

D. Inputs

To achieve this result, the following elements will have to be supplied. The Peace Corps office has committed itself to provide eight volunteers needed for the project and has already started the process for recruiting of the initial staff. For overall coordination and administration of the project, it will be necessary to strengthen FDAR with an assistant manager. To fill this position, an experienced and competent person has already been identified. He is an ex-Peace Corps volunteer who has for several years been in charge of training Chadians under the present well-drilling projects.

Well-drilling equipment, vehicles, and commodities such as pipes and valves and operational funds will also be needed.

The Chadian personnel and Peace Corps volunteers could continue to install wells wherever a sand aquifer is known to exist. In order to make a wider and more equitable distribution of wells, however, the project includes the services of a hydrologist for a period of from three to six months. This advice is required only with respect to specific site selections beyond areas where sand aquifer levels are already verified. These services are not needed for determination of project feasibility.

FDAR will provide eight Chadians to be trained in well installation and maintenance, working full-time with the Peace Corps volunteers. FDAR will also provide a warehouse/workshop in N'Djamena and another in Sahr as well as other facilities. In addition, FDAR plans to continue to provide a certain amount of funds for maintenance purposes. For calendar year 1977, FDAR has set aside $ 68,000 for the well program.

E. Alternatives

One alternative to small-bore tube wells is the small open well dug by the rural population. These already exist ; but, as stated above, most of those tested have proven to be contaminated. In the countryside, conditions are such that sooner or later the water in open, small wells becomes polluted.

Another alternative is the large open well constructed to provide water for animals as well as for the rural population. According to the best estimates available, the installation and maintenance costs of large open wells are several times those of small-bore wells. The World Bank estimates the replacement cost of 300 large open wells in Batha at $ 9 million or $ 30,000 each. In the proposed project, the cost of each small-bore well is estimated at $ 5,800. Moreover, large-bore wells are exposed to pollution, and, once contaminated, are virtually impossible to sanitize. Because of the danger of pollution, the open well is not an acceptable alternative to achieve the goal of this project.

2. Relation of the Proposed Project to the DAP

The DAP states that prevalent diseases such as dysentery and schistosomiasis could be reduced by sanitation and other related

preventive medicine programs. The DAP cites the previously mentioned Johns Hopkins survey which concluded that most of the rural water sources tested in Chad have been found to be contaminated. The DAP recommends that AID consider funding additional programs in rural water supply. In order to avoid further strain on already overextended GOC finances and manpower, the DAP recommends that AID utilize voluntary agencies and the Peace Corps wherever possible to execute projects. Thus the project described herein, which would be carried out in cooperation with the Peace Corps, is fully consistent with the recommendations of the DAP.

3. AID Policy Issues

Since the wells will be installed only in well-populated rural villages, the project is expected to benefit directly 400,000 rural poor.

The small-bore tube well provides potable water for human consumption and use only. Water is gathered in pails and jugs and carried home. The well is not suitable for use by animals. Hence, the ground cover around the well is not destroyed. Moreover, the amount of water drawn for human consumption is relatively insignificant, and the sources are replenished by nature.

The prime beneficiaries of small-bore tube wells are Chadian women. The fetching of water is primarily the task of women, who frequently are assisted by children but rarely by men. The sources of water are at varying distances from the homes -- sometimes as far as 1,000 meters. Depending on these distances, many hours are spent every week just carrying water home. This time could be utilized more profitably by women in the fields, at the market, or at home plying a craft. The time lost carrying water is felt most keenly during the planting and harvesting seasons. Location of the well in the village will save women many precious hours per month.

The project does not present any problems regarding the protection and promotion of human rights.

4. Estimated Cost of the Project ($ 000)

FY	78	79	80	81	82
Technical Assistance	110	40	40	40	40
Commodities	593	413	188	340	75
Other Costs - dollar	-0-	50	50	50	50
Other Costs - local currency	213	166	180	166	104
TOTAL	916	669	458	596	269

The total cost of the project over its five-year life is
$ 2,909,000

5. Development of the Project

As stated above, the present well-drilling projects will terminate in June 1978. If well-drilling is to continue without interruption, an order for equipment and commodities must be placed in early FY 1978. This is an absolute requirement. Undue delay in ordering of equipment would adversely affect the momentum of the Peace Corps well-drilling operation and cause serious damage to the Peace Corps programming and recruiting process. For this reason the CDO will submit the PP by November 1977. The mission will prepare this document with the help of a qualified and experienced well-drilling technician now working for Peace Corps and with assistance from REDSO's water supply technician for a period of approximately three weeks.

E. Initial Environmental Examination

The small-bore tube well presents no environmental problems. On the contrary, its environmental effects are highly beneficial. Closed small-bore tube wells provide potable water to large numbers of people who previously had access only to highly contaminated water sources. Moreover, water is drawn from a source that is

replenished by nature. The small amounts of water that fall on the ground are immediately drained away and disappear in the sandy soil. Finally, there is no destruction of ground cover near the small-bore well because animals go elsewhere to drink.

PROJECT NARRATIVE

Bongor Irrigated Crop Production (ex-Logone Dike)

This project is based upon the PRP for the Logone Dike project which was submitted by the CDO in November 1976. The PRP was not acted upon in Washington, but in early 1977, it was the subject of discussions with AFR/SFWA concerning further action to be taken. It was decided to reconsider the proposal as a food crop production activity.

The project was discussed in the Chad DAP review of May 1977 as one selected by the Ambassador as having high priority for early development and implementation in FY 1978.

The project described in the original PRP correlates closely with the activity identified by the Club du Sahel Irrigated Agriculture Working Group, minus direct interventions to exploit the irrigated agriculture potential of the sector. In other words, the original PRP provided only for dike construction/rehabilitation and technical assistance to Génie Rural (Division of Rural Engineering, Ministry of Agriculture). Although much of the analysis presented in the PRP remains valid, significant new initiatives are proposed within the scope of the revised project and have resulted in change of the project name.

The purpose of the following narrative is to revise the basis for the preparation and approval of a FY 1978 PP for this project.

1. Project Description

A. Problem Addressed by the Project

As explained in the Development Assistance Program (DAP) for Chad and in numerous other program and project documents, one of the salient characteristics of the low level of development in Chad is a precarious balance between food crop production and the food requirements of the Chadian population. Years of insufficient rainfall in the Sahelian zone inevitably mean severe food deprivation for the population of the area. Without international food relief programs, there would be mass starvation. National self-sufficiency in food crop production is thus an objective of the very highest

priority for the Chadian Government and for the international donor community.

B. Project Purpose

The area of Chad which has the greatest agricultural potential is the south and particularly the Logone and Chari river valleys. The best one can reasonably hope for in the Sahelian zone of Chad is approximate equilibrium between food requirements and food production in years of normal rainfall. The southern zone of Chad will be looked to in the future as the source of a national reserve stock to be drawn down on during years of poor rainfall and production in the Sahelian zone.

There is significant irrigated agriculture potential along the Chari and Logone Rivers. The report dated March 1977 which was prepared by the irrigated agriculture team for the Club des Amis du Sahel discusses in some detail the irrigated agriculture potential of Chad. One of the projects which they recommend for international donor funding is the Experimental Agricultural Sector of Bongor (SEMAB) at Casier A (Secteur expérimental agricole de Bongor au Casier A). The GOC continues to accord high priority to a project in the SEMAB area but strongly recommends inclusion of a series of interventions to tap the irrigated potential of the zone. A similar conclusion is expressed in the aforementioned Club report. The U.S. Embassy in N'Djamena is also a strong advocate of a development project in the SEMAB area. In light of the above considerations, the CDO has decided to modify its original proposal to include the interventions recommended in the Club report and strongly supported by the GOC. This PID describes the envisaged modifications based on the Club report.

The most common form of irrigation practiced in Chad is natural submersion or flooding utilizing the annual overflow of the Logone; however, in certain areas dikes and intake and drainage canals have been constructed to control the natural flooding or to permit total management of the river overflow. The SEMAB perimeter (Casier A) is one of the latter. The existing structures, however, no longer function effectively and permit only very limited control of the flood waters.

SEMAB was created in 1958 for cotton production; however, the clay soils of the area proved to be totally unsuitable for cotton cultivation,

and in 1960 it was decided to convert the sector for rice production. The existing hydraulic structures include a dike along the Logone protecting an area of about 60,000 ha. Within this "protected" (now only partially protected because of the dilapidated condition of the dike) perimeter, the Club report estimates that approximately 18,000 hectares could benefit from controlled flooding; however, only 2,700 hectares at most are under cultivation at the present time. The irrigated potential of the zone is thus quite significant.

A rice mill with a capacity of two tons per hour is installed at Billiam. Management of the rice mill which brought in revenues to SEMAB from rice marketing was transferred to FDAR in 1970. Since that date, according to the Club report, decay of the SEMAB perimeter seems to have accelerated markedly due to lack of maintenance of the hydraulic structures and replacement of agricultural equipment. Only 1000 ha. were cultivated in 1976 because of technical and economic insecurity of production and marketing.

The Club report recommends that a program of rehabilitation of SEMAB Casier A include the following elements:

- Repair of the existing dikes and hydraulic structures (distribution and drainage canals).

- Replacement of agricultural machinery

- Establishement of a management organization with sufficient authority and wherewithal to provide extension services to farmers, production inputs such as seeds, fertilizers, and simple machinery; marketing of farmer produce; and to collect taxes and fees in order to assure subsequent maintenance of the hydraulic infrastructure

The purpose of the proposed project described herein will thus be to increase rice and sorghum production in the SEMAB-Casier A sector. The life of the project will be from FY 1978 to FY 1982. It is recognized however that this project will represent only the first phase of a long-term development program. The initial project area will cover 5,000 hectares. In addition to the project element described in the Club report, the CDO and GOC believe that a rice research program constitutes an essential part of the overall agricultural program. Support to the rice research station at Billiam

Oursi is therefore included in the project.

C. Project Outputs

- Repair/rehabilitation of existing dike and hydraulic structures.
- Creation of a Chadian management organization to oversee execution of the project.
- Strengthening of existing extension services.
- Provision of production inputs (seeds, fertilizers, etc.) to project farmers.
- Provision of marketing services to project farmers.
- Strengthening of the existing rice research station at Billiam Oursi.

D. Alternative Ways of Structuring the Project

An alternative way to carry out the project would be that described in the previously mentioned PRP, i.e. to repair the existing dike and ignore direct agricultural interventions. Although there would be significant gains to the population of the area through improved protection from flooding and access to markets as the result of an infrastructure project without agricultural interventions, as noted earlier, this alternative fails to exploit the existing substantial potential in irrigated agriculture. It fails to capitalize on the existing hydraulic structures and agricultural infrastructure, the rehabilitation of which can be expected to have significant agricultural benefits.

2. Relation of the Proposed Project to the Development Assistance Program and to Host Country Priorities.

The Bongor Irrigated Crop Production falls completely within the strategy described in the Chad DAP and is totally responsive to host country priorities. The DAP strategy defines self-sufficiency in food crop production as an objectives of the highest priority. The strategy also calls for development of the significant potential for irrigated agriculture along the Logone River as one of the most effective means of increasing food crop production and specifically recommends AID consideration of the rehabilitation of the SEMAB project. The GOC has made repeated requests to the CDO for consideration of a project to rehabiliate SEMAB-Casier A.

The earliest of these requests dates back to 1970. Most recently, the GOC formally decided that any proposed donor intervention in the Bongor area should include both dike and repair and reactivation of Casier A for irrigated agricultural purposes.

3. Discussion of AID Policy Issues Including Beneficiaries, Environment, Human Rights, and the Role of Women.

A. Beneficiaries

The direct beneficiaries of successful execution of the project are expected to be :

- Rice and sorghum farmers in the project area who will realize increased incomes as the result of expanded production improved yields, improved access to markets and production inputs.

- The farmers and fishermen residing outside the project area but within the area to be provided better protection against seasonal flooding as the result of repair of the existing river dike.

- The country as a whole asthe result of increased food crop availability from the project.

- Génie Rural (the government agricultural engineering service) as the result of technical assistance to improve its management and operational capabilities.

B. Environment

A project of the type described in this PID will obviously have environmental implications. A detailed environmental assessment should therefore be undertaken.

C. Human Rights

There are no human rights problems which implementation of the project would generate or cause.

D. Role of Women

The PP team will draw upon studies to be carried out under other

projects in order to seek ways to enhance the role of women in the project to the maximum extent possible. If a separate study (or studies) is required, it will be funded under the project itself.

4. Estimated Cost of the Project and Estimated Cost to AID Including Dollar and Local Currency Costs

The table below indicates the estimated AID financial contribution to the project by year. A substantial amount of work has been done in estimating costs for the Logone Dike PRP. Much of that information remains valid. However, the cost information in the Logone Dike PRP and the estimated requirements for the agricultural interventions of the project will be further studied and analysed between now and the arrival of the PP/feasibility team by the GOC officials and CDO staff. Any further evaluation/analysis can be undertaken by the feasibility/ PP team itself. Approximately $11,630,000 will be required for local currency costs. The estimated Chadian contribution to the project is $1,500,000.

Financial Requirements (AID) Bongor Irrigated Crop Production

($ 000)

	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982
1. Personnel : Long-term technical assistance in irrigation engineering and agronomy	160	240	240	240	160
2. Training : Irrigation engineering agric economics	20	30	30	20	-
3. Commodities : Agric. equipment vehicles, construction equipment.	700	1.500	-	30	-
4. Other Costs : Construction, operational costs, studies.	620	2.820	4.570	3.130	490
TOTAL	1.500	4.590	4.840	3.420	650

5. Project Development

An in-depth socioeconomic feasibility study should be undertaken either as part of the project or preceding initial impleme ntation. In the former case, the institution-building aspects of the project (e.g. strengthening of the rice research station at Billiam Oursi) could begin immediately followed by the infrastructure elements after completion of the engineering, social and economic studies. In the latter case, the studies would precede or accompany preparation of the Project Paper.

The feasibility studies are estimated to require two to three months to complete by a consulting team consisting of an agricultural or hydraulic engineer, an agricultural economist an agronomist, and a rural sociologist. AID/Washington would have the best estimate of the cost of such a team, since it is normally AID/W which prepares the implementing documents and contracts for consultant teams. If the feasibility studies were to precede the PP, preparation of the latter would be materially simplified since most if not all the analytical sections required in the PP would have been completed in the feasibility studies. If such were the case, preparation of the PP could reasonably be expected to require no more than two months by a team consisting of the same disciplines as the feasibility studies team.

In fact, to economize on consultant services, there is essentially no reason why the feasibility team could not prepare the feasibility studies and PP simultaneously, since there is a substantial overlap in the requirements of each and the PP in any event is considered in practice (if not in theory) a feasibility document itself. This is likely to be even more true with elimination of the Project Review Paper. Combining the PP and feasibility studies will reduce tremendously (by 50% at least) the amount of time and manpower devoted to review in Washington. This latter option is the decided preference of the CDO, Embassy and the GOC.

The feasibility/PP team should address the following specific issues/questions :

a. Most appropriate area within Casier A for location of the initial project area of 5,000 hectares.

b. Cost/benefit and economic rate of return analysis for the project, including all elements and all benefits affecting the project area

and surrounding areas within coverage of dike and water works.

c. Recommended extension structure to provide extension services and inputs to project farmers.

d. Recommended marketing structure to be established to service marketing requirements of project farmers.

e. Identification of hydraulic infrastructures to be rehabilited and specification of costs thereof (drawing on existing documents and plans.).

f. Recommended approaches to assuring long-term financial viability of project (e.g. charging of taxes and fees by project office).

6. Environmental Examination

The project's effects on the environment are expected to be significant; therefore, an environmental examination should be undertaken as part of the feasibility/PP stage of project development.

PROJECT NARRATIVE

Agricultural Institutional Development
(677-0002)

Because the review of the Project Paper has taken much longer than expected, the CDO does not feel it will be in a position to make the initial project obligation before FY 1978.

PROJECT NARRATIVE

LCBC Livestock and Mixed Agriculture
(627-0100)

Although scheduled for FY 1977 initial funding, the PP preparation for this project was only completed immediately prior to the preparation of this budget submission, making FY 1977 funding doubtful. For this reason, the project is presented as an FY 1978 start.

Additionally, the experts carrying out the PP design have determined that the rangelands in the project area are in a state of deterioration previously undetermined and not accounted for in the inputs delineated in the PRP. This condition has necessitated a significant addition to the project design to incorporate ameliorative inputs which will be required if the project is to succeed. This addition has raised project costs above the level presented in the PRP and, concomitantly, above the funding requests shown in the FY 1978 C. P. AID/W was notified of the increase of project costs prior to the submission of the PP.

PROJECT NARRATIVE

Crop Production Research, Seed Multiplication and Marketing
(677-0014)

The PRP was submitted to AID/W for review and approval in November 1976. The ECPR at its meeting on January 1977 authorized the CDO to move forward with PP design for the research and seed multiplication components of the project, and recommended that the grain marketing segment of the project be the subject of further analysis of the overall GOC grain marketing strategy and the grain marketing process prior to proceeding to PP design.

A two-member consultant team is presently in Chad to prepare a report describing and analyzing the existing marketing system and recommending areas for AID support. Their work is almost completed and their report will recommend AID support to the village grain storage program. For this reason funding figures shown in the FY 1978 C.P. are less than those actually required for the successful implementation of the project. Financial requirements shown in Table IV reflect the inclusion of all components of the project.

PROJECT NARRATIVE

Food Delivery and Rural Works (CARE)
(677-0023)

This project does not appear in the FY 1978 Congressional Presentation. It was not shown, since it was assumed at the time the C.P. was prepared that it would be funded under the Operational Program Grant (OPG) program. AID/Washington, however, recently advised (see State 128881, June 4, 1977) that all OPG proposals with a life-of-project budget exceeding $500,000 would henceforth be considered as regular projects. Having a proposed budget of more than $500,000, this project will now be treated as a regular project in terms of project design documentation and presentation to Congress.

CARE has submitted to AID/W an OPG document for review. Based upon this review, it is anticipated that a Project Paper will be completed by CARE during FY 1978.

This project has evolved from the considerable CARE rural development experience in Chad, much of which was gained through the implementation of AID-financed relief and rehabilitation activities under the Sahel drought relief program. It also benefits from extensive design dialogue with the Rural Development Office of TAB.

The project will provide funds to allow CARE to respond to felt, identified rural needs. At the same time, a basis for a long-range village economic growth will be assisted. Specific activities will include:

- Organization of vegetable gardens near rivers and swamps, and assisting with production, preparation and commercialization of foods grown;

- Improvement of fish drying techniques, and assistance with commercialization of the products;

a

- Tree planting as/source of firewood and as a cash crop;

- Food processing projects such as peanut oil production and milling of flour;

- Improvement of existing village agriculture, irrigation and social overhead capital capacities.

All aspects of this project will have a learning component, thus encouraging and assisting villagers to continue and expand these activities.

This entire program will be closely coordinated with the CARE PL 480 Title II Food-For-Work project of FY 1978.

PROJECT NARRATIVE

Rural Pilot Workshops (ORT)
(677-0024)

The Rural Pilot Workshop project was proposed by the GOC to ORT in 1975 based on the dual need of training rural craftsmen and training practical skills teachers for adult skills training programs. This project does not appear in the FY 1978 Congressional Presentation. It was not shown, since it was assumed at the time the C.P. was prepared that it would be funded under the Operational Program Grant (OPG) program. AID/Washington, however, recently advised (see State 128881, June 4, 1977) that all OPG proposals with a life-of-project budget exceeding $500,000 would henceforth be considered as regular projects. Having a proposed budget of more than $500,000, this project will now be treated as a regular project in terms of project design documentation and presentation to Congress.

ORT has submitted to AID/W an OPG document for review. Based upon this review, it is anticipated that a Project Paper will be completed by ORT during FY 1978.

The origins of the project date back to 1975 when a Development Program Grant (DPG) for the Organization for Rehabilitation Through Training (ORT) was approved to permit ORT to develop project proposals in the rural development sector in several African countries. Rural Pilot Workshops is one of the projects identified and prepared as a result of the DPG. AID/W review of the DPG gave approval in principle to this activity and authorized preparation of an OPG; therefore, three ORT missions have visited Chad for the purpose of gathering data and information required for drafting a project proposal coordinating the design of the project with Chadian officials and with the CDO. The resulting proposal has received the complete concurrence and full support of both the Chadian Government and the CDO.

This project will provide funds over a five-year period to build and staff four rural adult training centers. Skills will be taught to the potential income-earning level for about 360 adults in such areas as maintenance of agricultural equipment, irrigation, carpentry, construction, and metalworking. It is also expected that 600 primary school teachers will learn a sufficient level of skill in several

areas to introduce the basics of these skills in the elementary schools. The centers will be extensions of pilot school workshops to be constructed under the Comprehensive Human Resources Development project and will complement the adult education portion of that project.

As for the relationship between the ORT proposal and the adult education element of the Human Resources Development project, the latter is intended to provide elementary skills training for village adults primarily for their personal use. The ORT proposal is designed to meet a serious need for skilled village artisans/ technicians. As such the ORT program would provide more intensive and advanced training to selected village adults in metalworking (to repair, for example, agricultural equipment), carpentry, masonry, and simple irrigation techniques to enable the graduates of the program to earn a living from their newly established skills. In addition, the ORT project will provide facilities for training of elementary school practical skills teachers. These are not provided for under the Human Resources project. The ORT proposal and approved AID project are thus totally complementary and mutually supportive.

PROJECT NARRATIVE

Rural Communications Training (ORT)
(677-0025)

This project does not appear in the FY 1978 Congressional Presentation. It was not shown, since it was assumed at the time the C. P. was prepared that it would be funded under the Operational Program Grant (OPG) program. AID/Washington, however, recently advised (see State 128881, June 4, 1977) that all OPG proposals with a life-of-project budget exceeding $500,000 would henceforth be considered as regular projects. Having a proposed budget of more than $500,000, this project will now be treated as a regular project in terms of project design documentation and presentation to Congress.

ORT has submitted to AID/W an OPG document for review. Based upon this review, it is anticipated that a Project Paper will be completed by ORT by September 1977.

The origins of the project date back to 1975 when a Development Program Grant (DPG) for the Organization for Rehabilitation Through Training (ORT) was approved to permit ORT to develop project proposals in the rural development sector in several African countries. Rural Communications Training is one of the projects identified and prepared as a result of the DPG. AID/W review of the DPG gave approval in principle to this activity and authorized preparation of an OPG; therefore three ORT missions have visited Chad for the purpose of gathering data and information required for drafting a project proposal coordinating the design of the project with Chadian officials and with the CDO. The resulting proposal has received the complete concurrence and full support of both the Chadian Government and the CDO. The project will fill an existing gap in communications training for rural cadres of the Chadian Government. Over a period of five years approximately 300 instructors of farm training centers (Centres de Formation Professionnelle Agricole), 1,000 extension agents of the Chadian extension service, 2,200 primary school teachers and 500 primary school principals participating in the primary school reform program will receive training in communications skills to enable them to relate to rural farm families and assist them more effectively.

The proposed project will play an important complementary role to the Agricultural Institutional Development project. The aim of the extension component of this latter project is to strengthen the extension service, and improvement in extension methodology, to be addressed as part of the Rural Communications Training project, is an essential part of increasing the overall effectiveness of the extension service.

The extension element of the Institutional Development project will include training of all ONDR extension personnel in improved techniques and the basic technology of food crop production (e.g., improved seeding, planting and harvesting techniques for millet and sorghum cultivation). The ORT project will address the manner or approach which the agents utilize in communicating or relating to farmers. The traditional approach is a one-sided, autocratic style with extension personnel essentially issuing orders and instructions but failing to listen or develop a sensitivity to the needs and problems of the peasant farmer. The technical training of the Institutional Development project and communications training (or extension methodology training) of the ORT proposal will thus be highly complementary and mutually supportive.

PROJECT NARRATIVE

National Fisheries
(677-0012)

The original project design envisaged a four-year effort to increase the availability and distribution of fishery products in Chad, and to augment government revenues derived from fisheries. Total cost over the life of the project (FY 1978-1981) was estimated at $2,608,000. Subsequent to the submission of the PRP for the project (end of 1976), CDO/N'Djamena was informed that the Club du Sahel was contemplating a much longer effort to develop Chad fisheries. Club experts met with CDO staff in February 1977. They found the PRP compatible with their own ideas, which encompass a comprehensive 4 year effort, starting in FY 1979 and ending FY 1982, estimated to cost $ 9 million. AID might finance 50% of this amount, or $ 4.5 million. While the Club des Amis du Sahel studied and offered the proposals of its experts, it was suggested the project could start under AID auspices in FY 1978, with $285,000 budgeted for first-year financing of the existing AID PRP. Current plans call for development of a PP-level document to be carried out under Club auspices.

TABLE V - FY 1979 PROPOSED PROGRAM RANKING

DECISION UNIT: CDO/CHAD | REVISED BY: | CONSOLIDATED BY:

RANK	DECISION PACKAGES/PROGRAM ACTIVITY/SUPPORT ITEM DESCRIPTION	APPROP ACCT	RESOURCE REQUIREMENTS: CUMULATIVE MISSION OPERATING EXPENSES (000)	WORKFORCE (DH ONLY) INCREMENT US	INCREMENT FN	CUMULATIVE US	CUMULATIVE FN	PROGRAM FUNDING (000) INCREMENT	CUMULATIVE
	Decision Package - Minimum								
	Workforce and Operating Expenses (Assuming no FY 1979 Obligations)		420	21	16	21	16		
1	0001 Lake Chad Irrigated Agriculture (GO)	SH*				21	16	2,310	2,310
2	0201 Chad Range and Livestock Development (GO)	SH				21	16	929	3,239
3	0005 Comprehensive Human Resources Development (GO)	SH			1	21	17	1,510	4,749
4	0004 Rural Health Planning and Management (GO)	SH			1	21	18	456	5,205
	Decision Package - Current								
5	0022 Rural Sanitary Water (GO)	SH	580					669	5,874
6	0016 Bongor Irrigated Agriculture (GO)	SH		1	1	22	19	3,000	8,874
7	0002 Agricultural Institutional Development (GO)	SH		1	1	23	20	1,891	10,765
8	677-0130 LCBC Livestock and Mixed Agriculture (GO)	SH		1	2	24	22	1,801	12,566
9	0014 Crop Production Research (GO)	SH		1		25	22	2,760	15,326
10	0023 Food Delivery and Rural Works (GO)	SH			1	25	23	484	15,810
11	PL 480 Title II			1		26	23	636	16,446
12	0024 Rural Pilot Workshops (PVO) (GO)	SH			1	26	24	498	16,944
13	0025 Rural Communications Training (PVO) (GO)	SH				26	24	676	17,620
14	0012 National Fisheries (GO)	SH				26	24	715	18,335
	Decision Package - Proposed								
15	0029 Sudano-Sahelian Food Crops (GN)	SH	656	1	2	27	26	1,500	19,835
16	0028 Chad Range and Livestock Development II (GN)	SH			1	27	27	2,198	22,033
17	0030 Rural Projects Fund (GN)	SH		1		28	27	1,000	23,033

* No funding from regular functional accounts is planned for FY 1979.

AID 1330-9 (4-77)

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT IDENTIFICATION DOCUMENT FACESHEET

To Be Completed By Originating Office

1. TRANSACTION CODE: [A] (A = Add, C = Change, D = Delete) — PID

2. DOCUMENT CODE: 1

3. COUNTRY/ENTITY: CHAD

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER (7 digits): 677-0029

6. BUREAU/OFFICE: A. Symbol: AFR; B. Code: 1

7. PROJECT TITLE (maximum 40 characters): Sudano-Sahelian Food Crops

8. PROPOSED NEXT DOCUMENT: A. [3] (2 = PRP, 3 = PP); B. DATE (MM YY): 10 77

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION: a. INITIAL FY 79; b. FINAL FY 83

10. ESTIMATED COSTS ($000 or equivalent, $1 =)

FUNDING SOURCE	Life of Project
a. AID Appropriated	10000
b. OTHER U.S. 1.	
b. OTHER U.S. 2.	
c. Host Country	2000
d. Other Donor(s)	4000
TOTAL	16000

II. PROPOSED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. Grant	PRIMARY TECH. CODE D. Loan	E. FIRST FY ____ F. Grant	E. FIRST FY ____ G. Loan	LIFE OF PROJECT H. Grant	LIFE OF PROJECT I. Loan
(1) SH	144	070	-	1500	-	10000	-
(2)							
(3)							
(4)							
			TOTAL			10000	

12. SECONDARY TECHNICAL CODES (maximum six codes of three positions each):

13. SPECIAL CONCERNS CODES (maximum six codes of four positions each):

14. SECONDARY PURPOSE CODE:

15. PROJECT GOAL (maximum 240 characters)

Achieve self-sufficiency in food crop production and increase small farmer incomes.

16. PROJECT PURPOSE (maximum 480 characters)

Increase millet, sorghum, rice, corn and peanut production in Sahelian and southern zones of Chad.

17. PLANNING RESOURCE REQUIREMENTS (staff/funds)

Three contract consultants for 3 MM each: $180,000.

18. ORIGINATING OFFICE CLEARANCE

Signature: John A. Lindgren

Title: Country Development Officer

Date Signed (MM DD YY): 06 30 77

19. Date Document Received in AID/W, or for AID/W Documents, Date of Distribution (MM DD YY):

AID 1330-2 (3-76)

PROJECT IDENTIFICATION DOCUMENT (PID)

Sudano-Sahelian Food Crops

1. Description of the Project

A. The Problem

The Development Assistance Program (DPP) for Chad identified increased food crop production in the southern and Sahelian zones of Chad as a major AID objective in the agricultural sector (p. C-20). In the southern region the DAP recommends improving the production of subsistence crops (millet and sorghum) and developing other crops such as rice and peanuts. The aim in the Sahelian zone should be to increase the production of millet and peanuts, which are the subsistence crops of this zone.

The rationale for increased food crop production is an obvious one: in normal years of production, the amount of food grains available for the country as a whole approximates consumer demand; in poor years, there is a substantial gap between food requirements and food availability. There is little or no margin of security in food crop production. A drought year is tantamount to severe food shortages for the population, especially in the absence of international food relief programs. National self-sufficiency in food crop production is thus an objective of the highest priority for both the Chadian government and the international donor community.

B. Project Purpose

Club du Sahel documents 7702/CHD/P1 and 7702/CHD/P2, prepared by the dryland agriculture team, outline feasible approaches for augmenting food crop production in the southern and Sahelian regions of Chad. Both documents embody long-term perspectives to achievement of self-sufficiency. The project described herein would represent the first phase of this long-term effort.

The purpose of the project would be increased millet and peanut production in the Sahelian zone and increased millet, sorghum, rice and corn production in the Southern zone. The relationship between the project purpose and the sector goal of attaining self-sufficiency in food grains and improving the social and economic standing of the Chadian cultivator would be obvious and direct.

C. Estimated Project Outputs

Sahelian Zone

The proposed intervention in the Sahelian zone would be complementary to a European Common Market Fund (FED) project which has been approved

in principle. The proposed project would also build on the extension activities proposed in AID project Agricultural Institutional Development, which is in the final stage of project documentation.

Club document 7702/CHD/P1 suggests that the zone of project action cover selected subprefectures of Chari Baguirmi, Batha, and Ouaddai. We propose to leave the final decision concerning geographic coverage to the PP stage of project design in order to allow further study and analysis of the most appropriate geographic zones from both an agricultural and a security point of view.

Production objectives in the Sahelian zone will be more modest than those in the southern zone. Less favorable climatic conditions and virtually nonexistent extension infrastructure and communications systems in the Sahelian zone restrict what can be expected in terms of increased production, particularly in the initial phase of the envisaged long-term program. The Club document estimates that it would be possible to expect attainment of the following production targets during the initial phases:

	Millet/sorghum	Peanuts
1981	3,500 tons	12,000 tons
1985	23,000 tons	37,000 tons

The life of the proposed project described in this PID would be FY 1979 to 1983. Therefore, the targeted production increment for this project would be somewhere between the 1981 figures and the 1985 figures cited above. One of the tasks of the PP team will be to estimate appropriate targets for millet/sorghum and peanuts for the time frame of the project.

To achieve the 1981 target for millet/sorghum, the Club document estimates that average yields should increase by 20%, that is from 450 kg/ha to 540 kg/ha. To achieve the 1981 target for peanuts, it will be necessary to increase cultivated hectarage from 5,000 hectares to 25,000 hectares by the distribution of seed varieties adapted to Sahelian conditions.

Projected outputs are as follows:

- Expanded extension infrastructure, including subsector chiefs and extension agents (encadreurs de base).

- Construction of storage facilities and offices.

- Increased mobility of extension organization.

- Training and retraining of extension personnel.

- Availability of selected seeds, pesticides, agricultural equipment.

- Organization of farmers for demonstrations, village storage, and marketing.

- Socioeconomic and technical studies/research.

Southern Zone

The southern zone enjoys relatively favorable agricultural and climatic conditions, especially in comparison with the Sahelian zone. These favorable conditions have resulted in a rapid development of cotton production. Food crop production in the south tends to follow population increases with a slight surplus remaining after satisfaction of local demand. This surplus could not accommodate the needs of the country, however, even if the entire surplus were to be directed to the north. Moreover, the increased production sought in the Sahelian zone, as described in the preceding paragraphs, will not be able to satisfy the needs of N'Djamena, and a need exists to constitute a national reserve stock to confront the perodic shortages which will ineluctably continue to occur during years of poor rainfall in the Sahelian zone.

The southern zone is thus looked to as the grain source for the capital of N'Djamena and for a national reserve stock to meet periodic grain shortages in the Sahelian zone. The Club documents establish a target for the reserve stock of 16,000 tons by 1985 and 50,000 tons by the year 2000. To reach this objective, production in the south will have to expand by about three percent per year. Approximately 1.6% will be accounted for by spontaneous production increases (principally due to increased hectarage under cultivation) while improved productivity will have to account for the remaining 1.4%. Such a productivity increase will require concerted effort, particularly in view of the soil degradation and exhaustion brought about by intensive cotton cultivation.

A grain productivity program must therefore be closely tied to that for cotton productivity. Club document 7702/CHD/P2 proposes coverage of about 100,000 hectares under a cereal productivity program by 1981 with an expected increase in yields of 0.4 ton per hectare. Farmers participating in the program would use improved cultural practices, selected and treated seeds, and chemical fertilizers.

In addition, the extension service presently functioning in the south will require expansion and retraining. New sectors and subsectors would be created. Expanded infrastructure in the form of increased village warehouses is also contemplated. Subsidization of seeds, fertilizers, and pesticides is also recommended in the Club document.

The Club proposals do not take into account the possibility of expanding rice production under conditions of natural flooding. It is proposed herein to exploit this opportunity in the area of the Logone Valley presently under the jurisdiction of SEMALK. Precise production targets will be developed during preparation of the PP. According to knowledgeable technicians, however, the production potential is quite significant. What will be undertaken under the Food Crop Production project will be a strengthening of the existing SEMALK extension service and the provision of production inputs on an extensive scale.

Expected production results for millet/sorghum are as follows:

	1981 (000 tons)	1985 (000 tons)
Incremental production over and above that which would occur naturally.	40	79
Reserve stock	--	16

Projected outputs are as follows:

- Creation of a specialized extension force for food grain production.
- Extension to farmers of inputs like selected seeds and fertilizers.
- Creation and equipping of precooperative structures for production and marketing.

Existing extension coverage in the south is on the order of one extension agent per 424 farm plots, that is per 1,700 hectares. In reality, however, extension is provided uniquely for cotton production, i.e., covering 300,000 hectares or one extension agent per 500 hectares (between 416 and 500 plots). For the

life of the project, given the intensive specialization of the present extension force, it is recommended that an extension group be created specifically for millet/sorghum production. At the same time, the existing cadres would undergo training to prepare them to serve more effectively as food crop extenders. For subsequent phases of the long-term program envisaged by the Club document, a multipurpose extension force will have been established whose agents will be able to address both cotton and food crop production. The Club document recommends maintaining the existing ratio of one agent per 500 hectares in accordance with the following schedule:

	Present/Projected Level	Need	Difference
1981	646	1,036	390
1985	1,036	1,060	24

It is estimated that the project will require production inputs in the following magnitudes:

	Annual Needs	
	1981	1985
Fertilizers (000 tons)	10.0	16.0
Seeds (000 tons)	.34	.94
Fungicides for seed treatment (000 bags)	200	580

Improved seeds will be generated from the AID project, Crop Production Research and Seed Multiplication. For other inputs, the Club document estimates that subsidization on the order of 50% will be required.

In terms of infrastructure, it is proposed that a program of village warehouse construction be undertaken and that precooperative village organizations be equipped to function adequately. At the time of this writing, an AID-financed consultant team was reviewing possible AID interventions in the area of grain marketing. Their final report will recommend AID support to the construction of village warehouses as part of the grain marketing component of the Crop Production Research, Seed Multiplication and Grain Marketing Project which is scheduled to begin in FY 1978. In

addition, an approved World Bank project includes a village grain storage construction component. For these reasons, it is anticipated that the storage construction element of the Food Crop Production project may be relatively modest in nature.

D. Estimated Inputs

The inputs outlined below should be considered illustrative and very preliminary in nature. At the PP stage of project design, it will be possible to determine more precisely the kinds and magnitudes of technical and physical resources which will be required.

Personnel

One technical advisor to provide overall guidance and assistance to ONDR in implementing its Sahelian production program.

Training

Initial in-country training for new extension agents (encadreurs) and retraining of existing cadres.

Commodities

Vehicles.
Office equipment.
Production inputs (improved seeds, fungicides-pesticides, fertilizers).

Other Costs

Construction of offices and regional village warehouses, sector and subsector warehouses, training centers.

Operating costs for extension force.

Technical and socioeconomic studies.

E. Major Assumptions Pertinent to Project Success

(1) That the Chadian Government will provide full moral and administrative support to the project.

(2) That the southern farmer can be motivated to increase his millet/sorghum production sufficiently so that the project's production targets for the south become attainable.

(3) That price levels for millet and sorghum will be sufficiently high to encourage surplus production in the south.

(4) That improvement of the internal road system keeps abreast of production increases so that transportation does not become a constraint.

F. Realistic Alternatives to the Project

An alternative to increasing food crop production in Chad would be to continue to rely on international food relief in times of food shortages; however, Chad may not be able to do so indefinitely. It is not certain that the food surplus countries will always have the amounts of food grains necessary to meet food shortages around the world. Moreover, food relief is an expensive proposition for food donors. The mechanism for supply and distribution is inevitably inefficient, and food relief does not always arrive at the right place at the right time. The most reliable solution to meet periodic food shortages in Chad is an expansion of internal production. It is moreover the only solution which can accommodate the objective of increasing the incomes of the Chadian farmer. International food relief programs cannot address this problem.

2. Relation of Proposed Project to Development Assistance Program, Host Country Priorities, Other Donor and Other AID Activities

The first section, "Project Description,"contains a discussion of the relationship of the proposed project to the Chad DAP and GOC priorities. As mentioned earlier, the Project Paper for AID project Agricultural Institutional Development proposes to provide assistance to ONDR, the Chadian extension agency, in the area of food crop production in both the Sahelian and southern zones; however, the amount of assistance is quite modest. The proposed project described herein would build on the experience and limited training activities proposed in the Institutional Development project. In this sense, the latter activities would be of a pilot nature to pave the way for the much more ambitious and concentrated programs described herein.

As also mentioned earlier, FED has approved in principle an agricultural production project for the Sahelian zone with a project life from 1978 to 1981. The project would be carried out in certain subprefectures of Chari-Baguirmi, Batha, and Ouaddai. The proposed Food Crop Production project would complement the FED project.

The southern element of the Food Crop Production project will be an integral part of the FED/FAC Southern Chad Integrated Agriculture

project which has recently been approved in principle. Discussions regarding collaboration among FED, FAC and AID in execution of the latter project have already been initiated. Since the food grain element of the Integrated Agriculture project, which will begin late in 1977 and end in 1982, is essentially only sketchily developed at present, the AID Food Crop Production project represents a logical plan for this component.

The proposed project would also be complementary to, and supported by, the planned AID project Crop Production Research, Seed Multiplication and Marketing. The objective of the research component of the project is to develop and test improved technical practices which ONDR will subsequently extend to farmers under the Food Crop Production project. The seed multiplication component will develop and distribute improved seeds, a second essential element of the productivity improvement program. The aim of the marketing element will be to assist in improvement of the marketing system for millet, sorghum and peanuts. Such improvement needs to take place as part of any effort to increase food crop production.

3. Discussion of Policy Issues Including Beneficiaries, Environment, Human Rights and the Role of Women

A. Beneficiaries of the Project

The intended beneficiaries of the project will in the first instance be the thousands of Sahelian Chadians who will not have to endure to the same extent the food shortages of the past due to periodic droughts. The creation of a reserve stock will help immeasurably to soften, if not eliminate entirely, the cruel impact of periodic droughts in the Sahelian zone of Chad. Chadian farmers of the Sahelian and southern zones should also benefit from increased incomes which in turn are expected to occur as the result of productivity improvements. Urban consumers should also benefit in the same way as the Sahelian zone inhabitants. That is, urban consumers will have greater assurance of reliable food supplies at reasonable prices.

B. Environment, Human Rights and Role of Women

The project is not expected to have any significant adverse environmental effects. The project does not contain any human rights implications. One of the socioeconomic studies to be undertaken under the project during the first year of the project will be a study of the present role of women in food crop production and recommendations on feasible approaches to enhance the status of women as part of the project.

4. Estimated Cost of the Project and Estimated Cost to AID Including Dollar and Local Currency Costs

Detailed financial plans will be developed as part of the preparation of the Project Paper. The requirements shown below should be considered extremely preliminary and rough approximations at best. They are based on the aforementioned Club documents.

Personnel

$400,000 - one long-term advisor (60 mm).

Commodities

Vehicles and office equipment $743,000
Production inputs - $5,169,000

Other Costs

Construction of village warehouses, office space, training centers - $1,608,000.

Operating Costs and salaries for extension service - $1,920,000.

Technical and socioeconomic studies - $160,000.

Grand Total -- $10,000,000.

The estimated budget shown in the Club documents has been considerably reduced from a total of $24 million to slightly more than $10 million. A sizeable reduction was made in the amount allocated to village storage construction since it is anticipated that the bulk of this requirement will be met through an approved World Bank project and through the marketing component of AID project, Crop Production Research, Seed Multiplication and Marketing. Chadian personnel costs were significantly reduced, since it is assumed that the GOC will assume the salary costs of supervisory/management personnel. Finally, it was felt that much less could be allocated to technical and socioeconomic studies than the fairly large amount listed in the Club documents.

5. Project Development

The project Paper should be developed by a multidisciplined team over a period of two to three months. The composition of the team

One agronomist
Two agricultural economists
One design officer

The CDO will provide the design officer who will lead the team. The other team members will have to be outside consultants or AID/W officers. Specific questions which the PP should address in depth are:

(1) Feasible measures of increasing millet, sorghum, and peanut production in the Sahelian zone and the magnitude of the incremental production which can be reasonably expected.

(2) Feasible approaches to encourage the southern farmer to increase his millet/sorghum production.

(3) Detailed study on fertilizer and other input use in Sahelian and southern zones, including recommended percent of subsidization and gradual phasing to point where farmer is able to assume full costs of all inputs.

(4) Recommended government price policies required for successful execution of project.

(5) Nature and extent of credit facilities recommended for successful execution of project.

(6) Examination of most important transport links and recommendation for improvement thereof. It is assumed that transport links will be more important for the southern element of the project, since the south will produce the surplus required for the needs of N'Djamena and for constitution of an emergency reserve stock. Increased production in the Sahelian zone will be directed to consumption within the region; therefore, transportation links will have less relative importance than in the south. However, this assumption needs to be looked into more carefully. For the south, the most important road links should be identified with recommendations as to the degree of improvement required.

6. Initial Environmental Examination

See attachment.

ATTACHMENT

INITIAL ENVIRONMENTAL EXAMINATION

Project Location: Chad
Project Title: Food Crop Production
Funding: FY 1979: $1.5 mil. Total 5 years: $10 mil.
Life of Project: 5 years
IEE Prepared by: S.H. Krashveski Date June 22, 1977

Environmental Action Recommended:
The initial environmental examination indicates that the project will not have a significant effect on the environment and, therefore, a negative determination is appropriate.

Concurrence
The CDO has examined the IEE and the recommended environmental action shown hereabove and concurs that a negative determination is appropriate. Therefore, CDO recommends that negative declaration be approved.

JLundgren CDO June 23, 1977

Recommendation:
That AA/AFR approve the Negative Declaration.

Approved _____

Disapproved _____

Date _____

A. Project Description
The project purpose is to increase food crop production substantially in Chad in two climatically distinct areas, i.e. Sahel and Sudan zones. For both zones, improved crop production techniques will be employed which will not negatively affect the environment.

In the Sahel ecological zone having 400-600 mm rain/year, the traditional production system will be improved to reduce its vulnerability to drought. The deterioration of soil resources will be halted by introducing soil conservation measures (without engineering activities such as, for example, terracing) to halt erosion and reverse desertification.

The land form of the Sahel selected for crop production under this project consists mainly of a broad plateau interpersed

with (1) occasional sand dunes, many of which are presently active and denuded of vegetation, (2) small hillocks with some brush and weeds but originally supporting a sparse cover of trees which are cut out now, and (3) areas of sandy loam soils sparsely covered with various grasses (now overgrazed). On these sandy loam soils, traditional agriculture has been practiced for a long time. Small farmers produce Millet and some sorghum there. The population is sparse amounting to about 6.4 persons/square kilometer and is to a certain extent still nomadic. Even during normal rainfall, crop production in the area is not sufficient to satisfy the consumptive needs of the population. The project will not only increase crop production but also will provide increased employment for the population and improve their standard of living.

In the south of Chad, which enjoys more abundant rainfall (over 600 mm/year) and more fertile soils, packages of production technology will be employed rather than specific crops or individual cultural practices. Increases in production will be stimulated by providing better seeds, better land use, pest management, some fertilizers and other inputs.

Within the broad areas selected for project support to increase crop production, there are also low-lying areas that are flooded during the rainy season. These will be put into rice production.

In the southern zone of Chad, wind and water erosion is also increasing due principally to cutting of trees for fuel. Several reforestation projects are in progress or will be started soon. This will tend to reverse or at least halt erosion.

This agricultural development project will assist Chadian farmers in increasing crop production on land which is already in cultivation. The overall effect on the environment will be beneficial. The use of pesticides (only those that are approved by EPA-) will be minimal. The Integrated Pest Management Proposal for Basic Food Crops in the Sahel addressed adequately the issue of environmental impact noting that the effects of pesticides are minimal because of rapid biodegradation in the high temperatures of the Sahel countries.

In summary, the examination shows that, with the exception of the effects of pesticides and fertilizers which will have a minimal degrading effect on the environment, the overall project activity will tend to be neutral or actually have a beneficial environmental effect.

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT IDENTIFICATION DOCUMENT FACESHEET

To Be Completed By Originating Office

1. TRANSACTION CODE: [A] (A = Add, C = Change, D = Delete) — PID

2. DOCUMENT CODE: 1

3. COUNTRY/ENTITY: CHAD

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER *(7 digits)*: 677-0028

6. BUREAU/OFFICE: A. Symbol: AFR; B. Code: 1

7. PROJECT TITLE *(maximum 40 characters)*: Chad Range & Livestock Development Phase II

8. PROPOSED NEXT DOCUMENT: A. [3] (2 = PRP, 3 = PP); B. DATE (MM YY): 01 78

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION: a. INITIAL FY 79; b. FINAL FY 82

10. ESTIMATED COSTS ($000 or equivalent, $1)

FUNDING SOURCE	Life of Project
a. AID Appropriated	7425
b. OTHER U.S. 1.	-
b. OTHER U.S. 2.	2000
c. Host Country	
d. Other Donor(s) IBRD and FED	14200
TOTAL	23625

11. PROPOSED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. Grant	PRIMARY TECH. CODE D. Loan	E. FIRST FY 79 F. Grant	E. FIRST FY 79 G. Loan	LIFE OF PROJECT H. Grant	LIFE OF PROJECT I. Loan
(1) SH	100	050	--	2198	-	7425	-
(2)							
(3)							
(4)							
TOTAL				2198		7425	

12. SECONDARY TECHNICAL CODES *(maximum six codes of three positions each)*: 031 | 095 | 078

13. SPECIAL CONCERNS CODES *(maximum six codes of four positions each)*: BR | ENV | PART

14. SECONDARY PURPOSE CODE: 213

15. PROJECT GOAL *(maximum 240 characters)*

An increase in the income of small herders, increased export earnings and an expansion of the meat supply for Chadian consumers.

16. PROJECT PURPOSE *(maximum 480 characters)*

To increase substantially the annual off-take of cattle from the Chadian herd.

17. PLANNING RESOURCE REQUIREMENTS *(staff/funds)*

$100,000 for feasibility study for pilot growing and fattening activities.

18. ORIGINATING OFFICE CLEARANCE

Signature: John A. Lundgren

Title: Country Development Officer

Date Signed (MM DD YY): 06 28 77

19. Date Document Received in AID/W, or for AID/W Documents, Date of Distribution (MM DD YY):

AID 1330-2 (3-76)

PROJECT IDENTIFICATION DOCUMENT (PID)

Chad Range and Livestock Development - Phase II

1. Introduction

Under the auspices of the Club du Sahel, the IBRD is in the process of finalizing a proposal which will likely become the strategy for the livestock sector of Chad. This PID recommends that AID participate in this $23 million multidonor project.

AID's participation in this project will permit the United States to integrate its ongoing effort in the livestock sector into a more comprehensive sector program and at the same time sponsor activities of specific interest to the GOC and AID. Another donor in this project is the European Development Fund (FED).

2. Statement of the Problem

Chad's livestock sector provides a livelihood for 30% of the population and accounts for 27% of agricultural output, 15% of GDP, and 32% of merchandise exports. Eighty percent of Chad's cattle are in the Sahelian zone. The production constraints include slow rates of animal growth, low calf crops, high levels of disease, improper utilization of land and water, and poor marketing institutions.

An overall increase in livestock production, however, cannot be realized in the Sahel unless its programs are complemented by programs in more mesic zones. The Sahelian environment is not conducive to growing market-size animals in a reasonable length of time. There are, however, forage and feed resources in the Chari-Baguirmi and cotton producing regions of Chad which could be used for growing out younger animals removed from Sahelian herds. These regions have tsetse fly, but elimination of this constraint is completely feasible.

3. Project Description

The project purpose is to increase substantially the annual off-take of cattle from the Chadian herd. The sector goals to which the project contributes are increasing the income of small herders, increasing export earnings, and expanding the meat supply for Chadian consumers. In the medium term, the project will strive to develop livestock production in the Sahelian and southern zones. Generally, AID direct collaboration with the IBRD will concentrate on the production of cattle in the Sahel, elimination of tsetse fly in the south and relevant training aspects. AID will also engage in

complementary activities concerned with the fattening and marketing of livestock in the south. This latter will also reinforce the FED and FAC activities being undertaken as part of a major effort for the integration of agriculture in the cattle-producing zones of the south.

Specifically, the production increases in the Sahel will be brought about by the geographic delineation of pastoral units (PU) and the grouping of the livestock producers in each PU into an association of pastoralists. The associations, which would each have a committee and a representative with executive responsibilities, would provide a permanent link between their members and government departments. Specifically, the associations would serve as intermediaries and normal guarantors in credit matters, permit financial participation in maintenance and development of fixed assets, increase the effectiveness of the extension service and, to some extent, thereby reduce the need for extension staff.

Each association would receive exclusive grazing and watering rights in its pastoral unit. In exchange for these rights, the association would agree to make better use of the rangeland and watering points, to provide for their maintenance and, later, to participate in their improvement. The associations would also undertake to observe the directives and advice of government technical departments after due consultation with representatives of those departments.

Given the new form of organization of pastoral peoples, the Livestock Department, whose activities have traditionally been limited to vaccination campaigns against the major diseases, would be reoriented in order to permit full-time provision of animal health and husbandry services to pastoralists. This change, which would require some additional buildings and equipment, would be effected above all by the retraining of departmental staff to prepare them for broader responsibilities and for the new framework within which they would operate. The initial retraining would be periodically repeated during the life of the project.

The above two interventions herein described are similar to the grazing and vaccination programs of the proposed Assalé-Serbewel livestock project. In fact, the Assalé-Serbewel programs provide a baseline from which new programs can be launched beyond the geographic confines of the Assalé-Serbewel project.

Working through the new forms of organization, the project would finance animal health and husbandry activities, the construction of selected watering points, and the provision of credit. The desired effect will be to increase calving rates from 60% to 62%,

reduce calf mortality by 20%, increase the culling rate by 47%, thus permitting an increase in the animal off-take rate from the present rate of 10.5% to 13.4% in 10 years. The size of the Sahelian herd would stabilize at about four million head--up from the present 3.4 million head.

At the same time, the project will provide funds for the training of both herders and public officials (financed by AID) and the improvement in slaughterhouse facilities (financed by the IBRD).

The major AID emphasis will be to develop facilities for the marketing and commercialization of the animal off-take of the Sahelian herds and the improvement of the cattle-raising environment in the south by the eradication of the tsetse fly. Eradication of the tsetse fly is required if cattle finishing is to become established in the south. An environmentally acceptable method of eradication will be adopted involving concentrated spraying with biodegradable chemicals.

All of the above activities are related to the IBRD project and AID's intervention therein. AID also proposes to make a major complementary effort in cattle fattening and feedlot operations. The World Bank's project will take over the existing experimental feedlot programs in northern Chad and unite them into one major program to provide economic and ecological baseline data for such operations. The feedlot in Bol will use irrigated forages, whereas the AID interventions in the south will use agricultural by-products and natural or improved pastures. The AID and World Bank interventions are thus complementary to each other and bring agricultural diversity in both northern and southern Chad. Because funding is always finite, IBRD and AID choose to work in separate regions to make the division of labor clear and to simplify manpower needs. It should be here noted that all of the proposed AID interventions are in line with the Club du Sahel livestock strategy and the project recommendations of its livestock working group.

Chad is now the leading exporter of cotton in West Africa. To date there have been, however, only weak attempts to use cottonseed and its products for feeding livestock. There are some farmers feeding cottonseed to a few cattle and their oxen. Such programs have been financed by FED and FAC. With greater emphasis of cotton production by using insecticides and fertilizers and by processing cottonseed into cottonseed cake, small farmers in reliable rainfall areas have an excellent opportunity to use a combination of improved ranges and grazing practices, pastures, and supplemental feeding to grow cattle for export markets as well as local consumption. It is timely for AID to develop a program which will add diversity to the farming practices south of the Sahelian zone.

In addition, Chad has a small but growing sugar industry and will have a new sugar processing plant near Sahr. It is proposed that the by-products of this industry be used in connection with other feed resources to support a feedlot or a farming feed program for producing market-size cattle.

It is proposed that AID provide finances for research and planning studies and follow-up actions for the development of farm feeding (embouche paysanne) and/or feedlot (embouche industrielle)enterprises in southern Chad. This proposal is in response to the GOC's request for AID assistance for such activities in support of its priority project for agriculture integration in the south. This project is receiving strong financial assistance from FED and FAC. The Ministry of Agriculture has a Bureau of Studies and Programs which will have the capability of carrying out such research and program development. AID assistance through the Chad range/livestock and agricultural institutional development projects will provide key personnel and operating funds to this office.

4. Relation of Project to the DAP

The level and degree of AID involvement in this project is in keeping with the guidance of the DAP, which notes that as a relatively new donor in an already crowded field, AID should adopt a strategy of carefully selecting projects where additional donor resources can have a significant impact on the performance of the sector and of complementing rather than duplicating or oversubscribing other donor and GOC activities.

5. AID Policy Issues

An overriding issue is the role AID should play in a project of this nature, in view of the heavy involvement of other donors in the livestock sector. The problems are very real and require the establishment of a new concept of grazing and herd management and the risk of overgrazing where calf crops are increased. The degree and nature of our involvement in new areas of the livestock sector beyond our present activities, directed mainly toward training, is an issue for discussion.

It is not anticipated that the project will address the AID concerns of women in development or present any human rights problems. The beneficiaries of the project will be the small farmers of southern Chad and the Sahelian herders who will jointly manage a pastoral unit. The pastoral units will be delineated by mutual agreement among villagers in the project zone, and in effect will give the pastoral group exclusive grazing and watering rights. Thus, an

incentive to manage the land will be present. Under the traditional system of open ranges there is no incentive for rational range management. While the number of primary beneficiaries is not available at this time, the project area includes a rural population of greater than two million.

6. Estimated Cost of the Project

The estimated cost of the project is $23 million, with the AID component totaling $7.4 million. Funding details follow: (NOTE: $100,000 for feasibility studies under growing and fattening operations is requested for FY 1978.)

Proposed Funding Levels for PID ($000)

	AID Interventions	
	Within IBRD Project[a/]	Complementary to IBRD Project[a/]
A. Country-wide programs		
1. Vaccines	936.6	
2. Supplemental feeds and minerals	490.8	
3. Training		
a) In-service training of livestock agents		200.0
b) Scholarships		200.0
c) Range management specialist		500.0
d) Massakory Center		500.0
e) Short-term consultants		150.0
f) Evaluation		75.0
B. Southern Chad		
1. Tsetse fly programs		
a) Cotton zone survey and evaluation	614.8	
b) Middle Chari		
1) Survey and program development	160.8	
2) Eradication program	1,897.6	

2. Growing and fattening operations

a) Feasibility studies and development of plans for feedlot fattening (embouche industrielle) and farm feeding (embouche paysanne)		100.0
b) Pilot programs		1,600.0
Subtotal	4,100.6	3,325.0
Total for AID financing:		7,425.6

a/ March 1977 prices, but without amounts for contingency.

7. Project Development

With respect to our proposed direct interventions within the World Bank project, IBRD has taken the lead in putting together the components of that project and will be primarily responsible for its implementation. Implementation details and schedules will not be known until the IBRD project paper is complete (estimated date August 1, 1977). The AID components for supplement feeds and minerals and tsetse fly surveys are considered crucial to the timing of the overall project. In order to permit the World Bank to move ahead with its project components, it needs a firm commitment from AID by September 15, 1977 that financing for the commodities and surveys will be forthcoming.

Because of the advanced state of the World Bank project documentation and the Bank's programming schedules, any delay in implementation schedules would seriously jeopardize execution of the overall project. To expedite the approval process for the AID supplement feeds and tsetse eradication interventions, we recommend that the World Bank documentation serve in place of the usual PP requirement, to be supplemented if and where necessary by additional AID prepared analysis.

For the two complementary AID interventions of training and pilot growing and fattening operations, we recommend that a feasibility study be undertaken before or in conjunction with preparation of a Project Paper for the latter activities. Project design for these would be carried out in collaboration with FED, FAC, and the GOC.

8. Initial Environmental Examination

Although the overall IBRD project will involve increasing the number of cattle in the project area and establishing watering points and cattle migration corridors, AID participation will not be involved in these interventions. While the details of these activities are not now available, it is reasonable to conclude that IBRD will address the relevant environmental effects. Inasmuch as AID will not make financial contributions to these interventions, we question the requirement and propriety for an AID Environmental Impact Statement for non-AID-financed activities. The tsetse fly eradication program and possibly also the feeding program in the South will require an Environmental Impact Statement. This statement will be included as an attachment to the PP. It is anticipated that AID/W assistance will be required to arrange for an IQC contract to prepare this statement.

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT IDENTIFICATION DOCUMENT FACESHEET

To Be Completed By Originating Office

1. TRANSACTION CODE: [A] A - Add, C - Change, D - Delete

PID

2. DOCUMENT CODE: 1

3. COUNTRY/ENTITY: CHAD

4. DOCUMENT REVISION NUMBER:

5. PROJECT NUMBER *(7 digits)*: 677-0030

6. BUREAU/OFFICE: A. Symbol: AFR; B. Code: 1

7. PROJECT TITLE *(maximum 40 characters)*: Rural Projects Fund

8. PROPOSED NEXT DOCUMENT: A. [3] (2 = PRP, 3 = PP); B. DATE (MM YY): 01 78

9. ESTIMATED FY OF AUTHORIZATION/OBLIGATION: a. INITIAL FY 79; b. FINAL FY 83

10. ESTIMATED COSTS ($000 or equivalent, $1 =)

FUNDING SOURCE	Life of Project
a. AID Appropriated	5000
b. OTHER U.S. 1.	
b. OTHER U.S. 2.	
c. Host Country	
d. Other Donor(s)	
TOTAL	5000

II. PROPOSED BUDGET AID APPROPRIATED FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	PRIMARY TECH. CODE C. Grant	PRIMARY TECH. CODE D. Loan	E. FIRST FY ____ F. Grant	E. FIRST FY ____ G. Loan	LIFE OF PROJECT H. Grant	LIFE OF PROJECT I. Loan
(1) SH	200	210		1000		5000	
(2)							
(3)							
(4)							
			TOTAL	1000		5000	

12. SECONDARY TECHNICAL CODES *(maximum six codes of three positions each)*: 290

13. SPECIAL CONCERNS CODES *(maximum six codes of four positions each)*: BR, BS, DEL

14. SECONDARY PURPOSE CODE:

15. PROJECT GOAL *(maximum 240 characters)*

Achieve national self-sufficiency in food crop production and improve the social and economic standards of Chadian small farmer.

16. PROJECT PURPOSE *(maximum 480 characters)*

To provide a quick and flexible mechanism for carrying out small-scale rural development activities aimed at producing income or ameliorating social and economic conditions of the Chadian rural poor.

17. PLANNING RESOURCE REQUIREMENTS *(staff/funds)*

Need of short-term consultants is possible, but it cannot be determined at this time.

18. ORIGINATING OFFICE CLEARANCE

Signature: John A. Lundgren

Title: Country Development Officer

Date Signed (MM DD YY): 06 28 77

19. Date Document Received in AID/W, or for AID/W Documents, Date of Distribution (MM DD YY):

AID 1330-2 (3-76)

PROJECT IDENTIFICATION DOCUMENT (PID)

Rural Projects Fund

1. Description of the Project

In Chad, there is a staggering need for rural development. Fortunately, Chad has development potential which lies primarily in agriculture. This potential can be exploited not only by large development projects, but also by numerous small-scale projects, such as the provision of low-lift pumps to villages and the construction of small irrigation canals and village-to-market roads. Moreover small projects can develop the potential that lies closer to the villages and can improve more directly the livelihood of the rural population.

A. Problem Addressed by Project

Unfortunately, in many cases, the U.S. Mission cannot respond positively and promptly to targets of opportunity to exploit the potential for rural development because of the present program system. This PID proposes testing of an innovative project concept.

Many projects proposed are too small to be eligible for approval and support through AID's regular complex and lengthy programming process. Moreover, the need is oftentimes urgent, and unless the response is prompt, the opportunity slips by.

This need was recognized in the concept and design of the Accelerated Impact Program. In reality, however, many months can elapse between the submission and approval of AIP project proposals, and the opportunity is lost. Moreover, certain needs and requests do not fall into the project categories or satisfy the criteria laid down in AIP instructions. In addition, since AIP funds are limited and noncountry specific, individual missions cannot be assured of the availability of these funds.

Thus, through the existing system, which includes the regular AID program, the AIP, and, in addition, the Ambassador's Special Fund, funds are not available, at least not in a timely way, for the Mission to seize targets of opportunity and to make positive and prompt replies to requests for assistance in the exploitation of Chad's development potential through small-scale rural projects.

B. Solution of a Similar Problem by the World Bank

A few years ago, the World Bank's International Development Association (IDA) was faced with a similar problem. It was receiving from the Government of Chad requests for loans to finance many relatively small-scale projects. IDA was unable to administer individually the evaluation, approval, and financing of numerous small-scale projects, and yet IDA saw the development value of these projects and wanted to seize this opportunity of helping the GOC to develop its economic potential.

IDA resolved this problem by grouping a number of small projects under one umbrella-type project, called the Rural Projects Fund, which would provide overall management for several subprojects. For the sake of brevity, this project will be henceforth identified in this document as IDA-RPF.

For the overall administration of this project, a Fund Management Unit (FMU) has been established consisting of a Chadian Fund Manager, an internationally recruited Deputy Fund Manager, and supporting staff. The Fund Manager reports to an Interministerial Governing Committee consisting of the Ministers or in their absence, the Directors General of the ministries which execute the subprojects and the Director of Planning as secretary.

The FMU is assisted by the Office of Foreign Aid Management, which is a section of the Directorate of Planning, in the overall financial control of all project activities. Funds are disbursed through an account at the Banque de Développement du Tchad (BDT) in the name of the RPF. Subproject implementation is undertaken by existing government agencies strengthened by technical assistance and additional local staff financed under the project.

After subprojects have been approved, the FMU monitors and evaluates the implementation. It reviews detailed subproject work programs, budget and progress reports, bidding procedures and contracts. In addition, the FMU evaluates proposals for future projects, submitted by various agencies and groups, selects the most appropriate and submits them to IDA for approval. This project, the first phase of which will last three years, has been budgeted for US$13.4 million of which IDA will provide twelve million, Fonds d'Aide et de Coopération (FAC) one million, and the beneficiaries US$400,000.

C. Project Purpose

As a solution of the problem raised above, the project that is being proposed here is modeled and to some extent grafted on the IDA-RPF. For clear identification purposes, it will be referred to henceforth as the AID-Rural Projects Fund or simply as AID-RPF.

It is conceived as an umbrella project for the management and execution of discrete, small-scale, rural development subprojects. Under this project, a general project agreement would be signed each year with the Government of Chad (GOC) guaranteeing up to one million dollars for subprojects approved by AID.

This project would be managed by the FMU in charge of IDA-RPF, strengthened by the full- or part-time services of a CDO staff member who would focus his attentinn on subprojects submitted for, or supported by, AID assistance. For these subprojects, the FMU would be responsible to the Interministerial Governing Board, just as it is for the subprojects of IDA-RPF, and would be assisted by the same Office of Foreign Aid Management. In short, the AID-RPF would utilize the management mechanism, system, and personnel of the IDA-RPF with the addition of a CDO staff member in the FMU who would ensure that AID regulations are followed.

Criteria for Subprojects

Although this project is being designed to grant the mission maximum flexibility to respond quickly and positively to targets of opportunity, the project must establish certain criteria to serve as guidelines for the agencies and groups that will conceive and design subprojects, as well as for the FMU which will evaluate and select project proposals. Each subproject will be evaluated in the light of the following criteria: (a) it benefits the rural poor as directly as possible, improving their crop production, income, and standard of living; (b) it protects and upgrades the environment; (c) it safeguards human rights; (d) it takes into account and develops the potential of women; (e) it provides employment outside of the principal cities to stem urban migration in search of income; (f) it provides incentive for and is supportive of local initiatives; (g) it is within the demonstrated capability of the executing agency or group to implement; (h) it is complementary to the other development activities in the area; and (i) it does not impose unbearable recurrent costs upon the Government. During the PP phase, the criteria will be refined for clear guidance in project design and evaluation while granting the mission maximum flexibility to respond to targets of opportunity in rural development.

Subproject Design

One of the responsibilities of the FMU even now under the IDA-RPF is to identify future subprojects for evaluation and approval. With the AID-RPF and a guarantee of one million dollars, the FMU will be in a strong position to encourage prefects, subprefects, and local chiefs to discuss with the rural population their needs, desires and projects in which the villagers are ready to commit local resources. In February, an Interministerial Committee was formed to plan rural development. It feels the necessity of discussing potential projects with the local leaders and villagers. The committee members are convinced, however, that they can get little cooperation from the local chiefs and population without assurance of funds.

Under the project management component of project 677-0005, Comprehensive Human Resources Development, training in project management will be provided at all levels. Project management is not, however, a science that can be learned completely in a lecture room; it is a skill that is mastered only by practice. Thus it is crucial that the trainees have the opportunity to design small projects and follow the execution of these projects by government agencies or other groups. The project proposed herein will afford trainees the opportunity to develop their management skills by participation in design and implementation of the subprojects.

Approval of Subprojects

After receiving project proposals from the rural population, government agencies, and other groups, the FMU will evaluate the plans prepared. For projects that require no research and no technical assistance outside of the CDO, and no 611A certification, it is proposed that authorization for approval remains with the Country Development Officer. Project proposals requiring a 611 certification would be referred to REDSO as well as all projects beyond the technical capability of the CDO. In those instances, projects could not be approved by the CDO without the concurrence of REDSO.

The CDO will, additionally, undertake an Initial Environmental Examination as a basis for making a Threshold Decision as to the need for an Environmental Assessment or an Environmental Impact Statement. In the event that either of these is required, the CDO will, as needed, look to REDSO for assistance.

Letter of Implementation

After approval of a subproject, a separate Letter of Implementation would be signed by the CDO, the FMU, the executing agency, and the

representative of the Banque de Développement du Tchad. Only through this Letter of Implementation would a definite amount of money be obligated. This system of obligating monies by separate Letters of Implementation under a general grant agreement is being utilized at the present time for the Accelerated Impact Program. The only difference will be that the Chief of the FMU will sign the Letter of Implementation rather than the Director of Planning. In every other aspect, the Letter of Implementation for the AID-RPF subprojects will contain the same stipulation and require the same reports as the Letters of Implementation now in force for the Accelerated Impact Program.

D. Project Outputs

In this project, the FMU would evaluate subproject proposals and, after their approval, would monitor their implementation by existing government agencies. At this time, it is impossible to determine the number, nature, and outputs of these rural development subprojects with any specificity. As mentioned above, however, they will be small-scale projects such as the development of one or several irrigated perimeters, land improvement and water control works in bottomlands, irrigation canals, small dams, etc.

E. Project Inputs

For this project, a member of the CDO staff will assist the FMU for all subprojects to be submitted to or approved by the CDO. Since only small-scale projects are envisioned, the need of purchasing heavy equipment and vehicles may never arise. The commodities will be mostly construction material, pumps, hand tools, etc. Whenever needed, the services of short-term consultants will be requested whether from the CDO, REDSO, or elsewhere. It seems unlikely, however, that long-term technical assistance will be required for this project.

F. Major Assumptions

The most basic assumption is that the FMU newly organized in the Directorate of Plan for IDA-RFP will succeed in its role of monitoring projects executed by various ministries. There is, however, a widely felt need both in the Ministry of Planning and in the executing agencies for improvement of work planning, monitoring and preparation of small rural projects. During the PP phase, the efficiency of the FMU can be verified.

Secondly, it must be assumed that IDA will not stop the RFP after the end of the first phase in December 1979. At the moment, IDA

is already planning for the second phase by providing funds so that the FMU can prepare and evaluate proposals for subprojects for the second phase. In the event that IDA would not finance the second phase, however, this project would be amended to continue the funding of the FMU which would consist only of a Chadian Fund Manager and a member of the CDO staff.

G. Alternative Ways of Structuring the Project

There are three alternatives: first, the regular AID program process; secondly, the Accelerated Impact Program; and thirdly, the Ambassador's Special Fund. While all three programs have their purpose and value, they have been rejected in the beginning of this document as alternatives of the AID-RPF project because with them alone the mission cannot give a prompt, positive response to many targets of opportunity and project proposals. Some of these are too small and urgent for the AID's regular program; others are too big for the Ambassador's Special Fund, and still others fall outside the limitations and criteria set down for the AIP and the Ambassador's Special Fund.

2. Relation of the Project to DAP and to Host Country Priorities and to Other Donor Activities

The FY 1975 DAP describes the scarce natural resources of Chad, its harsh climate and limited social, economic infrastructure and, as a consequence, Chad's great need for rural development. The DAP recognizes the development potential in Chad especially in agriculture and livestock. On page A-4, it specifically suggests the development of small irrigation perimeters and the land improvement and water control works in bottomlands. The project being proposed here intends to carry out those very projects and others like them. The DAP then suggests that AID support small-scale pilot projects. In this context the DAP mentions the AIP; but its recommendation could be carried out as well and surely more positively and promptly through the AID-RPF.

The participation of the host government in the AID-RFP will be similar to its role in the IDA-RFP. The AID-RFP will be administered by the Fund Management Unit responsible to the Interministerial Governing Board. The existing Office of Foreign Aid Management will assist the Chadian Fund Manager in the overall financial control. In addition, all subprojects will be implemented by government agencies. In short, the host government will provide personnel, buildings, and other resources.

As explained above, the AID-RFP will be grafted on the Rural Project Fund to which IDA has contributed US$12 million and FAC one million dollars. In another Rural Projects Fund which IDA is considering for the Sahelian Zone, the Canadian International Development Agency (CIDA) is planning to contribute.

3. Discussion of AID Policy Issues Including Beneficiaries, Environment, Human Rights and Role of Women

One direct beneficiary of this proposed project would be the Fund Management Unit which would be strengthened by a member of the CDO staff. The direct beneficiaries of the various subprojects cannot be determined before the subprojects themselves have been identified; however, since small projects of rural development are being considered especially in crop protection, the direct beneficiaries will be the rural poor.

The Rural Projects Fund has been conceived as a mechanism for the management of small rural development projects, all or some of which can be continued or replicated year after year over an ever-expanding area until the full potential has been exploited.

As mentioned above, each project proposal will be evaluated in the light of set criteria in order to ensure that the subproject protects and improves the environment, safeguards human rights, and takes into account the role of women.

A fundamental issue concerning the basic concept underlying the project is the question of the appropriate mechanism for subproject approval. Delegating to the field authority to approve $1 million annually for subprojects seems to be in line with the recent decision of AID Administrator Gilligan communicated by State telegram 136885 dated June 19, 1977, namely that "decision-making on both project development and implementation should be shifted to a larger extent from AID's central staff offices to the geographic bureaus and in turn from the geographic bureaus to the field missions." Moreover, this project is in the spirit of section G of recent State telegram 141397.

4. Estimated Cost of Project and Estimated Cost to AID Including Dollar and Local Currency Costs

The project proposes to obligate up to one million dollars annually for a period of five years for small-scale rural development projects. No funds are budgeted for the salary and support of the CDO staff member who will work full- or part-time in the FMU. Thus all the budgeted funds are reserved for subproject expenditures, the exact details of which cannot be determined until specific subprojects are approved.

The inputs described earlier require mostly local currency. At this moment, the only dollar cost that seems certain is for part-time consulting services.

5. Development of the Project

We question whether a full-blown Project Paper will be required to complete documentation of this project. We believe that the PP should provide a full discussion of the basic project concept, i.e. approval of $1 million per year for rural development sub-projects which are designed and approved in the field. We feel, however, that much of the PP analytical and other sections would not be applicable or appropriate. If the idea of a simplified PP were to be accepted, CDO could complete such a document no later than January 1978.

6. Environmental Examination

See Section B., Approval of Subprojects.

PL-480 TITLE II NARRATIVE

CARE-CHAD estimates a need for 2,000 metric tons of PL-480 Title II food commodities per year during the five-year period 1979 through 1983 for its Food-for-Work (FFW) program. Specific foods and quantities are as follows:

Soy-fortified bulgur (SFB).....38,169 sacks of 22.7 kgs each (50 lbs)
Soy-fortified cornmeal (SFC)..38,169 sacks of 22.7 kgs each (50 lbs)
Peanut oil.....76,338 tins of 3.5 kgs each (7.7 lbs)

The ration of food for work is calculated on a monthly basis with the monthly ration for one worker and four dependents being two sacks (50 lbs - 22.7 kgs) of soy-fortified bulgur or two sacks of soy-fortified cornmeal and two tins of peanut oil. CARE will program its (FFW) activities throughout the entire calendar year and will work with an average of 3,180 workers per month, making a total of not more than 38,169 workers and 190,000 dependents throughout the year. The maximum participation figures are given as multiple distributions and are envisaged as depending upon the needs of a specific FFW activity. This ration corresponds to the guidlines set out in STATE 030851 regarding caloric intake per worker and dependents in FFW projects:

CATEGORY	CALORIES/DAILY PROVIDED BY PL-480 TITLE II
Worker	2,500 calories
Wife	1,300 calories
3rd Child	700 calories
1st Child	1,100 calories
Total Family Caloric Supplement Suggested Per Day	6,300 calories
Total Family Caloric Supplement Per Month	189,000 calories

CARE will undertake to distribute the above-mentioned PL-480 supplies in the USAID-designated rural development priority areas of Chad. The specific FFW projects will be related to both agricultural and nonagricultural efforts.

The Food-for-Work activities will be divided into three main categories:

(A) Projects directly related to increases in food production, such as seed multiplication, pilot gardens, construction of irrigation canals, provision of basic farm tools, and insect removal by hand.

(B) Projects which are indirectly related to food production such as the construction or improvement of farm-to-market roads, the improvement of village market areas, the construction of food storage and drying areas, and the planting of windbreaks.

(C) Projects which enhance the environment in which the farmer must work, such as health improvement, establishment of adult education classes, construction of schools, home improvement, latrine construction, and removal of stagnant waters.

PL-480 Title II Multiyear Statistical Table

1. 1979 PL-480 Title II Program: Food for Work

   a. Country: Chad

   b. Sponsor's Name: CARE

   c. Total Recipients: 228,170 (workers and dependents)

   d. Number of Recipients by Commodity:

	COMMODITY	KGS	DOLLARS
(1) 114,085	SFB	866.4	176.5
(2) 114,085	SFC	866.4	176.5
(3) 228,169	Peanut Oil	267.2	288.0
Total		2,000.0	636.1

2. 1980 PL-480 Title II Program: Food for Work

   a. Country: CHAD

   b. Sponsor's Name: CARE

   c. Total Recipients: 228,170 (workers and dependents)

   d. Number of Recipients by Commodity:

	COMMODITY	KGS	DOLLARS
(1) 114,085	SFB	866.4	176.5
(2) 114,085	SFC	866.4	176.5
(3) 228,169	Peanut Oil	267.2	288.0
Total		2,000.0	636.1

3. 1981 PL-480 Title II Program: Food for Work

   a. Country: CHAD

   b. Sponsor's Name: CARE

   c. Total Recipients: 228,170 (workers and dependents)

   d. Number of Recipients by Commodity:

	COMMODITY	KGS	DOLLARS
(1) 114,085	SFB	866.4	176.5
(2) 114,085	SFC	866.4	176.5
(3) 228,169	Peanut Oil	267.2	288.0
Total		2,000.0	636.1

4. 1982 PL-480 Title II Program: Food for Work

   a. Country: CHAD

   b. Name of Sponsor: CARE

   c. Total Recipients: 228,170 (workers and dependents)

   d. Number of Recipients by Commodity:

	COMMODITY	KGS	DOLLARS
(1) 114,085	SFB	866.4	176.5
(2) 114,085	SFC	866.4	176.5
(3) 228,169	Peanut Oil	267.2	288.0
Total		2,000.0	636.1

5. 1983 PL-480 Title II Program: Food for Work

a. Country: CHAD

b. Sponsor's Name: CARE

c. Total Recipients: 228,170 (workers and dependents)

d. Number of Recipients by Commodity:

	COMMODITY	KGS	DOLLARS
(1) 114,085	SFB	866.4	176.5
(2) 114,085	SFC	866.4	176.5
(3) 228,169	Peanut Oil	267.2	288.0
Total		2,000.0	636.1

CHAD

Mission Evaluation Schedule for FY 1978 and FY 1979

Date: July 1, 1977

Project Title and Number	Last Evaluation Submission Date	No. of Last PAR	Date of Submission FY 78/79 Evaluation	Period Covered Next Evaluation	Remarks
Chad Range and Livestock Development 677-0201	N/A	N/A	9/78	7/75-11/78	Major portion of project not initiated till 1977.
Lake Chad Irrigated Agriculture 677-0001	N/A	N/A	11/78	12/77-11/78	Major portion of project not initiated till 1978.
Rural Health Planning and Management 677-0004	N/A	N/A	6/78	8/77-2/79	
Comprehensive Human Resource Development 677-0005	N/A	N/A	6/78	9/77-8/78	FY 77 start.
Agricultural Institutional Development 677-0002	N/A	N/A	7/78	10/77-3/79	FY 78 start.
National Fisheries 677-0012	N/A	N/A	Undetermined	N/A	Initial FY 78 monies are for studies.
Crop Production Research 677-0014	N/A	N/A	6/79	12/77-8/78	FY 78 start.
Bongor Irrigated Crop Production 677-0016	N/A	N/A	5/79	2/78-5/79	FY 78 start.
Rural Sanitary Water 677-0022	N/A	N/A	9/78	10/77-1/79	FY 78 start.
Food Delivery and Rural Works (PVO) 677-0023	N/A	N/A	1/79	10/77-1/79	FY 78 start.
Rural Pilot Workshops (PVO) 677-0024	N/A	N/A	7/79	2/78-7/79	FY 78 start.
Rural Communications Training (PVO) 677-0025	N/A	N/A	5/79	6/78-5/79	FY 78 start.
Lake Chad Livestock and Mixed Agriculture 627-0130	N/A	N/A	9/78	9/77-9/78	FY 78 start.

ENVIRONMENTAL STRATEGY PROPOSAL

Village-Level Ecology: A Proposal for Environmental Interventions

This paper is not a description of a project submitted for the approval process; rather it is a discussion of the conceptual framework and methodology appropriate to a national-level intervention within the context of region-wide Club des Amis du Sahel project. With this orientation in mind, no funding parameters are provided in this paper.

A. Some General Comments on Environmental Interventions in the Sahel

There is general acceptance of the idea that the Sahel is in a condition of environmental stress, that the damages of the recent drought will not be completely ameliorated by a succession of years of normal rainfall and that the potential of existing resources to maintain human populations at reasonable living standards is, in fact, decreasing. Evidence to support these beliefs is available from both scientific and casual observations:

1. Increasing dune formation in the northern Sahel.

2. Continued deterioration of the quality and amount of rangeland grasses through overgrazing.

3. Continued deterioration of soils of both open range and cultivated areas.

4. Increasing shortage of wood resources for both energy and construction.

The implications of the generalized deterioration suggest the necessity of major donor efforts directed at the modes interaction between Sahelian populations and their environment.

There remains, however, the problem of designing environmental interventions which are technically, programmatically and politically effective. AID, unfortunately, has little experience in environmentally-oriented projects. Those efforts at environmental amelioration which AID has carried out have, with very few exceptions, been undertaken within the framework of traditional economic development projects. This is neither surprising nor particularly bad. It may not, however, be the most effective way of getting at environmental problems. For

instance, while a livestock development project may correctly suggest the need for range management which in turn suggests possibilities in village-level production of range grasses, involvement of a village in such a scheme will not satisfy other, equally important environmental needs at the village level such as wood-fuel energy or crop field degradation. It is proposed then, that ecological interventions, undertaken for their own sake (or more accurately, in recognition of the fact that natural resources are not "free goods" and that environmental interventions may be economically justifiable in "real", and monetary, if difficult to measure, terms) be designed in a holistic manner. There is no need to limit project to one type of intervention such as Acacia albida forestation, or windbreaks, and projects should ideally incorporate whatever is necessary and available to overcome a diversity of environmental constraints within a specific target area.

A second point which should be considered is the need, at least in the Sahel, for a somewhat more specific definition of the term "ecology". It will have to be assumed, as an article of faith, that the current process of resource deterioration in the Sahel is only partially due to the weather: the climate is not the major cause of the level of environmental degradation which has occurred. The degradation is very much a direct or indirect (e.g., livestock) result of human impact. The ecology which must be considered therefore is human ecology--those points at which human populations are interacting with their environments. A focus on human ecology suggests then that massive reforestation, the "green-belt" concept, might not be the most appropriate strategy for environmental regeneration, even if such strategies were feasible in terms of the amount of funding required. Donor efforts should be directed at a village-level ("village" in this instance referring to the most useful aggregate of rural individuals susceptible of working in an organized way with government agencies) spread of activities, thus providing the benefits of interventions most immediately to human populations.

B. The Problem to be Addressed

The potential project would make interventions in the environment at points where the process of environmental degradation affects and is affected by human populations. As suggested by the foregoing discussion these interventions would be multifaceted, directing themselves at a variety of specific environmental problems which would include but not be limited to desertification (dune formation), wood fuel shortages,

range grass degradation and soil deterioration and erosion. A concomitant purpose of such a project would be to establish behavior patterns (largely through education) in rural populations to enable them to make optimum utilization of natural resources without their depletion.

C. Description of the Project

Such a project would establish within the Government of Chad (GOC), probably the Directorate of Waters and Forests, the capability to determine and establish optimum land-use patterns at village levels throughout Chad, and by means of village-wide education and rural work programs engage village-level populations in activities directed at amelioration and management of local environmental conditions. Specific activities to be undertaken would be determined by local environmental conditions; however, it is expected that they would generally include:

1. Reforestation for windbreaks, forest reserve areas, for dune control and crop field protection.

2. Establishment of tree stands for firewood and construction material production. This would be for both local use and cash cropping.

3. Establishment of crop field-compatible tree species (Acacia albida, for instance) for field protection and soil enrichment.

4. Establishment of village-level nurseries for seedling production (grasses, shrubs and trees).

5. Establishment of live fencing for small ruminant management.

6. Acceptance and operation of range management systems.

7. Construction of firebreaks.

8. Reseeding of pasture lands.

Project inputs would include short and long-term technical assistance to the Directorate of Waters and Forests for the development of valid land-use patterns and project management. The vast bulk of inputs, however, would be in the form of operational expenses to cover costs of seed bed development, new personnel, tools, vehicles and a rural

works plan. The amounts of funds available for operating expenses and commodities would directly determine the number of villages participating in the scheme. There would also be a significant requirement for Peace Corps participation at the level of the prefecture. Given the enormity of the efforts which might be required, there would be ample opportunity for participation by voluntary agencies, either on a functional or a geographic basis, within the scope of a national program.

Cost per participating village is extremely difficult to gauge. Experience with the CARE Acacia Albida Expansion Project (which includes some, but not all of the types of inputs envisioned in this proposal) suggests a cost per tree of $1.14 and a direct per beneficiary cost (farmers and dependents) of $111.24. More useful cost indices would result from further project design work.

D. Assumptions

1. The prime assumption in this paper is that the environmental deterioration which is evident in the Sahelian region is to a very large extent due to the human impact on the environment, and that climatological fluctuations are of lesser importance.

2. An equally important assumption is that comparatively low-cost changes in the human impact on the environment cannot only halt existing deterioration, but generate amelioration sufficient to improve the living standards of existing populations significantly.

E. Feasibility Issues

1. It is supposed that cadastral issues have direct and serious implications for popular interaction with the environment. Willingness to conserve or improve crop and rangeland will be a direct function of the use-right patterns operant for an individual, family unit or population. While cadastral conditions may be expected to vary considerably in relation to cropland due to the variety of social and political factors operating, with rangeland the cadastral problems will tend to fall into rather more familiar patterns of controversy arising from possible multiple use by farmers, transhumants and nomads. In any case, intereference with established patterns, however necessary such interference may be to engender conservation and improvement practices, may present serious political considerations to the government. Government action in this realm will almost certainly require some legal and political changes. It is believed, however, that such changes would certainly not constitute a full-scale land reform effort.

2. Closely related to the above is the issue of the social receptivity of rural populations to taking a fresh view of their own relationship to their environment. Local social patterns will affect, not only local land-use patterns, but willingness to recognize that natural resources are not free or public goods and are not costless in real terms. While externally financed rural works and education programs to support environmental interventions will be necessary as an initial step, only the willingness of rural populations to recognize the benefits inherent to themselves will cause environmental amelioration programs to be effective in the long run.

The two feasibility issues noted above are not believed to be in any way insurmountable. They are pointed out as important areas to be investigated before undertaking a project of great magnitude. It should be noted that two years' experience with the CARE Acacia Albida Expansion OPG has highlighted no particular problems related to the feasibility issues discussed. In fact, village level acceptance of this project has been virtually overwhelming. Certainly the CARE project has generated information regarding social and cadastral conditions in Chad which will be useful to analyze. Furthermore, the Acacia Albida Expansion OPG has provided a demonstration of a successful organizational structure and delivery system (along with considerable technical information) which would be applied in the design of the proposed project.

F. Development of the Project

Prior to further development of a project, the following studies should be undertaken:

1. Cadastral survey - A cadastral survey of land-use right patterns in both crop and range areas should be undertaken. The study would highlight areas in which existing practices would mitigate against the success of a project, and delineate potential actions at a governmental or project level necessary to overcome any constraints.

2. Social analysis - A social analysis, preferably carried out in conjunction with the cadastral survey, would highlight the potential social impacts of the project. The analysis would further generate implications for the development of an educational program for rural consumption.

A- 6

Subsequent to these studies (estimated cost $60,000), project design could be completed with individuals having expertise in forestry/ land use, rural economics, and project design. It is estimated that such a project could be ready for funding within six months of the completion of the cadastral and social soundness studies.

APPENDIX B

Road Construction as a Regional Multidonor Effort: a potential Club du Sahel intervention

The Club du Sahel has considered the need for a definitive study of the regional transportation system in the Sahel to identify and to determine the priorities of the major trunk routes and the most economically justifiable feeder road extensions required for systematic development of the region. It is anticipated that such studies and any follow-up action would be subject to the interest of an ad hoc international consortium of donors.

While planning has proceeded at the broad level of the Club, continuous joint study and collaborative planning between the GOC and the CDO have identified five important road links that are considered essential for economic development in Chad. These road links are presented below in the order of their relative priority as perceived by the Government of Chad. These segments should be considered in any future study of the regional transportation system. Simultaneously, AID should undertake discussions with other donors to identify priority construction projects and to conduct the joint studies necessary to advance selected activities to the project stage. CDO has not submitted PID documentation for any of these potential projects inasmuch as the financial magnitude for implementation of any one of them is such as to preclude an individual AID venture and the appropriate anticipatory work with other donors will require a period of time prior to elaboration of a solid project proposal. Likewise, no funding request for such activities is contained in this ABS. It is anticipated that funding for initial studies required through FY 1979 can be provided from regionally allocated study monies.

First Priority: The Moundou-Gidjiba route will significantly shorten the distance from the agriculturally productive regions of southern Chad to the important railhead at the N'Gaoundere in Cameroon. The proposed route of approximately 500 kilometers is estimated to cost approximately 13 billion CFA ($ 52 million), which the European Development Fund at one time had agreed to fund in its entirety. Subsequent changes in FED regional fund levels have now resulted in a virtual default on this committment.

A study of the proposed route funded by FED was made in April 1974. FED has now pledged only 2.8 billion CFA as its contribution toward construction of the Chadian portion of the route, i.e., Moundou to the border of Cameroon. The Cameroonian Government is seeking additional funds for the remainder of the road to link the border with Gidjiba. Other donors so far invited to consider funding this road are AID, Arab Development Bank and Canada. The GOC has enlisted the help of EEC Commissioner, Cheysson, in interesting other donors in investing in the road.

Second Priority: The Bongor-Lai road. The possibility exists, and, indeed, the geography of southern Chad may dictate, that the interior road network between Bongor and Lai, for example, might combine the characteristics of a water-control system with those of the communications system. A series of dike roads that prevent flooding, conserve water and provide all-weather access from farm communities to markets and centers of governmental services may be the most effective means of catalyzing rural development.

The possibility of combining needed road transportation links with water control measures for agriculture interventions should be carefully considered and costed out by donor study teams.

The Bongor-Lai road will open up reliable all-season traffic into one of the relatively more densely populated and agriculturally fertile areas of southern Chad. The Logone river seasonally inundates and isolates an area which represents a potential agricultural base of fundamental importance for the achievement of food production goals.

A study of this route financed by the European Development Fund (FED), was made in 1974 and the Fund subscribed 2 billion CFA as its contribution toward construction of the road. FAC has offered a contribution of 2 billion CFA to be disbursed in annual increments of 500 million CFA for four years. In May 1977, the Directorate of the Plan approached USAID on this subject. Chadian approaches have been made also to Canada, Saudi Arabia and the Islamic Development Bank as well as to the World Bank. The Bank has responded that is would be interested in this project only within the context of broad-based development of the Logone Valley. The Government of Chad continues

to hope for USAID funding of both the final design study and the actual construction of the road. The current estimate of a total cost approximating $60 million does not include the cost of related agriculture works which would be an obligatory adjunct to the raod construction. The road itself would actually be based on a dike that could serve the dual function of controlling river waters and providing sufficient elevation to the road so as to assure year-round use. It is anticipated that agriculture-useful water control features would be built into the dike.

Third Priority: The Djermaya-Djimtillo road will provide immediate access to a segment of the southeast Lake Chad arc area where significant developmental activities in irrigated agriculture are under way and are planned for expansion. The African Development Bank (ADB) has financed with an AID grant a study of this route in the context of potential intensive development of the area lying roughly between Lake Chad and N'Djamena. The contract for study has been awarded, but actual work has not yet gotten under way. This route will become more critically needed when construction is begun on the proposed petroleum refinery at N'Djamena to process oil from the Kanem. A preliminary study by a French consultant company funded by IDA was completed in 1972. The African Development Bank will undoubtedly be in the forefront for the search for organizing donor support for funding the construction of this road, which relates closely to AID-funded projects on both the northern and southern sides of the lake. The road would be a necessary element of an integrated exploitation of the economic potential of the lake as well as the area under study.

Fourth Priority: Massaguet-Bol-Mao road running generally along the path of the southeast lake arc would provide all-season access to the polder area of Lake Chad where development work in irrigated agriculture is planned for expansion and intensification. The route would constitute a farm-to-market route for commercial scale, truck vegetables and grain crops for urban markets in N'Djamena and the south and to rural markets elsewhere in the Sahel. The path of the road would run from Massaguet through Massakory to Ngouri, then with separate legs west to Bol and northeast to Mao.

The priority of this road will grow as developmental ventures based on Lake Chad expand, and as movement of petroleum resources from Kanem across Lake Chad to the planned refinery at N'Djamena increases.

No detailed study of this route is known to CDO. A portion of the proposed Massaguet-Bol-Mao road was included in the IBRD studies undertaken, for CILSS, of a trans-Sahelian road network. As far as CDO knows, that study, finished in the last quarter of 1974, has never been released by the contractor. A new feasibility study of this road is

needed and will possibly be funded as a portion of the IBRD/AID road maintenance project previously mentioned. The economics of this road should be studied in relationship to the Djermaya-Djimtilo road and in connection with barge transport across the lake to Bol.

Fifth Priority: The Gounou-Gaya-to-Kelo road will be an essential link between the proposed construction of an oil mill to extract oil from cottonseed in the Gounou-Gaya area and soap factory to be located at Garoua in the Cameroon. The cost is estimated at approximately $ 4 million, the estimated productive capacity of the mill route would be between three and five thousand metric tons of oil per year. The road would also be important in the export of cotton and finished beef. The IBRD has studied this proposal but has not made a final determination regarding it.

The original French study for this road anticipated a large expansion of inundated rice cultivation and the construction of the soap factory mentioned above, both of which have suffered delays. The socio-economic aspects of the French study will need reconfirmation.

APPENDIX C

PROPOSED CHAD ELEMENT TO CLUB DU SAHEL HEALTH PROGRAM

A. Description of the Project

1. Identification of the Problem

Chad shares with its fellow Sahelian countries the development--defeating patterns of malnutrition, malaria, parasitic diseases, and infant mortality. Reinforced by the drought, which still continues in large areas of the country, these chronic conditions are an important obstacle to Chad's recovery.

Under the present health services system, thes situation seems unlikely to change very soon. In spite of the priority given to rural health by the new government, the system still shows the effect of its progressive starvation of funds during the decade between 1965 and 1975. The rural health system is burdened by the prevalence of inadequately trained nurses, dilapidated buildings and equipment, chronic shortages of medicines, a low level of supervisory capacity and Chad's overall lack of money.

During the last two years, efforts have been made to bring a more preventive orientation to the health system through a revised nursing school curriculum, recycling courses for the older nurses, and a stronger sanitation agent program. However, the government realizes that it is only through preventive health efforts in such areas as maternal-child health, clean water supplies, vaccinations, and better family health habits that health levels will effectively be raised. Making these efforts accessible to the isolated rural farmer and herder families will entail major modifications in the existing hospital-based system. Preventive practices promoted by fellow villagers--the village health worker, the village midwife, and the town elders of the village health committee--have the greatest chance of making the biggest change in the health of the community.

Since 1975, the government has made it clear in a number of statements that the cornerstone of its health policy is to extend preventive and curative services to rural areas and to encourage the people to take more responsibility for their own health. In response, there have been a number of modest village health projects started, sometimes funded through organizations like the Red Cross and the Ecumenical Council of Churches, but more often begun on the initiative of a doctor or a nurse assigned to a public or private rural medical facility. The government believes that local responsibility for training should be encouraged in order to ensure the most appropriate program focus and regular supervision of village agents.

However, large areas of the country have not been covered by these efforts and the existing projects have not produced sufficient impact to stimulate the development of national policies to bring forth the support and continuity required to firmly establish this new mode of rural health delivery. Two important deficiencies are in the drug distribution system and in the referral/supervision linkages between levels in the rural health system. These problems are the principal reasons for current disruptions in rural services. The village health projects already begun have not had to confront these problems because their small size has permitted either ad hoc government funding or provision of supplies from private organizations.

2. Purpose to be Achieved

The purpose of the project is to institute the basic elements of a low-cost rural health delivery system at the Ministry of Health and to establish a complete working system in the southwest region of the country. With national policies well-developed in such areas as nurse and village agent role definition, medicine and supply distribution, and referral/supervision system procedures, the rural health program can be spread more quickly across the whole country.

The new rural health system will have two innovative characteristics. It will have stronger orientation toward preventive services and it will offer preventive and primary curative services for the first time to the bulk of the rural people who live outside the major towns. By the end of the project, each interested village with a population of 500 or more located within 25 kilometers of a medical facility in the region will have a village health program.

The essential elements of the program will be the organization of a village health committee of village elders, the selection of two village agents: a village health worker (VHW) and a traditional midwife which the village will be willing to support, and a small community pharmacy containing a few simple medicines which will be restocked through revenues from village sales. The village programs will emphasize preventive programs: the midwife will be responsible for MCH programs and the VHW will take charge of environmental matters such as well-maintenance while also offering primary care such as first aid and malaria and diarrhea treatment. All complicated cases will be referred to the supervisory nurse at the nearest medical facility.

The supervising nurse will have trained the village health agents and will be responsible for visiting each village on a regular basis. He will have attended further recycling training courses in order to acquire supervisory skills, training techniques, and a

stronger preventive orientation. Each medical facility will be repaired and re-equipped and will offer MCH other preventive services. Sometimes in the future, both dispensary and village programs will have family planning components; however the GOC has not yet taken the decision to support national family planning programs. The acceptance of the GOC of the need for these programs may require long-time efforts. The Rural Health Planning and Management project (677-0004) will be gathering demographic data to persuade the government to change this policy but such a decision will probably not occur before the end of this project.

At the national level, the project will be working with the Division of Studies and Professional Training which is also the base of operations for the Rural Health Planning and Management project. Both this project and the health planning project will be working to find a solution for the drug and medical supply distribution problems. One element of the solution will be to establish distributinn points for medicines in each of the prefecture capitals to avoid delivery disruption while the roads are im passable during three to six months of the year.

In October 1976, the GOC requested that the rural health system first be established in the southwest region. This area includes the river basin of the two Logones and the remainder of the prefecture of Mayo-Kebbi. This area of 1.5 million small farmers shares many of the same heavy problems as the rest of Chad: poverty; high prevalence of malaria, venereal disease, schistosomiasis, dysentery and other parasitic diseases; high infant mortality and under-nutrition, poor roads, and disruptions in public health services. However, it also has potential for economic development and will be the site of a number of projects funded through the SDP. Raising the economic status of the area will provide a better financial and nutritional basis for the long-term support of a village health system. It also has a fairly extensive and well-distributed health infrastructure consisting of a hospital and over 45 private and public medical centers and dispensaries. This should somewhat reduce the problems of reinforcing the referral/supervision system between the village and its supervising medical facility and between the dispensary and the medical center or sector office.

3. Components to be financed under the Project

a. Expatriate technical personnel (20 p.y.)

1) A physician with experience in rural health and paramedic programs to act as chief of party. He or she will provide liaison with the Ministry of Health and will direct and assist in training activities.

2) A paramedic education specialist to develop training materials, assist in training of nurses, design village agent recycling programs and assist in the supervision of village agent training programs by rural nurses.

3) A management/logistic specialist who will assist in the development of systems to distribute medicines and supplies to villages and to supervise village programs, upgrade management skills of nurses, and develop simple record-keeping system for the village programs.

4) Local-hire secretary.

b. Chadian contribution for five-year life of project

1) 15 p.y. of counterpart personnel to assist in and eventually take full responsibility for village training program supervision and nurse recycling courses.

2) 2 p.y.of assistance by nurses, physicians and social aides to formulate and refine village agent and nurse training curriculum.

3) 425 p.y. of work by nursing personnel to train and supervise village agents (VHWs and midwives)

4) Facilities for training and recycling of village agents and nurses.

c. Commodities

1) training equipment

2) 400 village health agent kits

3) 400 village midwife kits

4) 400 bicycles for VHWs

5) 85 mobylettes for nurses for use in supervisory tours of villages

6) 8 four-wheel vehicles, with spare parts, maintenance, and gasoline (4 vehicles to be bought in first year of project with four replacements purchased in third year of project.)

7) Repairs - re-equipment of 85 public medical facilities in the region.

8) Construction of four regional pharmaceutical warehouses for the improvement of the drug distribution system.

d. Other Costs

1) Transportation and maintenance costs for nurse and village agent training.

4. Outputs projected

a. 85 nurses upgraded by retraining to act as trainers and supervisors of village agents (VHWs and midwives)

b. 85 medical facilities repaired and re-equipped to serve as referral, training, recycling centers for VHW and midwives and as the source of MCH programs, other preventive programs, and curative services for the area surrounding the facility.

c. 400 volunteer village health workers trained to offer simple primary care, promote environmental health projects in the village, and operate a small village pharmacy.

d. 400 volunteer village midwives retrained to employ more sanitary delivery techniques and to expand their roles to include prenatal and child health services.

e. 400 village pharmacies stocked with simple medicines such as nivaquine (malaria), ganidan (diarrhea), eye drops, iodine, and bandages. The first stock will be furnished by the project; subsequent restocking will be financed through revenues from village sales.

f. 400 village health committees composed of village elders to provide local control of village health program and to assist in the organization of environmental activities.

g. Drug and supply distribution systems in place with well-established procedures for supplying the orders from village pharmacies in a timely manner.

h. Referral/supervision system in place with referral criteria and supervision schedule between village and health facility and between dispensary and medical center or sector well understood and functioning.

i. Training and recycling curriculum prepared, tested and put in use for training and recycling of VHWs, midwives and nurses.

5. Proposed Project Strategy

Once the expatriate technicians have arrived,the commodities have been ordered and the Chadian counterparts have joined the team, work will begin for preparing the training curriculum for VHWs, midwives, and nurses. To assist the team in this effort, about ten senior nurses from rural medical centers, the two Chadian physicians who have been responsible for training the 15 to 20 agents for the Red Cross and the Ecumenical Council of Churches projects, the Chadian-WHO personnel experienced in organizing village health committees, and three representatives from the MCH division of the Social Affairs Division of the Ministry of Health will be called together to work on curriculum development.

After the curriculum has been judged to be suited to Chadian disease problems and belief systems and to be line with ministerial policy, the first group of rural nurses will be assembled for training in management skills, training techniques, and preventive services. Upon completion, they will return to their posts, and set about organizing village health committees in interested villages that fulfill the ministry's size and location requirements. The committees will see to the construction of a small building to be used for the village health program. The committee will also select a VHW and midwife from the village for training and agree to support them either with in kind payments of food or with assistance in the agents' fields. The VHW and midwife will be trained by the nurse at the nearest medical facility under the initial supervision of a Chadian or expatriate member of the project team. After training is completed, the VHW and midwife will return to the village with their kits and pharmacy stocks and will begin work. Each year during the project, the village agents will be brought to the supervisory dispensary for a recycling course.

At the same time, work will be started on the repair and re-equipment of rural medical facilities and on the construction of the four regional pharmaceutical warehouses. The management specialist will also be working with the Division of Studies and Professional Training to design a medical supply system for the village program.

6. Alternative ways of structuring the Project

a. Reduce expatriate technical assistance to only one person.

Although personnel costs would be greatly reduced if this alternative were to be followed, there would be a great risk that the project purpose would not be achieved. The reason that the Ecumenical Council of Churches and the Red Cross projects have trained such a modest number of people and taken so much time to

do it is that project direction and implementation have been the responsibility of two already over-worked Chadian physicians who cannot devote sufficient time for these activities. The presence of the expatriate team with a wide range of expertise who will be depending heavily on Chadian counterparts and rural nurses should move the project along without creating unnecessary dependence on the expatriates.

b. Train VHWs and midwives in regional centers

The advantage of this approach is that training could be better controlled and be assured of a more consistent level of quality. However, the GOC is opposed to this for three reasons: 1) They feel it is crucial to involve the local nurses in the program from the beginning in order to assure their commitment and continuing regular supervision of the program; 2) They are hesitant about taking on the responsibility for continuing training centers in view of their chronic budget deficiencies; 3) Politically, the minister of health feels it is unwise to place a training center in any one place because it may appear to favor one area morethan the others.

B. Relation of Proposed Project to DAP and to Host Country Priorities

The highest priority of the Ministry of Health is to render the present system operational. First enunciated in September 1975, this has been a constant theme and reflects the enormity of the problem. Specifically, the ministry seeks to 1) conduct in-service training for all existing health workers; (2) repair and re-equip existing facilities; (3) re-establish the supervision system from the ministry out to the peripheral dispensaries; (4) train paramedical workers; (5) develop a planning capacity. The ministry has also stated that it is its official policy to provide a more preventive orientation to the health system and to extend services to the rural majority.

The DAP for Chad mirrors these priorities closely. Its two main priorities are to (1) develop a planning capacity in the Ministry of Health and (2) develop a functioning low-cost rural health system using village health workers and traditional midwives to extend services to unserved rural villages. These are also the main health priorities which emerged from the "Health-Water-Nutrition Commission" for the Sahel Development Program. The request of the ministry for health planning assistance has recently been answered through a four-year AID-financed health planning project. The project proposed in this PID is the initial response to the second DAP priority. The success of this project should greatly facilitate the spread of this new mode of rural health delivery to the rest of the country.

C. AID Policy Issues

1. Beneficiaries

The direct beneficiaries of the project will be the village agents (VHWs and midwives) and rural nurses, who, in turn, with increased capabilities, will be able to offer more effective services to the rural population.

The indirect beneficiaries are the 1.5 million people who live in the southwest region. For the first time, a large number of inhabitants will have regular access to medical care and to preventive care such as MCH programs. With the training of preventive health workers for rural villages, Chad will have the best strategy for lowering the morbidity and mortality rates from such problems as malaria, dysentery and parasitic diseases, and childhood illnesses associated with poor weaning practices.

2. Environment

This project will have a beneficial effect on the environment. VHWs will be trained how to initiate environmental projects using local resources. The object of these projects will be to use simple measures to prevent diseases. These could include activities such as: preventing well contimination from fecal waste, eliminating mosquito breeding areas, and proper disposal of refuse. No insecticides or other potential pollutants will be funded under the project.

3. Human Rights

If human rights are interpreted to include the right for each person to better health, this project provides a big step forward. Much of the poor health in Chad is a result of the lack of understanding of the available causes of conditions such as parasitic diseases, childhood malnutrition, and malaria. Bringing this knowledge to rural people through health workers who are members of the community has the best potential for success.

4. Role of Women

Almost half of the direct beneficiaries of the project are women: the village midwife. Through training, her role will be expanded to prenatal and child health services. Besides making her more effective, the midwife should also acquire a higher status in the community. Half of the indirect beneficiaries are also women. For the first time many of them will have access to MCH service. Hopefully by the end of the project or in an extension of the project, the GOC will see the benefit of family planning services to maternal health and economic development and give women the means to better control their own lives.

D. Estimated Cost of the Project ($000)

1. Foreign Donor Inputs

a. Personnel

1) Physician/chief of party 5 p.y. at $120,000/p.y.	$600	
2) Paramedic trainer 5 p.y. at $100,000/p.y.	$500	
3) Management/logistics specialist 5 p.y. at $100,000/p.y.	$500	
4) Secretary (local hire) 5 p.y. at $8,000/p.y.	$40	
Subtotal Personnel		$1,640

b. Commodities

1) Training equipment	$8
2) VHW kits 400 at $300	$120
3) Midwife kits 400 at $50	$20
4) Bicycles for VHW 400 at $150	$60
5) Mobylettes for nurses 85 at $450	$38
6) Vehicles, parts, maintenance and gasoline (4 bought in first project year, 4 replacements in third year) 8 at $22,000	$176
7) Repairs to medical facilities 45 at $20,000	$900
8) Re-equipment of medical facilities 45 at $1,500	$68

9) Construction of regional pharmaceutical warehouses 4 at $120,000	$480	
Subtotal Commodities		$1,870
c. Other Costs		
1) Transportation and maintenance (VHWs and midwives) 800 at $65	$52	
2) Transportation and maintenance (nurses) 85 at $85	$7	
3) Miscellaneous	$14	
4) Operating costs	$20	
Subtotal Other costs		$93
Inflation and contingencies		$647
TOTAL Foreign Donor Contribution		$4,250
2. GOC Inputs		
a. Personnel		
1) Counterpart personnel for expatriate team 1 at $10,000 for 5 p.y. 2 at $7,000 for 5 p.y.	$120	
2) Rural nurse trainers and supervisors for VHW and midwives 85 at $3,000 for 5 p.y.	$1,275	
3) Curriculum advisory committee 2 p.y. at $7,500/p.y.	$15	
Subtotal Personnel		$1,410
b. Training facilities	$40	
Subtotal Facilities		$40
TOTAL GOC CONTRIBUTION		$1,450
GRAND TOTAL		$5,700

E. Strategy for Preparation of Project

The next stage in project development will be the project paper, which should be scheduled as soon as possible. The August through October 1977 period is the best time for the field visit.

The design team, required for a duration of four to six weeks, should include the following types of expertise:

1) a public health physician with experience in low-cost health systems in LDCs. Duration: 6 weeks.

2) Financial/logistics expert. Duration: 4 to 6 weeks.

3) Paramedical training/curriculum expert. All should be French-speaking. CDO would expect to participate actively in the design team and to provide significant direction and support to the design team during its activities in country.

The following issues must be studied as part of PP preparation:

1) Community involvement: The interest of villagers in the southwest region must be ascertained. This may be accomplished by consulting with missionaries in the area who have attempted local projects and by examining the results of the health census teams that have been identifying villages which are eligible to be included in the program because of size and location. Another part of this issue is to discover whether a continuing village agent program using volunteers rather than salaried personnel is feasible in the long run.

2) Supervisory system: At the present time, the vaccination/diagnostic teams of the Service des Grandes Endemies (SGE) have been charged by the Ministry of Health with the task of transporting drugs and supplies to rural dispensaries and providing some kind of supervision. There are some dispensaries, however, which depend on near-by medical centers for assistance. It must be discovered whether the SGE is willing to take on the extra burdens of transporting village medicine orders to rural dispensaries on a regular schedule and of supervising rural dispensaries on a more regular basis.

3) Drug distribution system for village pharmacies. A study should be made of the feasibility of a program in which villages stocks are replenished by revenues from village sales. A complicating factor in this issue is the frequent shortages of medicines and

supplies experienced by rural medical facilities. Discussions should be held with the Ministry of Health and the National Pharmacy to determine the feasibility of transferring village-financed supplies without loss through intermediate institutions whose own operations may be seriously limited by lack of basic supplies.

4) Midwifery training and supervision. The vast majority of nurses in Chad are male. Few female nurses are assigned to rural areas and female social aides who also work in the MCH field are also limited at the present time to urban areas. Since, for the present time, male nurses will have to supervise midwives, it should be determined the amount of extra training needed for these nurses and possible difficulties of a man dealing with traditional women. It should also be decided whether traditional midwives would be interested in expanding their roles or if a third class of female workers should be trained to offer child health services.

F. Initial Environmental Assessment

An initial assessment is favorable for reasons discussed in Section C.