

PNABK 814
ISN 76328

REPORT OF THE
MALI FOOD SYSTEMS
DESIGN TEAM

June 1985

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Acronyms and Abbreviations

- ADO - Agricultural Development Office of USAID
AF - Africa Region
AFSI - Africa Food Systems Initiative
AID - Agency for International Development
APCD - Associate Peace Corps Director
ASAP - As soon as possible
AT - Appropriate Technology
AWLD - Alternative Water Lifting Devices
- CAR - Centre for Rural Facilitators (Centre d' Animation Rurale)
CAST - Center for Assessment and Training
CofC - Chamber of Commerce
CCT - Cross Cultural Training
CD - Community Development
CDC - Community Development Centre
CFA - Local Currency
CFAR - Centre for Training of Rural Women Facilitators
(Centre de Formation des Animatrices Rurales)
CMDT - Malian Textile Development Company (Compagnie Malienne
de Developpement Textile)
CMP - Country Management Plan
CMPB - Country Management Plan and Budget
CNRF or CNRFM - National Centre for Fruit and Vegetable Research
(Centre National de Recherches Fruitieres et Maratcheres)
COS - (Completion of) Close of Service
CPCD - Country Peace Corps Director (or CD)
CPR-M - Country Program Review and Monitoring
CREST - Center for Reassessment of Staging
CSS - Country Strategy Statement
CY - Calendar Year
- DGIS - Dutch Development Agency
DOW - Description of Work

EOT - End Of Training
ET - Early Termination
ETA - Early Termination
ETA - Estimated Time of Arrival
ETD - Estimated Time of Departure

FAC - French Development Agency (Fond d'Assistance et Cooperation)
FED - European Development Fund (Fond Europeen de Developpement)
FFW - Food For Work
FP (FSR - Foreign Personnel
FPP - Foster Parents Plan
FS - Foreign Service
FSI - Foreign Service Institute (usually refers to language exam)
FSN - Foreign Service National
FY - Fiscal Year

GRM - Germany Development Agency
Ha. - Hectares
HCA - Host Country Agency
HCN - Host Country National

ICT - In-Country Training
IEF - Institute of Primary Schools (Inspection des Ecoles Fondamentales)
IER - Institute for Rural Economy (Institute d'Economie Rurale)
IMF - International Monetary Fund
IST - In-Service Training

Km. - Kilometers

M - Meters
mm - Millimeters
MOA - Ministry of Agriculture
MSF - Doctors Without Borders (Medecins Sans Frontieres)

NGO - Non Government Organization

O/A - On or About

OACV - Operation Peanut and Varied Production (Operation Arachide et Cultures Variees)

OHV - Operation High Valley or Operation Upper Niger Valley (Operation Haute Vallee)

ORS - Operation Rice Segou (Operation Rie Segou)

OPAM - Office of Agricultural Marketing (Office de production Agricole Malien)

OTAPS - Office of Training and Program Support

PAM - World Food Program (Programme d'Alimentation Mondiale)

PASA - Participating Agency Service Agreement

PC - Peace Corps

PCD - Peace Corps Director (Country)

PCMO - Peace Corps Medical Officer (or Office)

PCPS - Peace Corps Programming System

PCT - Peace Corps Trainee

PCV - Peace Corps Volunteer

PCVQ - Peace Corps Volunteer Questionnaire

PC/W - Peace Corps/Washington

PME - Programming, Monitoring and Evaluation

PSC - Personal Services Contract

PSS - Problem Strategy Statement

PST - Pre-Service Training

PVO - Private and Voluntary Organization

RTO - Regional Training Officer

RTRG - Regional Training Resource Office

SAV - Special Assignment Volunteer

SB - Division in Upper Niger Valley Operation (Secteur de Base)

SOMIEX - Malian National Marketing Office (Societe Malienne d'Importation et Exportation)

SOW - Statement of Work
SPAF - Small Projects Assistance Fund
SST - State Side Training

TAC (sheet) - Training Assignment Criteria
TDC - Community Development Technician
TOT - Training of Trainers
TP - Public Works (Travaux Publiques)
T's - Trainees

UNDM - Malian National Party (Union National Democratique Malien)
UNDP - United Nations Development Program
UNFM - National Union of Malian Women (Union Nationale des Femmes
Maliennes)
UNV - United Nations Volunteers
USAID - United States Agency for International Development
USIS - United States Information Service

V's - Volunteers

WFP - World Food Program
WFS - Malian Water and Forest Service (Eaux et Forets)
WID - Women In Development
WRM - Water Resource Management

ZAF - Functional Literacy Zone
ZER - Rural Expansion Zone (Zone d'Expansion Rurale)

ACKNOWLEDGEMENTS

The AFSI Design Team would like to thank the many people who made our stay in Mali so pleasant and productive. First of all, we must thank the Peace Corps/Mali administration, staff and Volunteers for being so supportive of our efforts. Everyone went far out of their way to insure our stay was successful and our work went as smoothly as possible.

We appreciate the efforts of the American staff who took much time from their busy schedules, especially during a period when most are preparing to leave Mali, to review drafts of our documents and provide invaluable input, to meet with us at all hours, to see that our transportation and other needs were met, to facilitate the typing of documents, logistic support and for their encouragement. We also thank the Malian staff for their cooperation and assistance, especially Mr. Fafaran Keita who accompanied us on many of our trips, represented us and explained our work to various government officials, provided us with documents, and gave us a great deal of information about the country. Mr. Keita is indeed a consultant's consultant.

We give great thanks to the Peace Corps Volunteers who provided an invaluable service in giving us ideas as to where we should focus our efforts. We appreciate the time they gave and the interest they showed, as well as their excellent hospitality during our visits to their villages.

USAID deserves special thanks for the input they provided and their welcome and constructive discussions about our programs. We particularly thank them for providing us with a vehicle and driver for our stay in Dire, without which we could not have covered so much of that region. The USAID staff met with us individually and as a group on several occasions to provide information and documents, which were of great value in preparing this report.

Africare is entitled to special recognition. Their contacts and rapport with the Malian officials and villages made information collection in the Dire area much easier than we anticipated. The hospitality of the Africare staff in Dire was exceptional. They provided us with excellent accommodations and transportation in Dire and were most tolerant of our seemingly never-ending questions about their project.

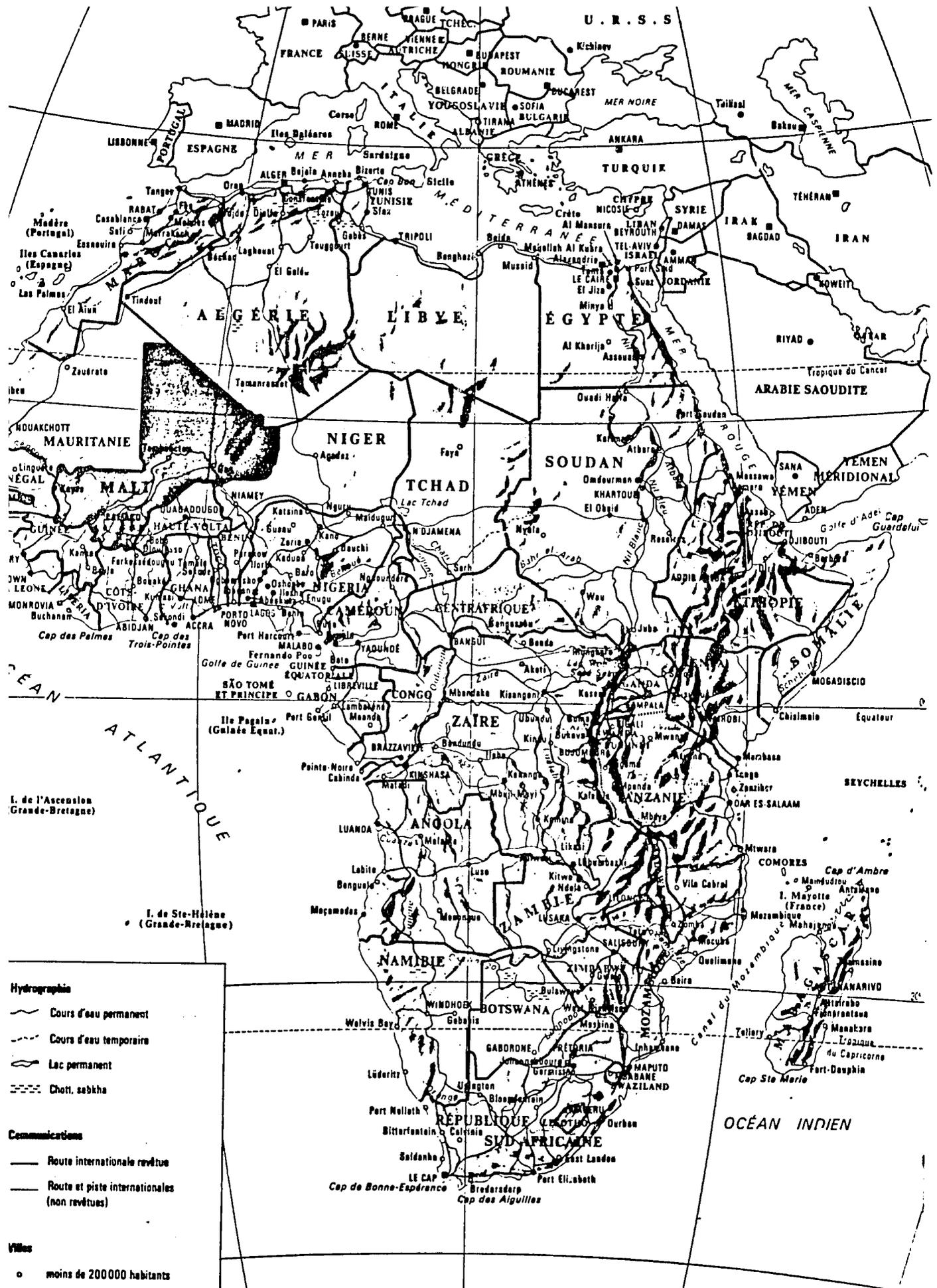
All the Malian officials from the Administration, Political Party, and all the Services, Operations and Offices were extremely useful, open and willing to help us in any way they could. The staff of Operation Rice Segou and Operation High Valley deserve special thanks for the long hours they worked to accompany us on site visits in their respective regions. We also appreciate the hospitality of their field staffs, and their cooperation in providing us with documents and other data we required.

We also thank Mr. Roy Cole, a Fulbright scholar conducting dissertation research from Michigan State University's Department of Geography, for his hospitality. Mr. Cole provided us with a great deal of information from his data and assisted a member of our team in the collection of additional materials during our research in the Segou region.

We also appreciate all the donor and relief agencies that took time to meet with us and share their knowledge of Mali. We were most impressed by the interest that many of these agencies showed in having AFSI programs work in areas where they are providing services, and a willingness to support projects of Volunteers that interface with their efforts.

Our logistics person, Ms. Peggy Hogarty deserves special recognition for putting up with all of our requests, arranging meetings and making our stay most comfortable. Without a constant supply of chocolate bars, soft drinks, peanuts and cola nuts we would have never finished this document.

Last, but not least, we thank the many villagers, chiefs, council members, and leaders of village associations for opening their communities to us. They were always open to the never-ending questions we had, and were most gracious in their hospitality. That kindness and cooperation assures us that Peace Corps will be welcome in their communities and can be most effective in assisting them to improve their food systems.



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EXECUTIVE SUMMARY

The African Food Systems Initiative (AFSI) Design Team, in collaboration with Peace Corps/Mali, proposes the placement of initially thirty-eight (38) additional Volunteers in on-going and new programs in three regions of Mali, with an increase of four new APCDs to support them. The Team drew from the report prepared by the AFSI Assessment Team in February, 1985, in recognizing the needs of those regions and visited each to determine the viability of the first team's recommendations and to plan new programs accordingly.

In designing the AFSI programs the Design Team attempted to integrate on-going food systems programs of Peace Corps/Mali and to take into account the stated goals and objectives of the government of Mali (GRM). The GRM has stated four priorities in their initiative to increase food self-sufficiency for their country: the involvement of villagers at the local level in cooperative development efforts, water resource improvement, gardening and reforestation. In concert with these priorities the Design Team programmed AFSI Volunteer assignments for each region in gardening, water resources, forestry and soil conservation. The exact tasks involved for each of these categories depends on the region of Mali where the Volunteers are placed.

At present Peace Corps/Mali has ongoing programs in two of the three regions for the initiative; Segou and the Upper Niger Valley. The third area, the Circle of Diré in the Timbouctu Region, previously had a short-term Peace Corps program and was recently declared a high priority zone for agricultural development activities by the GRM. There are different goals for each of these regions, depending on the types of food systems activities currently being conducted. The Upper Niger Valley surrounds the capital, Bamako, and is one of the highest agricultural productive areas in the country. However, most of the emphasis is on cotton and tobacco rather than food crops. It will be Peace Corps' task to improve on-going activities in food production. This will be accomplished by increasing the size and diversification of gardens, and providing supportive assistance with wells construction and forestry/soil conservation.

The Segou Region has two target populations for Peace Corps involvement; the traditional residents and new migrants who are mostly nomadic populations coming from the drier northern regions. Most of the agricultural land adjacent to the Niger river is under the control of government parastatals for the growing of rice. Most of the population is unable to participate in their activities because of restrictions in areas for planting due to the disrepair of irrigation infrastructures. The repair of those infrastructures is beyond the scope of Peace Corps involvement. However, viable programs can be developed by working with the majority of the population, most of whom have turned to gardening as a means to supplement their subsistence farms of millet and sorghum.

The Diré area is adjacent to the Sahara desert, and is a last outpost for possible agriculture. There are many nearby refugee camps of traditional nomads who lost most of their herds because of the drought. The sedentary farmers in the area must rely on either irrigation canals from the Niger river and the use of water lifting devices to irrigate their fields. There is currently a USAID funded program run by Africare to provide motor pumps to farmers on credit. This project reaches only about five percent of those living in the area. Thus, it is crucial to find alternative water lifting technologies that are not dependent on fuel for the majority of the population. We have designed a program to introduce such devices, and to provide agricultural education and forestry assistance to increase food production in the region.

In each region AFSI Peace Corps Volunteers will act as teams, coordinating their efforts to provide integrated programs for improving food systems. Each of the regions has a specific focus, with other Volunteers working to complement the primary work being accomplished in the area. Thus, in the Upper Niger Valley the focus is on soil conservation to improve existing food crops and gardening, the Segou focus is in implementing improved gardening activities, and in Diré the emphasis is on water resources. We anticipate that each area will suggest improvements that can be extended to the other two regions, and eventually to all areas of the country.

INTRODUCTION

The following report is the result of a seven-week mission to Mali by the African Food Systems Initiative (AFSI) Design Team, composed of

- . Beryl L. Bellman, rural sociologist
- . Melissa Burns, agricultural economist
- . Dague Clark, forestry and soil conservation specialist
- . Jonathan Greenham, agronomist
- . G.V.V. Rao, water resources specialist
- . Kathy Tilford, team leader

The original assignment of the Design Team was to develop one or more projects from the Volunteer job assignments recommended by the Assessment Team that visited Mali in January-February, 1985. However, the Design Team had to reevaluate some of the Assessment Team's recommendations and conducted site assessments for two reasons:

1. Peace Corps/Mali did not concur with several of the proposed job assignments and asked the Design Team to reevaluate the pilot areas.
2. Due to time constraints, the first team did not visit Diré; it was important to conduct the initial assessment in this area.

METHODOLOGY

The Design Team spent approximately half of their time in the field, interviewing local political authorities, including the Governor of the regions, meeting with development committees, the directors and other government representatives, services and parastatals and with representatives of the various international donor agencies working in each region. We also met with Volunteers in two meetings in Bamako, and visited all Volunteers in the field who were assigned to the regions we studied. We also visited a number of additional villages as potential Peace Corps assignment sites.

In the villages the Design team interviewed village chiefs, their advisors or councils, and representatives of various village associations to evaluate the local conditions and to receive an understanding of their priorities.

The Team also visited fields for cereals and other crops, gardens, well sites and irrigation infrastructures to evaluate the needs and to determine the possibilities for Peace Corps interventions.

Representatives of the government services accompanied the Design Team on most of the trips in their regions.

In Bamako the Team interviewed several Malian government employees, including technical advisors for the Ministry of Agriculture and many other services to collect data, receive documents and to obtain a list of their priorities. Representatives of several international donor agencies, including FED, UNICEF, Africare, Foster Plan, Physicans without Borders and the World Bank, were also interviewed to collect data for the writing of this report and to establish possible lines for collaboration.

ORGANIZATION OF REPORT

Following the field visits and Bamako meetings, the Team began to draft the project plans, strategy paper and supporting documents, most of which were reviewed by Peace Corps/Mali and revised accordingly. For a more thorough understanding of the strategy proposed the report should be read in its entirety. It is organized as follows:

1. Strategy Statement.
2. Project Plans, including TACs and Task Analyses.
3. Management Issues.
4. Recommendations for Training.
5. Reports on agency debriefings.
6. Annexes.

PROPOSED AFSI STRATEGY
FOR MALI

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INTRODUCTION

The African Food Systems Initiative (AFSI) Design Team, in collaboration with Peace Corps/Mali, proposes the placement of initially 38 additional Volunteers in on-going and new programs in three regions of the country. The Team drew from the report prepared by the AFSI Assessment Team in February, 1985, in recognizing the needs of those regions and visited each to determine the viability of the first team's recommendations and to plan new programs accordingly.

In preparing this report and in making our recommendations we have endeavoured to work closely with Peace Corps/Mali staff and representatives of the Malian government (GRM). In this manner we have attempted to insure that our recommendations are consistent with GRM goals and objectives, and that the AFSI program will be an integrated part of the overall country management plan of Peace Corps/Mali. Thus, we are confident the AFSI program design we propose is both feasible and will have a significant impact in improving the food systems of the country.

This report is divided into three major sections. In the first part we present a brief overview of the natural and human resources of the country. Then, we discuss the major constraints on food production in Mali, including natural and sociological factors. Finally, we present the current goals and objectives of the GRM and discuss how the short and long term goals of AFSI pertain to them.

This section is followed by an analysis of the AFSI programs in each region where we have programmed our initial interventions. Thus, the section is divided into three parts relating respectively to the Upper Niger Valley, Segou Region, and Diré. The third section presents linkages between and within regions for the Volunteers' assignments, a summary of the management and training strategies and justifications for our programs. In conclusion, we present the long term goals and future directions of the initiative.

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OVERVIEW OF NATURAL RESOURCES

The climate of Mali ranges from the Saharan desert in the north to the Sudan-Guinea savannah in the south. Rainfall ranges from near zero in the north to 1200 mm in the south; moving north, farming becomes more dependant on irrigation. In recent years there has been a reduction in the rainfall nationwide. This drought, combined with the late start of the rains and the intra-seasonal droughts has been the main problems affecting the predominantly rain-fed agriculture of the country.

In spite of the undependable climate, Mali is fortunate to have access to abundant, albeit underdeveloped, water resources in the Senegal and Niger rivers, the two largest in West Africa. The Niger river transverses 1700 km of its total course of 4200 km through Mali and forms a vital resource for the country. The natural phenomenon of the inland delta of the Niger provides a great potential for agricultural development in the heart of Mali.

Due to the length of the Niger the flood peaks extend over a four month period along the river. The peaks occur in September at Koulikoro near the start of the inland delta, at Mopti in October, at Timbouctu, the other end of the delta, in December and at Gao in January.

Except for the inland delta region, which is underlain by the continental terminal, much of the rest of the country is underlain by ancient sedimentary rocks, with volcanic intrusions in the south. In the south, ground water occurs discontinuously in fissures and faults. The amounts available depend on the size of fractures and the amount of weathered rock they contain. Water is also found in a confined and semiconfined state. Geophysical and hydrogeologic investigations are being conducted to identify the potential ground water resources, and will aid in placement of water resource Volunteers in Mali.

With two perennial rivers passing through vast alluvial plains, the irrigation potential of Mali is great. The inland delta of the Niger covers an area of 4 million hectares, with the

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delta at points between Segou and Timbouctu, up to 100 km in width. Even though detailed soil surveys and land classifications are lacking for a complete identification of irrigable lands, available studies indicate a minimum of 1 million hectares of land as potentially irrigable. The available water resources are potentially adequate to serve all this land and more.

The natural vegetation in Mali is closely tied to the rainfall and soil characteristics. There are very few, if any, areas in Mali where natural vegetation has not been altered by humans and their domestic animals. The alterations caused by humans include: deliberate and unintentional burning, clearing areas for agriculture, cutting selected species for fuelwood and construction materials, animal forage, and the propagation and protection of certain species.

After farms are cleared, they are cultivated until the productivity drops and the farmer clears a new plot of land. Estimates have been made that a fallow interval of between six to sixteen years is necessary in order to regenerate the productive capacity of upland soils to an optimum level throughout tropical Africa (Goswani: 1982). This period may take far longer if the site has been severely degraded because of extended cropping periods and inadequate fallow intervals as occurs in many parts of Mali. If the site has been severely degraded a fallow period of thirty years or more may be required to regenerate the productive capacity of the soil. This means that four to ten times as much land must be left fallow as is currently being cultivated.

When the population is small there is no major problem, because the annual area cleared is small and environmental degradation is minimal. But with an increase in population, as occurs in southern Mali due to large migrations from the northern regions and the increase in land area farmed in response to falling yields, the situation radically changes. The fallow period is necessarily shortened, which leads to rapid degradation of the soil fertility.

HUMAN RESOURCES

A. Sociocultural characteristics.

Mali has a diverse ethnic population that reflects its history of successive empires. The largest ethnic group is the Bambara, including the Malinke, who are both linguistically and culturally re-

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lated. They are primarily located in the most agriculturally rich regions of the country, from Segou to the Guinea border. It is estimated that over eighty percent of Malians speak Bambara, which is, along with French, the lingua franca, a primary language for commerce spoken by a cross section of ethnic groups.

There is a strong relationship between ethnicity and types of economic production in the country (c.f. TAMS, 1981). Thus, the Bambara, Malinke, Khassonke, Sonike, Songhai, Senoufo, Mande, Minianka, Dogon and Bobo are agriculturalists, who also practice varying degrees of animal husbandry; the Peul (also known as Fulani), Maures and Tamacheck (which include the Tuareg and Bella) are pastoralists; and the Bozo and Somono are fisherpeople.

However, due to the severe conditions brought on by the droughts since the 1960s there have been major shifts in economic activity among the pastoralists and fisherpeople. The drought caused the majority of the cattle to die, and has so severely affected spawning and feeding areas that fishing has become a less viable activity. In response to these conditions both the pastoralists and fisherpeople are turning to gardening for economic survival or as a major supplement to their traditional economic activities. This has significant implications for land use, water resources and the structure of social relations among ethnic groups in each region of the country.

B. Economic factors.

With a per capita GNP of approximately \$180, Mali is the world's fifth poorest country. Agriculture accounts for forty-three percent of the GNP. Land-locked and afflicted by persistent drought Mali's physical resources are declining, leading to significantly reduced production of subsistence and cash crops, employment income and foreign exchange revenues. Consequently the growth of GNP per capita has been negative. Unemployment and underemployment are significant and increasing rapidly, and the rate of expansion of the pool of labor greatly exceeds the creation of jobs.

Cotton is the major cash crop and constitutes, along with cattle, about eighty percent of Mali's exports. The total value of exports in 1984 was \$184.4 million, of which cotton exports was \$96 million and livestock \$50.9 million. To meet deficits in food production, Mali imports significant amounts of cereals (143,000

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MT in 1982), and receives large contributions of food aid (67,000 MT for 1981-1982).

It was recently estimated by the Ministry of Agriculture that Mali's requirement for cereals for domestic consumption for 1984-1985 was 1,468,160 MT. Of this, 591,680 MT were produced in Mali. This leaves an estimated deficit of 876,480 MT or about sixty percent of total cereals requirements. Estimated total annual food aid for 1984 was 170,000 MT, leaving a 706,480 MT deficit or approximately fifty percent of the nation's estimated requirement.

CONSTRAINTS ON FOOD SYSTEMS IN MALI

The Assessment Team's report (1985) identified ten principal constraints to increasing food production and improving food distribution in Mali:

1. Weather variability and the drought.
2. The overexploitation of resources by humans and animals leading to a decline in the natural resource base.
3. The lack of effective technical packages for crop and livestock development with an overemphasis on cash crops such as cotton and peanuts for export.
4. An overconcentration of field crops to the exclusion of gardening activities.
5. The underdeveloped nature of agricultural research in the country.
6. Problems in the management of development activities.
7. Lack of effective post-harvest storage and food processing techniques.
8. The limited purchasing power of most Malians.
9. Logistical problems, particularly in the isolated areas of the country.
10. Lack of coordination between donor agencies, private volunteer agencies and the GRM.

Although it is easy to be critical of previous efforts to improve food systems in the country it is important to be aware of the problems the GRM has had to face since independence.

The development of Mali has been impeded both by the recurrent droughts and by an unstable political beginning. Following independence the GRM had to assume responsibility for the management of agricultural agencies, but lacked skilled manpower to effectively maintain them. The GRM was faced with problems of increasing food production in the context of drought

conditions. To accomplish this they established the Malian Import-Export Company (SOMIEX) for the production and marketing of agricultural products. Villagers were forced to join collectives in order to participate as conscripted labor on community farms in order to meet increased demands for food and export products.

After the coup of 1968 these unpopular organizations were discontinued. They were considered a failure due to inefficient and corrupt management; the imposition of collective farming practices in a manner inconsistent with traditional social structure; and the economic disincentives they proffered for the marketing of food crops (c.f. Ton Credit, USAD, report, 1984). After the coup, Mali established a series of parastatals, which were organized as Operations or Offices associated with different development zones in the country. These organizations were modeled after, or, as in the case of the Office of Niger, extensions of structures created during the French colonial period. They operate on the principle that development activities in a specific region can best be carried out through decentralization of projects.

Shortly after the parastatals were established another, and more devastating, drought began. Under such conditions it was difficult for the GRM to monitor the decentralized activities of the organizations, and once again development activities were hampered by management problems, as well as difficulties the agencies experienced in receiving repayment for credit extended to farmers for various agricultural inputs. Because of the decentralization of responsibility for development to regional agencies, which had management difficulties, much of the irrigation infrastructures built by the French fell into disrepair. This exacerbated the problems of some of the Operations, causing large amounts of otherwise usable land to be left fallow.

Thus, although there is great potential for irrigated farming in the areas surrounding the Niger and Senegal rivers, the disrepair of the irrigation infrastructures presents a major constraint to improving food production. As a consequence many farmers have had to rely on rainfed grain crops such as maize, millet and sorghum. However,

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the decreased rainfall and sporadic pattern of rain during the rainy period has resulted in diminished crops or total crop failures.

GRM GOALS AND OBJECTIVES

In response to these problems the political party of Mali (UNDM) created a national, independent and planned economy, based on the co-existence of a State sector, a joint sector and a private sector (c.f. International Conference of Donors, 1982). The Malian government working within the constraints of IMF policy and with the advice of the World Bank is engaged in major economic policy reform. As mentioned and discussed in greater detail in the AFSI Assessment Team Report (1985) this involves four objectives that pertain to agricultural planning:

1. The liberalization through the reduction of price controls for cereals, and the reduction of the role of OPAM, the government parastatal concerned with the distribution and marketing of those products. This shift in policy is considered essential for promoting agricultural production throughout the nation.
2. The reorganization of agricultural Operations and Offices to improve their efficiency and management capabilities, and to lower their costs by a reduction in their development responsibilities.
3. A reduction of government spending in the financing of the parastatals, including a freeze on hiring and, in some cases, the elimination of staff. The government is planning some compensation and special credit arrangements for staff who leave their agencies to begin independent business activities.
4. An emphasis on placing external aid funding from international donors in high potential agricultural areas, and the involvement of populations at the local level in the implementation of projects in conjunction with the private sector. These areas include portions of the Sahelian zone that have good possibilities for agricultural production.



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In order to implement these objectives the UNDM National Council proposed in February, 1981, a five year plan for increased agricultural production based on local level village associations and a strong emphasis on water resources and reforestation. In November, 1984 President Moussa Traore officially declared gardening activities as an additional national priority.

THE AFSI PROGRAM: LONG AND SHORT TERM GOALS

The present GRM emphasis on agricultural production, water resources, reforestation and gardening has provided the orientation we used in designing the AFSI program for the country. In addition we have endeavored to integrate whenever possible the on-going Peace Corps/Mali programs into our plan. As a consequence, in our debriefings with representatives of the GRM we have received strong enthusiasm for the AFSI intervention strategy we propose here.

When Peace Corps/Mali was asked to participate in AFSI by Peace Corps/Washington they were requested to identify areas of the country where programs should be concentrated. Peace Corps/Mali identified three areas, two of which already have Volunteers working with parastatals in food systems activities: in Segou with Operation Rice Segou (ORS) and the Upper Niger Valley with the Operation High Valley (OHV). The third area, the Circle of Diré in the Timbouctou Region, presently does not have Peace Corps involvement but it has been recently designated a national priority area for agricultural development by the GRM.

Both the AFSI Assessment and Design teams were asked to evaluate Segou, Upper Niger Valley and Diré as possible sites for the initiative. The Design Team was requested to determine which if not all of these locations should be involved. We visited each of the areas to determine the needs of each location and how Peace Corps Volunteers can be most effective in improving conditions. Although each of the regions has a variety of problems requiring aid, we maintained a policy that Peace Corps should only be involved in those activities that Volunteers can have an effect upon during their two years' tenure in the country, using the relatively limited amount of financial resources

that each has available. Large scale projects were considered unfeasible, as were those in which there is no local level government support for the Volunteers' efforts.

We also attempted as much as possible to consider the recruiting problem of obtaining qualified Volunteers by setting standards at a level at which requested assignments could reasonably be expected to be filled. Although advanced degreed Volunteers may at first seem appropriate we determined that the most important qualifications are dedication, a willingness to work hard, intelligence, technical ability and the perseverance to continue rather than be discouraged and early terminate. Thus, in designing our strategy we are recommending skill-training programs for some of the assignments we propose here. We do, nevertheless, require some more experienced Volunteers for various components of our programs. However, we have endeavored to require such skill levels only when they are realistically needed, rather than demand them for all assignments requiring some degree of technical ability.

In designing the initiative for Mali we have developed assignments that will evolve over the years building upon the successes of previous generations of Volunteers. In programming for the first set of Volunteers we created assignments that we predict will bring both job satisfaction and can reasonably be expected to be accomplished. We anticipate that some Volunteers will be motivated to undertake additional and complementary tasks to those expected. However, the tasks we propose for each assignment are at a level in which all Volunteers should be able to successfully undertake by their close of service.

We are programming thirty-eight new AFSI Volunteers for the first year of our program in 1986. In addition, there are six additional Volunteers being recruited in the on-going country management plan. Thus, in 1986 there will be forty-four food systems Volunteers in the country out of a total of 103. The following chart shows the increase of Volunteers up to the year 1990:

Volunteers	'86	'87	'88	'89	'90
Food Systems Volunteers input	38	49	61	76	84
Food Systems PCVs in country	44	93	110	137	160
Approx. number of Mali PCVs	103	120	135	154	169
Approx. percent Food Systems	43	77	81	88	95

These figures are not adjusted to take into account early terminations, which are about eight to ten percent per training period, nor do they include program expansion into other regions of Mali, which could increase these numbers. Nevertheless, the AFSI program will significantly increase the number of Volunteers in the country, and remain at a level close to 90 percent of all PCVs in Mali.

Because of this increase we are recommending the addition of four APCDs, and a revised support structure for the various new AFSI projects to be initiated in the years ahead. The initial AFSI assignments are described in sections below pertaining to each of the regions where programs will occur, and are presented in greater detail in the Project Plans. We anticipate that the AFSI programs will be expanded to other regions of Mali, perhaps into the Sikasso and Mopti areas by FY 1987. Basically we recommend the first generation of Volunteers be engaged in gardening and other horticulture work, water resources and irrigation, forestry and soil conservation. The exact tasks of each Volunteer depends upon the region to which he or she is assigned.

The Volunteer assignments we propose for beginning the AFSI programs are carefully designed to account for the present constraints of Peace Corps/Mali. At present there is no formal agricultural program in the country, except for some Forestry Volunteers assigned to the Mopti Region. There are, however, agricultural activities initiated by Improved Wood Stove Volunteers who have begun projects with wells and gardening. In order to implement a strong agricultural program it is necessary to introduce a new component into the present country management plan. To do this we have analyzed the types of tasks we expect

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Volunteers to do in order of development over time. Thus, we have programmed an evolution of activities and types of AFSI assignments over a succession of Volunteer generations, as discussed in greater detail in the conclusion of this report.

The types of assignments we perceive as developing out of the initial categories of Volunteers include: Agricultural Extension, Orchard Management, Dryland Extension, Crop Protection, Marketing, Community Organizations/Associations, Health and Sanitation, Rural Works and Irrigation Management. In addition to the evolution of present assignments we have programmed for an expansion of both the initial types of positions and their extensions to other regions of the country.

In sum, our objectives and goals for the future of AFSI in Mali include the following:

OBJECTIVES:

- . The introduction and dissemination of appropriate technologies for increasing the quantity and quality of water available for agricultural activities and for domestic use.
- . A measurable increase in tree cover and a decrease in soil erosion.
- . A measurable increase in food production and a corresponding decrease in food imports.
- . A diversification of agricultural activities in the target areas.
- . A reduction in post-harvest losses.
- . Improved marketing systems and returns to farmers.

These objectives are consistent with the following goals:

GOALS:

- . Assist the people of Mali in their efforts to improve food systems by using village-based interventions which increase per capita food consumption.
- .. Improve Peace Corps' capacity to develop an effective agricultural program that is long-term, focused on improving access to food and responsive to the changing needs, priorities and strategies of the Malians.

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- . Reinforce the ability of the population to effect improvements in the agricultural sector.

We consider these goals and objectives to be consistent with GRM stated priorities, and those of the various parastatals with whom our Volunteers will interact or be assigned.

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UPPER NIGER VALLEY

Physical Setting

The Upper Niger River Valley Operation (Operation Haute Vallee in French) agricultural development zone is located on and around the Upper Niger Valley. Its mandate covers a wide geographic area, with six major sectors; Kangaba and Bamako, the area along the Niger between Bamako and the Guinea border; Kati, the region to the northwest of Bamako; Ouelessebougou, the region to the south of Bamako; Bancoumana, an area on the west bank of the Niger south-southwest of Bamako; and Koulikoro, northeast of Bamako. The zone contains about 500,000 people in c. 1,000 villages, in an area c. 30,000 km². It surrounds Bamako, which has c. 600,000 inhabitants. The area contains a wide range of soil types and ecological conditions.

Natural Resources

The rainfall in the area ranges from 1350mm on the Guinea border to 700mm north of Koulikoro. The inter-tropical convergence zone influences the rains by moving from south to north, then returning; thus the rains start earlier and end later in the south. The rains can start in May, and end in October, with peak rains in August. The Niger river in this area is narrower than in the lower reaches and generally the sedimentary cover in the region is shallow, making ground water and irrigation resources less available. There are a number of small diversions which were used mainly for rice production in the past but which are now in disrepair.

The crops grown in the area vary by location, with sorghum, millet and fonio being the main cereal crops. Maize is grown, both in household plots and along the river during the wet season. Peanuts are common, particularly in the northwest of the area, although the fixed market price of peanuts in recent years has reduced its importance as a cash crop. Cotton is the major cash crop, particularly in the southeastern region, with the secondary cash crop, irrigated tobacco, grown in the Upper Niger Valley during the dry season. Rice is also grown as a recession crop in the seasonal swamps. The crops grown and the scale of production varies from site to site, depending on the available resources of suitable land, markets and inputs.

The farming system is also a function of available labor during peak periods. A variety of crops are grown everywhere but the extent and the

importance of any particular crop is very variable by location. Likewise off-season (November-February) gardening activities range from small household plots (to supply the family needs for condiments) to larger plots often communally farmed and to intensive vegetable production for market.

The area is comparatively well-wooded, particularly in the wetter south. However, the area within 100kms of Bamako is coming under heavy pressure as tree cutting for fuelwood and charcoal production expands. A number of tree species are left in farmer' fields in the region, particularly karite or the shea nut tree, which is utilized extensively and the Acacia albida which is common in drier areas. Other species that are spared and utilized include lotus bean, baobab and wild figs. Increased use of animal traction in the area is leading to more land under cultivation.

Human Resources

The Upper Niger Valley contains a mixture of ethnic groups, of which the Bambara and Malinke are the largest represented. Other groups are the Senefou, Mininka, Mande and Sarakolee. Members of these smaller groups speak Bambara, which serves as a commercial language throughout the region. This is significant in the government's attempts to organize ton villegeois or village associations, modeled after traditional Bambara groupings for ad hoc collectives, for credit and various inputs for cotton production. All ton are required to have at least five members functionally literate in Bambara. Thus, other ethnic groups must have members learn both language and literacy in Bambara in order to organize these associations.

The PCV's assigned to the region will, however, be placed in either Bambara or Malinke villages during the first few generations of Volunteers. The Malinke have a more prescribed form of social organization, with less participation of women in modern sector activities. The Bambara allow women to participate in village association election, while the Malinke deny them access to decision making in regard to any man's activity. Men control the cash crops—cotton and tobacco— for both the Bambara and Malinke.

The two groups treat migrants differently. There are members of the same and different ethnic groups coming in the Upper Niger Valley on a regular basis in efforts to relocate because of the drought. The Bambara appear to be willing to let such migrants farm and have access to credit, with the host

family responsible for insuring that debts are repaid to their village association. Guest farmers are less welcome in Malinke villages and do not have access to credit.

The predominant economic activity of the region is dryland agriculture. Infrastructure for large scale irrigation is lacking and a number of smaller diversion perimeters are in disrepair.

Livestock is less important in this region than further north, and fishing is localized along the river. The area is comparatively well served with roads with adequate routes to Kangaba, Koulikoro and Bougouni and a reasonable network of feeder roads which has been constructed to improve marketing of products. The main urban market in the region is Bamako with 600,000 people. An extension service has been set up with buildings and personnel in the field around the region. Inputs such as seeds, animal traction equipment, fertilizer and agricultural chemicals are available, as is credit. The beginnings of a commercial agricultural supply system exists. The major products of the region are cotton, cereals, peanuts and tobacco. Prices are fixed by the Ministry of Agriculture and the majority of the marketing has been via parastatals.

There is a trend towards the private sector and price liberalization. Cotton is a principal source of revenue, grown in the southern part of the region and used for cloth and oil production. Tobacco grown for local cigarette manufacture has been increasing in importance using irrigation particularly along the west bank of the Niger. Peanuts have been sold more and more on the parallel market or used for home consumption, as the fixed price has not encouraged production for sale through government channels. Cereal production has been declining in the area and it remains to be seen whether the shift away from the parastatals and toward liberalization of prices will lead to increased production.

Credit is becoming more available in the area, although as always credit is required pre-production and given the risk in agriculture, repayment is not guaranteed. It has also not been demonstrated that the costs of the return to the new inputs justify their use in all cases.

What Peace Corps/Mali Will Do

In 1986, PC/Mali will place 13 new volunteers in the production section of the Operation High Valley. By 1990 we expect 25 or more new volunteers to be assigned to the region. The Volunteers will be operating initially in the areas of horticulture, forestry/soil conservation and water supply.

Soil Conservation/Forestry Volunteers

The first task of the Soil Conservation/Forestry Volunteer will be to survey the area and gauge the need for and interest in soil conservation and forestry. Potential activities include:

- establishment of village-based, mini-nurseries.
- protection of natural regeneration of tree species.
- establishment of live fences.
- contour ploughing and establishment of berms.
- check dams and erosion control gullies

Village-based nurseries will produce selected trees (for fruits and other products and possibly windbreaks) for planting in and around the village. Protection of naturally regenerating tree species will help maintain the present mix of trees and field crops and contribute to the future fuel needs of the area. Live fences can be expanded around the existing orchards and gardens, once again reducing the pressure on the tree cover for fencing materials. This is a natural area of interaction between the forestry and the gardening volunteers. The work with berms and contour ploughing is a response to the increasing use of indiscriminate animal traction in the area.

Fields are often ploughed late by younger family members with no regard for the natural contour lines. There are a number of reasons for this: the older men are working elsewhere; the land is softer after several rains; the animals are fitter and an increased area is being ploughed. All of these factors result in late ploughing and in the land being exposed to the peak rains with little vegetation cover. Unless the furrow follows the contour, soil erosion is a problem. The check dams built in the gullies and seasonal streams will slow down the flow of water, reducing erosion, increasing water infiltration and possibly causing a temporary rise in the water table.

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Water Supply Volunteers

The water supply Volunteers will assist villagers to build new wells and improve existing well sites. Improvements will include deepening, installing pumps, construction of head walls and aprons, lining existing wells if appropriate, and improving sanitation around well sites. Water is needed for both domestic use and small-scale irrigated gardens. The area has a varied underlying geology with granites and schists to the south and ancient pre-cambrian sandstone to the north. This produces a more discontinuous aquifer than the younger sediments in the delta region, and makes well siting more difficult, requiring careful investigation.

A detailed survey of the region is underway by the Malian government and the results will be incorporated into selection of sites for future Volunteers. Peace Corps Volunteers have been successful sinking low-cost wells in the area and if expansion into off-season vegetable production is to increase, more wells will be needed. These wells will both increase the availability of water for domestic use and irrigation and reduce the time spent in collecting water. On our visits to the region and in our discussion with Malians, water was frequently mentioned as a priority need. Peace Corps/Mali is developing expertise in a variety of well digging and well improvement techniques suitable for different areas. The water supply Volunteers will build and expand upon that expertise and the program could develop into work with small-scale irrigation as opportunities arise.

Gardening Volunteers

There are a number of types of horticultural production underway in the Upper Niger Valley, ranging from cooperatively-owned motor pumps irrigating perimeters along the Niger, producing vegetables for export and the urban market; to small-scale household plots producing condiments for home consumption. The main production period is October - March, but some rainy season production occurs, particularly of okra and tomato.

The major problems vary with the location and type of production. Water is frequently a problem in the areas away from the river; short season varieties and crops could be used to reduce water need later in the dry season, and wells could be sunk in conjunction with the work of the water supply Volunteers.

Seeds are often saved and there is a whole area of potential intervention here: introducing improved varieties from elsewhere in the region and from overseas; seed selection and proper storage techniques, etc.

Pests and diseases appear to be regular problems. Although the Upper Niger Valley has more available agricultural chemicals than other areas in Mali, there is work to be done: improving the input supply; identification and treatment of pests and diseases; rotations and other methods of non-chemical pest and disease control; correct use and timing of agricultural chemicals. This area could expand further in the future into dryland agriculture, where increasing amounts of agricultural chemicals are also being applied, often without regard to efficient application, cost effectiveness or safety.

Marketing and storage issues are important in some areas with conservation methods required to retain value to crops produced during the seasonal gluts. Presently a number of crops are conserved including roselle, okra, onion, and chillies. Expansion and improvement of these techniques is envisioned. Crops such as potato and onion are amenable to correct storage and potential for maintenance of seed potatoes which are presently imported could be explored.

Storage interventions would logically lead to work with cereal storage for future Volunteers. Other marketing interventions could include organizing producers to supply the larger outlets in the major towns of the region. The type and nature of the Volunteer assignment will vary by location, but in addition to horticulture, there appears to be many areas in which Peace Corps Volunteers could usefully intervene to improve the incomes and diets of producers, and to increase food availability. We see horticulture and soil conservation as logical entry points for PC/Mali's development of a strong food systems program.

Constraints and Opportunities

The positive advantages of this region are: its rainfall, particularly farther south; its proximity to the major market of Bamako; and a network of comparatively good roads. There is also a developing agricultural support service system for credit, inputs and marketing, Fertilizer, agricultural chemicals and animal traction equipment are all available in the area.

Constraints include an influx of migrants from the north which is increasing the pressure on the resource base, reducing the available land for fallows, and increasing the use of marginal land. Another constraint is the restricted availability of ground water. Wells tend to dry up towards the end of the dry season and sinking new wells is not as easy as on the alluvial formations to the north.

Relationship to GRM Priorities

The Upper Niger Valley, like the rest of Mali, is part of the "grassroots initiative" which aims to develop local-level activity, mobilizing villagers and the private sector to respond to their perceived needs. The Operation High Valley has been working with village associations in the region to organize credit and marketing systems for agricultural products and inputs. Their mandate also includes agricultural extension, rural road construction and training in functional literacy. Their activities to date have concentrated on cotton production which is a major source of income for their operational costs.

AID has been providing financial and technical support to OHV since 1978 and is currently negotiating a follow-up project to start in mid-1986. The UNFM (National Union of Malian Women) has, with support from AID, established a training center for rural facilitators at Ouelessebouyou (CFAR) which is actively training women in health and gardening activities. Peace Corps has had a Volunteer working with this center doing follow-up work in the villages, working with wood stoves, and health/sanitation. Other Volunteers in the area have been working with wells and gardens. In the north of the Upper Niger Valley, two Volunteers have been working with Foster Parents Plan, training community development agents and teams of well diggers.

During our field visits, expressed local priorities included assistance with input supply and utilization (fertilizer and chemicals); wells for domestic supply and gardening; marketing of surplus produce and access to credit.

Justification

The Upper Niger Valley AFSI program is designed to continue Peace Corps/Mali's strong focus on skill transfer and community development. This is to be accomplished by building on present activities in the region in wells

construction and gardening and by introducing a variety of forestry and soil conservation projects. Gardening Volunteers will work to increase the size and diversification of gardens, with a focus on both men's and women's activities. They will assist the formation of community organizations in addition to ton villageois to encourage collective projects pertaining to food systems rather than cash crops. As gardening is a major focus of government extension activities in food systems, PCV involvement in this area is a priority of both the GRM and the OHV agency.

Wells Volunteers will continue to construct new wells and improve existing sites. They will be especially concerned with sanitation and water, by providing animal troughs, aprons and other improvements. They will also work with villagers on nearby small dams and other irrigation facilities in disrepair to assess the feasibility of repairing them. Where possible and where community sentiment exists for collective action, the Volunteers will work to acquire funding and support to be used either immediately, if possible, or by the next generation of Volunteers in the area.

Forestry and soil conservation Volunteers will introduce village nurseries and promote a diversification of types of fruit trees in collaboration with gardening volunteers. They will also work with villagers using animal traction to introduce improved plowing methods, such as tilling along rather than against land contours. These Volunteers can significantly improve soil conservation and promote more efficient land use, as well as increase the forestation of the area. These tasks are a major priority of the GRM and the OHV has expressed strong support for such efforts.

Thus, we see a close interfacing among the activities of the three categories of Volunteers in this area. In addition, because of the well-developed community organizations in this region, we consider this to be an important area for Volunteer involvement. The success of Volunteers in working with a variety of types of village associations will be both a test and a model for similar PCV involvement with associations in other regions of the country.

Segou is at the beginning of the inland delta of the Niger river and large parts of the region fall within the delta. The perennial Niger river has water throughout the year, and this resource is enhanced by the Markala dam, built in 1932 to irrigate some 960,000 ha. of land in the delta. However, much of this infrastructure is in disrepair, which results in large portions of otherwise cultivable land going fallow.

The deficit in rain has increased the risks in concentrating on dryland agriculture production. This has resulted in an expansion of gardening activity throughout the Region, with crops such as tomatoes, onions, okra, chillies, sweet potatoes, mint, lemon grass, amaranth and other leafy vegetables and bitter ball; these products are grown both for home consumption and markets. The gardens are also supplemented by mango groves, the products of which have become major market item. The gardens and groves are often irrigated by wells, particularly in areas adjacent to the Niger river.

The cultivation of cereal crops has strongly affected the trees in the area. Usually rice fields are cleared of all vegetation to help assure even distribution of the irrigation water. Certain species are left growing on the millet and sorghum fields, however, which usually have some economic value. These species are not being protected for natural regeneration in most farms. Currently, the Water and Forest Service (WFS) is working with the Office of Niger, one of the two major parastatals in the Region, to convince villagers to plant woodlots, but little is actually being done to promote agroforestry and soil conservation.

Although the Niger river is a potential source of water for cereals production, the waters are controlled by two parastatals: Office of Niger and Operation Rice Segou, both of which are concerned mainly with rice. Unless villagers participate in the programs of those agencies, they must rely on rainfed areas for any agricultural activity. The decreased rainfall and inconsistent rain pattern has resulted in greater emphasis being placed on gardening, and a need for wells as the primary source of water supply.

Sociocultural Factors

Segou is predominantly Bambara with a large secondary population of Bozo fisherpeople who live along the banks of the Niger river. In addition, there are large numbers of Tuareg, Maures, Peul and Songhai migrating from the north. Concomitantly, there is a large emigration of Bambara out of the region during the dry season, with many returning during the rainy season to assist in planting activities. Those migrating into Segou are having to shift from traditional economic activities into gardening. With the exception of

the Songhai these groups are pastoral nomads who have lost most of their herds in recent years. The Bozo, likewise, are moving from fishing to gardening, as spawning and feeding areas have been so affected that fishing can no longer be a principal economic activity.

Although the Bambara grow rainfed crops of millet and sorghum, they do so only at the subsistence level and have turned to gardening as a primary economic activity. Prior to the drought, men grew the extensive cereal crops while women did smaller, more intensive garden plots. Today both men and women garden, the former for market and the women have separate gardens mostly for domestic use. Recently, the GRM has attempted to form village associations to increase production. However, many men remember the first attempts after independence to use these associations as a means for conscripted labor to work collective farms. The women, on the other hand, have had collective credit associations for years and are more amenable to such efforts. Thus, in some villages women have organized collective gardens and successfully marketed their products. The profits are used to supplement family incomes and for community development.

Economic Factors

The economic activity of the region is primarily subsistence level production of rice, sorghum and millet. Most rice production land is under the management of the parastatals. Since the Volunteers will be working with the ORS, this section discusses the activities of the ORS and their economic effects. Rice production generally does not permit the generation of surpluses at the level of the farm family when measured following the payment of obligations to ORS. In most instances the greatest part of rice production is taken by ORS at below market-level price to pay for inputs and indirectly for the overhead of the agency, which suffers from problems of a large bureaucracy and poor management.

In addition, ORS suffers from problems of water deficit. The canals are poorly dispersed to receive water. When river levels are low rice production is extremely meagre. The combined effects of poor management, a large bureaucracy and water deficit in the canals has encouraged major donors like the European Development Fund (FED) to turn elsewhere, such as to the parastatal ON, to provide support; meanwhile FED is encouraging the ORS to reduce its staff, increase its operating efficiencies, and ultimately divest itself of its monopoly power over rice marketing in the ORS area.

What Peace Corps Will Do

The Design Team recommends placing twelve new volunteers in the community development division of ORS, along with a third year Volunteer to serve as a headquarters liaison to the field volunteers. By 1990 we expect at least 20 new AFSI volunteers to be additionally assigned to the Region. The field volunteers are divided into three categories of activities:

1. Water supply and sanitation Volunteers: these five Volunteers will be concerned with wells construction and the improvement of existing sites. In constructing and in improving wells Volunteers will improve the sanitation of the sites by building head walls, aprons, linings and animal watering troughs. In addition in the the future where appropriate and feasible, these Volunteers will introduce alternative water lift technologies, including hand pumps, foot pumps, shadoofs and other devices as tested in the Dire alternative water lifting project.

2. Gardening Volunteers: these five Volunteers will be principally involved in production types of activities. There will be a strong emphasis on community gardens and the development of marketing activities. This includes assistance in post-harvest storage, obtaining necessary inputs, and arranging for expanding their markets.

3. Forestry and Soil Conservation Volunteers: These two Volunteers will be concerned with reforestation activities, including the production of village nurseries. They will advise men and women farmer groups on improved soil conservation techniques, such as ploughing along rather than against natural contours to avoid unnecessary erosion.

Constraints and Opportunities

The major parastatal activity for the ORS is irrigated rice production. The reduced flooding of the Niger river has lowered the rice area available for cultivation. Likewise, because the intake structures are designed for gravity irrigation via zones, and they require higher flood levels than that which is occurring during this period of drought, there are lower than expected crop yields. This is even more aggravated by the disrepair of the infrastructure.

The availability and timing of water varies between zone and by placement within a zone. At present large areas are not irrigated or imperfectly irrigated. This has led to a struggle for the well-irrigated lands and a building

animosity between ORS and many farmers. Land is left fallow because of insufficient water for rice, and farmers are not allowed to plant other dryland crops because the land is allocated solely for rice. Farmers are required to pay user fees for the water, which compounded by the necessity to pay back credit on other inputs even if the yields are reduced by factors beyond the farmer's control, discourages many from engaging in rice production.

The other major cereal crops are grown in rain-fed areas. As there has been insufficient rain many crops have failed in recent years, and most farmers now produce only at subsistence levels. This problem is exacerbated by the influx of migrant populations from the north. Many of these groups are nomadic pastoralists who lost most of their herds. Likewise, local Bozo fishermen can no longer rely on fishing as a viable economic activity because spawning and fish feeding areas have been severely affected by the drought. These groups are turning to agricultural activities, which requires the acquisition of new skills from those traditionally used.

In response to these conditions there is a strong interest among all groups in gardening activities. It both improves food supply and provides a source for cash income. Small scale irrigation reduces the risk of gardening, and, unlike the rice, is more under each farmer's direct control. There is a good deal of local expertise in gardening activities as women have traditionally engaged in such work. As men have entered this domain larger gardens are being cultivated with a larger diversity of crops planted. Hence, this area of activity presents many opportunities for Peace Corps intervention.

Collaborating Agencies

The Volunteers will be under the direction of the Operation Rice Segou division of community development. Although ORS faces serious problems in the repair of irrigated infrastructures and land tenure issues pertaining to rice production, the agency is also concerned with improving other agricultural pursuits including gardening. The ORS is very interested in having Peace Corps Volunteers work in areas of gardening, forestry and water resources activities. They recognize that this work strongly complements their own efforts and mandate to increase general food production in the Region. The administrative problems within ORS are specific to rice production and the agency is well suited to support the complementary projects engaged in by the PCVs.

There are also various NGO and PVO groups working in the Segou Region that have expressed strong interest in working with the AFSI Volunteers. These include Africare, CARE and UNICEF which have various projects in wells construction and gardening work.

Justifications

We propose that the expansion of small-scale irrigated production is a logical response to the drought and the influx of migrants from the north, and that Peace Corps/Mali should encourage and assist this local response. Although dryland agriculture is the major activity in Segou region we do not feel this is an area where Peace Corps should initially place an emphasis. The ORS has had problems beyond the PCVs' control pertaining to dryland agriculture, and there are few technical improvements that could be extended to farmers which, given the drought, could be assured of success. With time and the accumulated experience of Volunteers in forestry/soil conservation and with the improvements made to the major irrigation infrastructures in the area, intervention may eventually be possible, e.g., in the areas of cereal storage and marketing, crop protection, and supplemental irrigation.

The most viable activity to focus upon is gardening, which has expanded throughout the Region. This off-season activity has led to a demand for new types of expertise and support structures. Small-scale horticulture is amenable to the kind of interventions at the village level that Peace Corps does so well. Volunteers can work with the village associations to address their definite needs. These associations include the government initiated ton villageois, modeled after traditional Bambara associations for collective activities, women's groups including the government sponsored Women's Union, and other groupings within each village.

Another intervention is soil conservation and forestry. As all rural based forestry projects are successful only if they have local level support, these Volunteers will conduct surveys to assess villagers' interest. They will analyze species of preferred trees, current agroforestry activities, locations for possible nursery sites and soil erosion problems that can be corrected by forestation. These Volunteers will encourage forestry activities, as well as non-planting work including the protection of natural regeneration of tree species, direct seeding areas with appropriate tree seeds, and the planting of cuttings especially for live fence establishment. PCVs will encourage plowing along contours, establish berms on fields when at farmers' requests, and assist in small scale work with check dams in gullies and seasonal streams. These dams will slow down water to cut down on erosion and permit more water to infiltrate into the soils.

Gardeners are natural candidates to establish mini-nurseries. They have sources of water available, and many are already familiar with the requisite knowledge involved for agroforestry. Gardeners need their lots protected from

livestock, especially those located near the river where animals are present because of water and forage. Live-fences will protect those areas and provide a natural addition to gardens.

The problems caused by decreased rainfall and poor irrigation infrastructures have increased the need for both drinking/domestic water and garden wells. Many PCVs already assigned to Segou villages in other projects have turned to wells construction and improvement at the request of villagers. Hence, this is an obvious and natural area for AFSI program expansion.

DIRE

The Volunteers in the Dire area will be addressing the problem of traditional nomadic and agricultural populations adapting to the ecological changes caused by the drought. This problem is manifest in the current lack of adequate water resources and appropriate irrigation technologies. In addition, segments of the population have a relatively limited knowledge of how to improve agricultural gardening, soil conservation and farming practices in order to combat these ecological changes and increase food production.

In 1986 Peace Corps Mali will place 13 volunteers in the Dire area to assist villagers to expand and improve: their water supply for both drinking and irrigation purposes, agricultural production, and forestry activities. Two

PCVs will assist the agricultural research station to bridge the gap between research at the station and on-farm testing of improved technologies. One Volunteer will be teaching teachers, agricultural production techniques; the teachers in turn will teach those methods to the primary school students in the Dire area.

Physical Setting

Dire is on the Niger river almost at the northern end of the inland delta approximately 100 kilometers south-east of Timbuctou. Travel from Bamako is difficult; at the best time of year the trip takes at least fourteen hours of hard driving. The area is very dependent on the Niger river both for transport of goods and people and for irrigation water for agricultural production.

Natural Resources

The rainy season is short, three months and usually not sufficient for rainfed agriculture. Water catchment and control in the low-lying areas is important for the rice,

sorghum, and millet crops which are grown from July to December, using impoundment and earth dykes. During the cooler dry winter, irrigated wheat and spices (cumin and anise) are grown on the flat sandy areas being irrigated by hand or with motor pumps. Vegetables and traditional household crops are produced on the sandy soils adjacent to the river or occasionally in the lower-lying more fertile areas, using water from the river or from seasonal, shallow wells.

The area being flooded by the Niger river has been less than normal in the past few years. The decrease in flooding has caused a decline in forage production in the traditional grazing zones in the areas. Herders have resorted to cutting the tops of acacia trees to feed their animals. The cutting of acacia trees combined with the fact that the area has received less rainfall than normal has resulted in a decrease in the woody biomass. An increase in soil erosion has been one of the consequences of the decline in vegetation.

There are several lakes in the area which are within access of Dire and Goundam. Due to the decline in rainfall during the last few years, the lakes have been receding but they still represent an important water resource and agricultural production areas.

The general area of the delta is dominated by sandy, clayey, alluvial soils. Ground water is believed to be available within 5 to 25 meters in a band of 5-10 Km from the river channel, the depth being greater as one travels away from the river channel.

Human Resources

The resources of the Circle of Dire are being pushed to their limits to provide for the sedentary Songhai agriculturalists whose crops have dwindled and for the nomadic Tuaregs who have lost most of their livestock due to conditions brought on by the drought. Refugee camps of mostly Tuareg pastoralists are being created throughout the region,

especially outside of the larger towns, and Songhai villagers are having to rely on grains provided by outside relief organizations to supplement their needs.

In spite of the drought, sedentary and pastoral populations and their associated Bella groups are attempting to adapt to the constraints of their environment by engaging in new economic activities such as gardening and fish culture, and by forming groups within and between villages to construct canals to improve irrigation possibilities. Motor pumps are being used to pump water up to these canals.

What PC Will Do

Given the importance of irrigation and water management in the area combined with the costs and problems associated with motor pumps, we are recommending two irrigation technology Volunteers work on alternative water lifting devices and with irrigation frequency and application methods. These Volunteers will install and test selected water lifting devices; survey the types of irrigation systems currently being used in the area; improve existing irrigation systems; run on-farm tests of methods developed at the Agricultural Research Station (IER) and assist the other Volunteers with their irrigation projects.

Five water supply Volunteers will assist villagers with their water needs. Duties include surveys of the water supply situation in the area, selection of potential work sites (new wells and improving old wells), developing work plans, organizing villagers, securing funding, supervising work, and training villagers and counterparts in all aspects of water supply and sanitation. The water supply volunteers will also work in conjunction with the irrigation technology Volunteers to improve irrigation systems and water management in their areas.

Five gardening/forestry Volunteers will work with farmers, local schools and others to improve the supply and utilization of horticultural inputs, expand the existing horticultural activities both in time and area covered, to increase

the horticultural production in the area. These five Volunteers will also work with the irrigation technology Volunteers to improve the irrigation systems in the gardens or on grain fields.

The gardening/forestry Volunteers will also work with villagers in the establishment and maintenance of village level tree nurseries. The trees produced in these nurseries will be used for a variety of reforestation efforts. The PCVs will work with villagers to decrease water erosion and increase water infiltration and storage capacities in gullies or small seasonal streams by building small check dams out of local materials where appropriate.

The final member of the team of Volunteers in Dire will be working with the Institute of Primary Schools (IEF) as an agronomist. This Volunteer will be designing new curriculum and teaching teachers how to set up appropriate agricultural demonstrations and small livestock projects. This person will also work closely with local groups and the gardening/forestry Volunteers with gardens and village tree nurseries.

Constraints To Improving the Agricultural System

The major constraint to increased agriculture production in the Dire area is the lack of widespread availability of water pumping devices for irrigation. Agricultural production is further confined by inefficient irrigation technologies and the high price of agricultural inputs. Additionally, there currently is no effective agricultural extension agency in the Dire area to offer the farmers advice on how to improve agriculture production.

Dire being so isolated also has effected the production in the area. Agricultural inputs are either not available or beyond the means of the average farmer. Additionally, should Dire produce more than that which can be consumed locally, the cost of transporting bulky low value goods to a market may make the products no longer competitive with goods produced elsewhere.

Collaborating Agencies

The activities the Peace Corps Volunteers will be implementing integrates well with other developmental efforts in the area. USAID is funding a motorized pump irrigation project through a private voluntary organization, Africare, to increase farmers' yields. The Africare staff has begun to implement agricultural extension program. The staff will be examining alternatives to the motorized pumps currently used for irrigation. In the near future they will be experimenting with wind and solar pumps and are very interested in collaborating with the Volunteers working in similar areas.

In addition to USAID and Africare, there are several other donor agencies providing both technical and relief efforts in the area. UNICEF, for example, is involved in a variety of activities such as wells installation, emergency feeding centers, maternal and child health projects and small-scale agriculture. Several of the wells UNICEF is installing are located at primary schools. The gardening/forestry Volunteers can use these wells as sources of water for gardens and tree nurseries. These schools will also be excellent locations for demonstration activities for the IEF agronomist to assist in their gardening efforts and they have stated interest in collaborating with Peace Corps.

Doctors without Borders (Medecins Sans Frontieres in French) are involved in a variety of activities, many of which are health orientated, but they also are constructing wells and small agricultural improvements such as dykes to control flood waters.

Justification

Dire is located near the northern end of the inland delta region of the Niger river and has strong potential for irrigated wheat and rice production. It is, in a sense a last outpost for agricultural activity. All around Dire

are numerous refugee camps of Tamachek nomads who have lost most of their herds because of the drought. Also, due to decreased rainfall many of the Songhai villages in the region have little or no yield from their cereal crops and must rely on donations of food aid from international agencies. Because of the potential for agricultural production in the area, if irrigation and water resources are improved, the GRM has declared the Dire area as one of three high priority development areas for pilot projects to improve food systems in northern Mali.

Although Dire is two days drive from Bamako, there are a number of organizations working to improve food production, increase water resources and provide food aid. Thus, in spite of the distance Volunteers will be from Bamako, there is a viable support structure already in place.

The Government of Mali has stated that the drought is not a short-term problem, and that Malians must find long-term solutions to the problems caused by it. Peace Corps Volunteers working with villagers to help them develop long-term strategies are not only desperately needed but also widely welcomed by all sectors of the population and local government.

The possible impact of the initial set and future generations of Volunteers is enormous. The small farmer who is untouched, or possibly worse off, because of the motor pumps in the area will have the potential of producing more, and in many cases will only be able to produce food crops with the interventions in this strategy. An area which now requires large grain inputs can possibly export food to the surrounding areas, particularly to communities now receiving food aid. The area can act as a demonstration of what can be done all along the Niger river to significantly improve food production.

The political and administrative officials in Dire Circle are very supportive of the local community efforts to increase food production in the area. A Development Committee of all

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of all the heads of the services and the local leaders from all ethnic groups in the Region review and coordinate the self-help efforts in the area. They have been very supportive of past projects and are encouraging new efforts. The Development Committee requested that the Peace Corps start immediately to assist villages with their various self-help efforts. The local political administrative support, plus President Moussa Traore declaring Dire a national priority, combined with the villagers' courageous efforts to try new technologies to produce food as an alternative to food aid, demonstrate that the Region should be an excellent area for a long-term Peace Corps strategy in food systems.

No one can deny that there is a desperate need for long-term developmental efforts in the Dire area. Any activity that proves effective will have wide applicability along the Niger river and in other Sahelian countries. Peace Corps should have few problems recruiting and training the Volunteers to fill the proposed positions. National, Regional, and local political and administrative support for development projects combined with the villagers' desire to find solutions to their problems makes Dire a prime location for AFSI intervention. All of these reasons more than outweigh the extra effort Peace Corps will have to extend to the Dire area.

MONITORING AND EVALUATION MEASURES

It is difficult to provide accurate quantitative measures of the success of Volunteers' assignments. Where one Volunteer may have been able to complete several different projects in a relatively progressive village, another may have introduced fewer in a more conservative community but laid the groundwork for future development activities. Some villages and ethnic/cultural groups are easier to work with than others. For example, Volunteers working with Bambara villages in close proximity to Bamako or Segou may expect more cooperation than those working in outlying areas with the more traditional Malinke. Likewise, those working with older villages can expect to complete more projects than those working with displaced populations of Tamachek, Peul, Songhai, Dogon and others moving from the drier northern regions.

Water Supply Volunteers in Segou and Diré may be able to complete more wells than those assigned to the Upper Niger Valley where geological conditions often complicate construction. Gardening Volunteers may differ as to the range of activities they pursue. Thus, in one area success may be measured by the number of gardens and the diversification of crops, while in another a Volunteer may be more concerned with post-harvest activities, including participating in functional literacy and the acquisition of numeracy and other skills among those with whom he or she works.

In each of the project plans we listed both goals and objectives for each category of Volunteer and the measures to be used in assessing a Volunteer's progress and accomplishments. Although we specified in most cases that a certain number of projects are to be completed within a certain time period, these measures are to be considered guidelines rather than absolute requirements. The most viable measures of the success of a Volunteer take into account the many variables concerned with each assignment, and are consequently more qualitative in nature. Thus, although we have defined a number of indicators to evaluate the progress of AFSI programs, we strongly maintain that absolute numerical comparisons are not appropriate for assessing the work within an area and/or between regions.

We agree with the Assessment Team Report (1985) that the goals of each of our programs are to enhance rural household production, productivity, income, and food security through agricultural development and related support activities. The production and capacity goals are presented in the respective project plans we developed for each region. Likewise, in those same reports we state the objectives for each Volunteer assignment and the associated measures to assess them. These documents provide the indicators to use for both monitoring and evaluating the programs.

In determining the success of the various intervention strategies it is necessary for monitors and evaluators to refer to the surveys conducted by Volunteers during their first months of service. Those contain needs assessments and evaluations of on-going activities, which are to be the base-line data to measure changes implemented by the Volunteer during the tenure of his or her assignment.

The evolution of tasks and categories of Volunteers, as well as the expansion of AFSI programs into other regions of the country, depends on the success ratios of the initial groups in these programs. Hence, we recommend the following general indicators be used to assess the work of the different categories of PCVs assigned to AFSI activities:

FORESTRY/SOIL CONSERVATION

1. A quantitative increase in the number of village nurseries and the varieties of seedlings planted.
2. An increase in the amount of live fences used on farms.
3. An increase in the number of trees planted within villages and in compounds.
4. An increased awareness on the part of villagers regarding reforestation and the preservation of types of trees.
5. An increased awareness on the part of villagers of the relationship between soil erosion and deforestation.
6. A willingness of farmers to till along contours, rather than against the natural contours.
7. The use of terracing and other related soil conservation techniques.

8. Increase in number of villagers involved in fruit tree grafting techniques.

WATER RESOURCES

1. An increase in the number of domestic/drinking water wells in villages, and the presence of individuals trained in wells construction and improvement.
2. An increase in the number of improved wells in villages.
3. The presence of wells sanitation practices at new and improved wells sites; examples include head walls, animal watering troughs and handpumps.
4. An increase in the number of garden wells in areas where they are feasible.
5. Improvements made on existing systems and the installation of new irrigation projects.
6. The introduction of appropriate water-lifting devices at domestic and garden wells sites, and, where feasible, at irrigation projects, including canals and river sites.
7. An equitable distribution of water resource projects for men's and women's groups.
8. The formation of water user groups, and community organizing for small project irrigation improvements were feasible and appropriate.

GARDENING AND AGRICULTURAL EDUCATION

1. An increase in the total horticultural output in villages.
2. An increase in the area of production of gardening and agricultural activity.
3. Expansion of out-of-season horticultural production.
4. An increase in availability of inputs necessary for improved production.
5. Improvement of technical skills for production, marketing and storage of products.

6. A diversification of types of products grown.
7. The development of appropriate technical packages for extension activities.
8. Improvements made in the timing of irrigation.

As discussed above, these clusters of indicators will differ depending on the region and particular tasks expected of Volunteers at each placement site. Likewise, the types of activities will depend in part on the team structure in the different areas of involvement. Each of the areas of initial AFSI programming contains a different emphasis depending on our evaluation of the needs of those regions. Thus, in the Diré Region the emphasis is placed on water resources, in Segou on gardening and in the Upper Niger Valley on forestry and soil conservation. Hence, the particular achievements of Volunteers will be determined in part by those emphases.

CONCLUSIONS

The food systems activities in Mali need to satisfy a number of criteria: these include

1. Compatability with GRM objectives and Peace Corps/Mali's mandate.
2. Integration with existing PC/Mali programs.
3. Feasibility given Peace Corps potential for recruitment, management and financing.
4. Productivity in terms of utilizing resources and generating results.
5. Capability of providing Volunteer job satisfaction.
6. Assuming a long term approach that is logical and builds on experience.

The Team is suggesting working within three regions using three technical areas of expertise. At the country level the concentration on the same technical area allows an overall integrated management and training strategy. At the regional level the selection of similar technical skills allows for complementary tasks, together with responses to regional differences.

Also, the approach suggested allows an initial focus and a subsequent expansion of Volunteer activities. It takes a cumulative approach to the major production constraints. It focuses the activities of Volunteers and emphasizes job satisfaction, and permits the accumulation of knowledge in each area and nationwide. Finally, the strategy permits the development of programs and the refinement of our suggestions.

THE TEAM APPROACH

Linkages within a Region

In each of the regions where Peace Corps will place AFSI PCVs we are recommending that they be considered as members of a team. Each of the areas of intervention complement one another, and in many cases are mutually interdependent. For example, water resource Volunteers will work in collaboration with gardening and forestry Volunteers, as water is a common variable for increased production. Also, water supply Volunteers with their counterparts and villagers can assess needs for gardening, forestry, soil conservation and irrigation management interventions relevant to the assignments of other Volunteers in the area.

Because of this team concept we are recommending that site selections be made so that Volunteers with complementary skills are in relatively close proximity to each other with groups of 2-3 Volunteers placed in villages within a short motorcycle ride of each other; PCVs would meet on a regular basis to discuss conjoint projects among themselves and their respective counterparts.

Linkages among regions

We also see strong links between AFSI Volunteers in the three regions where we have planned intervention programs. We consider the irrigation technology experiments with alternative water lifting devices and irrigation management in the Dire region, in conjunction with the Agricultural Research Station and Africare's project, to be relevant to all water resource Volunteers in the other two regions, as well as to other regions where future food systems PCVs are assigned. The results of the Dire' experiments will be disseminated to all such Volunteers, and, where appropriate, water lifting devices will be suggested for implementation throughout the country.

Other areas of collaboration between regions are in the activities of gardening and forestry Volunteers. In the Diré area it is likely that the agricultural education Volunteer will provide useful input into gardening activities in other regions. In OHV, horticulture and forestry/soil conservation are direct links with work in other regions, and the development of experience in marketing, post harvest storage and community organizations will be transferable to other areas. Thus, we envisage that the techniques developed and the training programs will be shared by all Volunteers, as will resources and skills.

Linkage between old and new programs

There are also many links between AFSI and existing Peace Corps programs, beginning with the continuation of the country-wide philosophy of community development and strategies focused on grass roots development. New Volunteers will be integrated into and expand on the current PCVs activities in Mali. Specific areas of interaction include the continuation and expansion of the wood stove, Volunteers' work in community development, water projects and gardening. The wood stove Volunteers have been active in organizing wells and well improvements, garden projects and vegetable marketing. The village agroforestry project and the village reforestation project in Mopti are the foundations for expanded activities we have programmed for future years for forestry and soil conservation in that region. The small enterprise development project started in conjunction with the Chamber of Commerce in Segou is now expanding to six Volunteers in four major towns in Mali during 1986 and will integrate with the exposed expansion of the AFSI projects into marketing and village credit organizations.

In each of the AFSI programs there will be a continuation of PC/Mali's strong focus on skill transfer and community development. The aim is to build on the present activities in wells, gardening and forestry, and to develop an integrated country-wide program in the complementary assignments

pertaining to water, gardens and forestry.

To help develop this integrated long term program, we strongly recommend the development of an institutional memory for Peace Corps/Mali. As in most countries where there are Peace Corps programs, the memory of Volunteers' work is at most only two or three generations in depth. Invaluable information about successful projects, types of interventions used, methods for community organization, local techniques that have been successful for improving farming and gardening, and area surveys are lost to future generations of Volunteers. Thus, in designing our project plans for the three areas of intervention we have included as the first task of all Volunteers in the country to conduct detailed surveys regarding their assigned tasks.

Wells and other water resource Volunteers are to collect data on existing water systems and conduct a needs assessment of their villages. Gardening and forestry/soil conservation Volunteers are to conduct similar surveys pertaining to their fields of expertise. Throughout each Volunteer's period of assignment we recommend follow-up and additional surveys to measure the impact of interventions, and to assess the most successful projects undertaken as well as to analyze problems encountered.

Volunteers will be trained in survey research methodologies and assisted in the design of schedules. They will be asked to particularly be aware that many farmers and gardeners in Mali are already doing small-scale experiments on their farms and gardens. These experiments are to be documented, and others encouraged. The results of these surveys will be analyzed and made available to other Volunteers in the country, as well as to future PCV groups. In this manner we hope to avoid the proverbial reinvention of the wheel by each successive group of Volunteers and staff in the country.

This data will also be an invaluable resource for various research projects being conducted by other NGOs and PVOs in Mali which have expressed an interest in data sharing.

Justification

The present GRM emphasis on increasing agricultural production by obtaining the active cooperation of villages, improving the water resources of the country and engaging in a major effort at reforestation and gardening has provided the orientation we used in designing the AFSI program for the country. As a consequence, in our debriefings with representatives of the GRM they have shown strong enthusiasm for the proposed AFSI intervention strategy.

In addition we have worked closely with PC/Mali to integrate whenever possible the on-going Peace Corps/Mali program into our strategy. Peace Corps has a number of its present Volunteers working in programs directly related to food systems, and in two of the three areas selected Peace Corps/Mali already has Volunteers working with the parastatals in food systems activities.

We have considered the potentially divisive effect of introducing a large new group of Volunteers into a country which already has a very united set of Volunteers who share a common focus of working with communities in the transfer of skills. We are also aware of the major staff changes that are imminent. In response we have suggested initial interventions that are community based and build on existing activities of PC/Mali: wells, gardening and forestry. As detailed later we are suggesting a phased expansion and a development of new programs over time. We believe this approach will develop Mali-specific expertise by Peace Corps/Mali, GRM collaborating agencies, counterparts, local farmers and other organizations in water, agriculture and forestry, and will ensure a successful start up and a subsequent effective long term intervention.

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Malian Agriculture and Peace Corps Proposed Interventions

The major problems facing Malian agriculture are the drought, the diminished flooding of the Niger river, under-developed irrigation potential and the migration of people into the south from the drier north. These problems have led to a need for improved water supply and water management, increased the pressure on the natural resource base and caused major shifts in economic activity.

In response to the need for improved water supply and water management we have programmed water supply Volunteers in each region. We have focused on expanding the existing activities of Volunteers working in constructing hand-dug wells and improving existing wells. We foresee a development of these activities into (1) using a wider variety of techniques with an improved matching of the technique used to the local conditions and (2) an extension of existing work with sanitation towards more site improvements, hand augering of wells and installation of hand pumps.

In the area of water management we are not suggesting placement of Volunteers within the large irrigation systems at this time. These systems have structural and management problems which make them unsuitable for Volunteer placements. In the Upper Niger Valley region, AID is considering renovating some small existing irrigated perimeters. If these are successful rehabilitated and water user groups are formed, we envisage a possible role for future Volunteers in irrigation.

In the Diré region we have placed seven Volunteers concerned with water-related activities. Two are to be based at the research station and five in the field to work with the research station, the Africare project and local farmers on some aspects of irrigation: water lifting devices, water management and small structures to develop possible future interventions for Peace Corps in irrigation.

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The increased pressure on the resource base caused by migrating populations and the drought has led to reduced fallow periods and larger areas under cultivation. Because of this and the GRM stated objective of working against deforestation, we are building on Peace Corps' existing forestry and wood stoves programs by placing forestry/soil conservation Volunteers in the Segou and Upper Niger Valley Regions. In the Upper Niger Valley the director of OHV has made soil conservation one of his organization's priorities, and the director of the CFAR in Ouelessebugo regards forestry as a critical intervention for the region.

The increased demand for firewood from the urban populations and the movement of people into firewood and charcoal selling has led to accelerating deforestation. This, combined with the inefficient use of animal traction, is contributing to soil erosion problems. In Diré, the gardening/forestry Volunteers will work with rural communities and school groups to encourage village tree planting, an activity that has been successfully started by Africare.

Major shifts in economic activity are occurring throughout Mali. The drought has reduced the cattle population: the reduction in river flooding has affected fish spawning and feeding areas, and the poor rains have affected the dryland crops where successful planting, good seed set and subsequent timely maturation are dependent on the timing and the nature of the rains.

In response to these conditions more people are turning to small scale irrigated production along the Niger river and around wells, for economic survival or as a major supplement to their traditional economic activities. We propose that this is a logical response to the existing constraints and that Peace Corps/Mali should encourage and assist this local response. This expansion has created a demand for expertise and support structures for marketing and production. We

believe that this area is amenable to the kind of village level focused interventions that Peace Corps does well. Volunteers will work in all three regions with a range of crops and social groups.

The level and scale of the intervention will vary with the placement site and existing needs. In Diré and Segou inexperienced farmers are moving into small scale production, marketing and storage of crops; school gardens, and dry season irrigated kitchen and food crops. These activities are in line with GRM's emphasis of gardening, and assistance has been requested from organizations, individuals and government agencies in each of the three regions.

At this time, although dryland agriculture is the predominant food source for Mali we believe the risk caused by the drought, the lack of strong local organizations working with dryland cereal production, the absence of proven technical packages to extend and Peace Corps/Mali's inexperience in this area, makes an immediate program in dryland agriculture difficult to implement. With time, PC's accumulated experience in agriculture and the changes in the focus of local organizations from irrigated rice and cash crops to cereal production will allow for potential intervention.

Peace Corps and Community Associations

The GRM has placed a strong emphasis on the formation of village associations as part of their grass-roots initiative to involve farmers at the local level in development activities. Recently, a National Directorate of Cooperatives was formed to assist villages in adapting such associations to their local level political structures.

The Directorate is encouraging a type of village association based on a traditional Bambara and Malenke form of social organization, the ton villageois. Initially these were used as loosely structured military societies during the height of the Bambara empire for defense and

the capture of slaves. The term was also used for a kind of ad hoc social group whereby younger men organized to assist fellow villagers on their farms. At the end of the colonial period the GRM revised the concept of ton to recruit labor for the production of collective farms. After the coup of 1968 these latter unpopular associations were discontinued. However, beginning with the grass-roots initiative in the 1981 Five Year Plan the GMR reinstated the ton concept, beginning in the OHV area to create a local level organization responsible for obtaining agricultural inputs and group credit for the production of cotton.

In the OHV region these associations have enjoyed a margin of success. Villagers elect a ton president and committee, who are responsible for obtaining and distributing inputs for cotton. Credit is given to each village ton rather than to individuals. Thus, the ton extends credit to villagers, and is responsible for the collection of debts. Because ton are not traditionally part of non-Bambara and Malenke social structures, they are seen as intrusive to local level political and social organizations by the other cultural groups. Many consider the ton to be reminders of the unpopular forced labor associations of the past and are reluctant to organize them in their communities.

Although the GRM is encouraging ton associations throughout the country we do not feel that Peace Corps Volunteers should be assigned directly to them as was the recommendation of the Assessment Team's report for the OHV Region. Rather, we feel Volunteers will be more effective working with such groups, rather than being affiliated as member-participants in them. As the Morton report (1985) stated, there are a number of other associations in addition to ton. These groups need to be studied as to their formation and internal social organization, as they proffer possibilities for being involved in food production activities.

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At the present time the ton are male organizations organized around cotton production. Some ton have, however, begun to encourage cereals crops but only as a minor and secondary activity. We believe Peace Corps Volunteers' involvement inside these groups would preclude their participation in the other village associations, particularly those involving women. As discussed, there are women's groups and unions in villages that are actively concerned with gardening and other agricultural activities. We feel that Peace Corps Volunteers should assist all such organizations, and give particular attention to the role of women in food production and social development. We also see our initial interventions in gardening leading to work with dryland women's agriculture.

All types of associations involved in agriculture require members to have some marketing skills, including functional literacy, numeracy, knowledge of weights and measures, and the like. Thus, by working with a variety of associations involved in activities pertaining to food rather than cash crop production we maintain Volunteers can make a more significant contribution.

Women and Food Systems

Outside of the Upper Niger Valley (OHV) area the most successful forms of community associations occur among women. The GRM instituted a number of Women's Unions in villages to organize them in collective groups for both political and gardening activities. In some areas, such as Sama in the Segou Region, women's gardens have had financial success. There is a tradition throughout Mali, cross-cutting ethnic groups, of various types of women's credit societies. The associations are ad hoc groups that collect money or other products, such as cotton, which are distributed among the membership, with a portion being set aside for community celebrations.

The influence of women varies greatly across ethnic groups. Among the Bambara, women have greater influence in decision making within the community, being allowed, for example, to vote for village association leaders and committees. However, among the related Malenke, women are not consulted in matters considered to be men's activities, and have their own associations within each patrilocal compound. There is a division of labor practiced by all cultural groups, but the nature of that division depends on the type of economic activity a community is engaged in. For example, among the Songhai in the northern regions there is a different sexual division of agricultural functions depending on the types of activities occurring in a village. In the villages we interviewed where wheat and other cereals are under the influence of men, women did gardening. However, in villages where men garden women engage in condiment gardens and tobacco production. Likewise, among the Bambara in both Segou and the Upper Niger Valley regions, in communities where men no longer grow cereal crops beyond the subsistence level and now engage in gardening, women grow separate gardens for vegetables and other crops such as rice, sorghum and peanuts, and produce mostly for home consumption. However, in communities where men have successful cereals or other cash crops women are able to engage in gardening both independently and in collectives to produce enough surplus for market.

As in many African and other cultures in the world, women are often the most positive influences and receptors to social development and change (c.f. Fortmann and Rocheleau: 1985). Women are often required to be the primary food producers for their immediate families, and particularly in West Africa, have been most successful in independent marketing activities. In Mali, the GRM established the women's unions in recognition of their role in development. Although these associations are more active in larger

villages, their very existence points to the increasing role of women and their interest in participating in the social development of their communities. Hence, we recognize a great potential for Peace Corps Volunteers to work with women's groups in a variety of projects related to food production, in addition to other types of village associations.

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The Future

The direction which will be taken by the food systems initiative as it develops in Mali will be influenced by a number of factors: the objectives of the Malian government as they change over time; the successes of the initial interventions; the development of the program by the PC/Mali Director and the PC staff; the actions taken by other donors; and changes in the perceived needs of Malians.

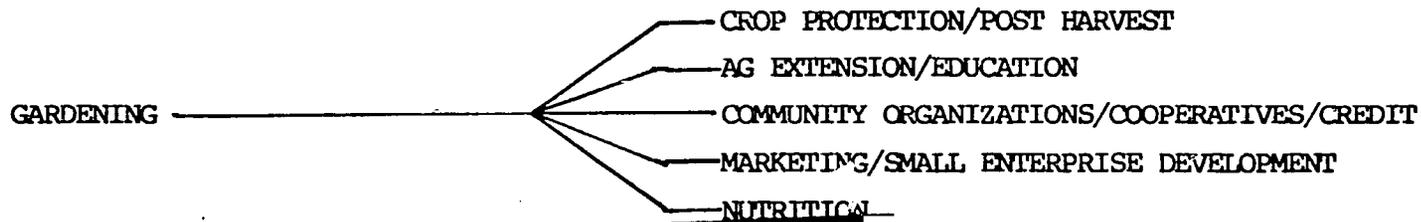
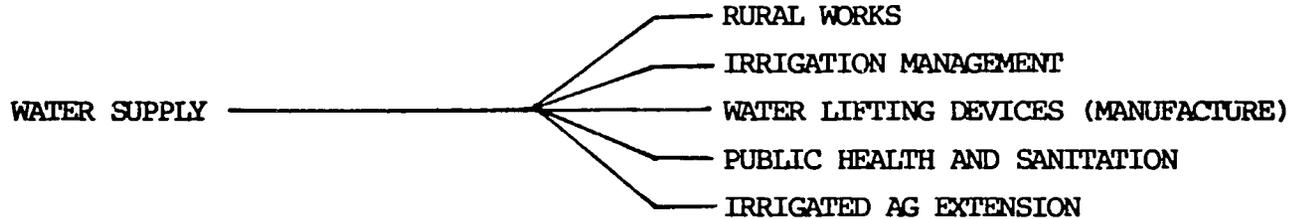
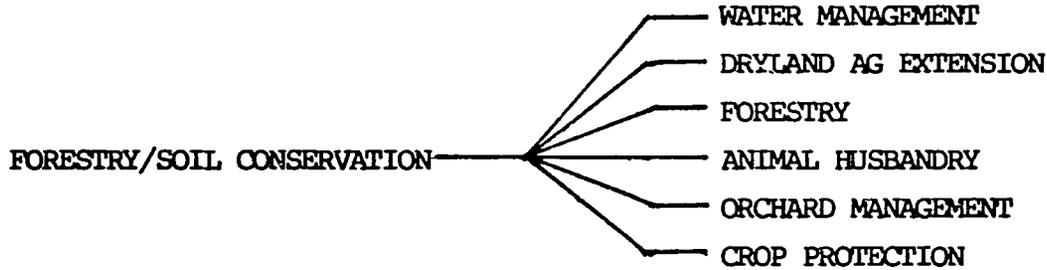
We see a number of logical areas of evolution from the initial assignments to future generations of Volunteers. These are presented in Figure 3 . Thus as the number of food systems PCVs in Mali increases over the years we see three kinds of expansion: expansion of the initial interventions to new regions within Mali; expansion into new program areas in the three pilot regions; and transfer of successful programs for modification to other Sahelian countries. The direction and rate of this expansion will be determined by PC/Mali Staff, collaborating government agencies and the Volunteers as the program is implemented.

The long term goal of the strategy is to expand unto some or all of the areas in Figure 3 , to replicate successful programs elsewhere and to produce an effective Peace Corps response to the problems of food systems in Mali.

POSSIBLE AREAS OF PROGRAM DEVELOPMENT

INITIAL FOCUS OF ACTIVITY

POTENTIAL FUTURE FOCI



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MANAGEMENT ISSUES

The development of new projects, the entry into the Timbuctou Region, the significant increase in Volunteer number, the institution of new systems- all have widespread management implications for Peace Corps/Mali.

Some of the issues are covered in the report prepared by the AFSI Assignment Team. This section presents the current situation, summarizes how the introduction of the AFSI changes it, outlines the issues and problems raised, and proposes solutions.

Current Situation:

As of June 1985 there are 78 Volunteers in Mali, distributed among 6 program as follows:

1. Integrated Rural Development:
 - Water Resources Management 19
2. Integrated Rural Development:
 - Improved Woodstoves 32
3. Forestry 8
4. Health Education 3
5. Math (Secondary) 7
6. Teacher Training 9

The PCD and programming APCDs work at the present with 12 different Min^Sistries and technical services as well as with 3 PVOs, USAID, and numerous external donors. Although the number of Volunteers has doubled in the past four years, there has been no increase in permanent programming and training staff. As a result, the PCD, APCDs and support staff, while doing an excellent job, are seriously over-extended and cannot, at this time handle the increase in Volunteer numbers projected for FY 1986.

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The other factors which will make it more difficult to integrate the AFSI into the current program by FY 1986 include the following:

1. There has been a complete turnover in the American staff (PCD, 2 of the 3 Programming APCDs and the PCMO) during May/June. At the present time no replacements have been named for the PTO and the APCD/ Ag and RD positions.
2. Mali is a difficult country to work in in terms of logistics and infrastructure: poor roads and communication networks, an inefficient bureaucracy, long distances between major centers, lack of basic infrastructure.

On the positive side, there is an element of programming continuity in the Malian APCD/Education Fafaran KEITA who has been with PC since 1973. He accompanied the Design Team on two of the three Regional trips (Ségou and Diré), actively participated in field visits and meetings and generally facilitated the mission. The excellent quality of the hard-working Malian staff and the high morale at the PC office will also help to offset some of the difficulties which the introduction of the AFSI will inevitably pose.

Issues and Problem Areas

1. Programming and Training Demands

The projected increase in Volunteer numbers and types of projects will place the following additional demands on the programming and training staff, over and above their present load:

- a. The placement of Volunteers in teams requires that substantially more time be devoted to site selection and job definition as Volunteers with complementary skills must be placed in contiguous villages to facilitate their working together.

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- b. Programming staff will be exploring new technical projects for program development as well as new geographical regions for possible expansion into underserved areas.
- c. New links will need to be forged with (1) technical Ministries and services (2) government administrators at all levels: local, regional and national (3) P O's and other donors.
- d. Opening up first the Diré area and then the entire Timbuctou Region is a high priority both for Peace Corps and for the GRM, but a full-time staff person must be assigned to Diré as Peace Corps involvement there entails careful programming.
- e. If the AFSI is to be extended into the other four Regions in Mali, feasibility studies and extensive programming need to be completed.
- f. Since the AFSI has the potential for Peace Corps-wide replicability, the Mali program will need careful monitoring and regular evaluations.
- g. The experimental nature of some of the assignment (the introduction of alternative water-lifting devices in Diré, for example) necessitates an on-going redefinition of some of the Volunteer assignments and adaptations of the new technologies
- h. Given the long-term approach implicit in this Initiative, Peace Corps/Mali must develop a better institutional memory: what has been tried before, successes and failures, adaptations of techniques and technologies, and dissemination of findings.

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- i. The emphasis that Peace Corps and the GRM place on skills transfer and local capacity-building means Peace Corps staff must assure that Malian counterparts are identified, trained if necessary, and briefed.
- j. Entry into the Timbuctou Region will necessitate the integration of Songhai and then Tamachek language and cross-cultural studies into training; this will require identification and training of language instructors and the development of new language and cross-cultural materials.
- k. On-going expansion of Volunteer assignments within the context of the AFSI will require new PST and IST models, including the development of Mali-specific technical materials.
- l. In order to train large numbers of skill-trained generalists in a variety of assignments and skills, Peace Corps/Mali must develop a phased series of training programs in a logical sequence, from PST (including SST) to IST
- m. PC/Mali staff will need to identify and set up at least one more village training site because
 - higher trainee numbers exhaust the capacity of one village and diffuse the benefits of village-based training
 - program diversification as well as expansion into new linguistic/cultural areas may require either region specific or job-specific training programs.
- n. A Mali-specific SST program will need to be developed for technical training in horticulture, soil conservation and forestry, and water resources management, including irrigation technology.

- o. Since most of the Volunteers will generate more demand for funding of small projects, PC staff must identify new sources and assist the Volunteers in using them.
- p. APCDs will need to devote considerable time to assuring that the host country agencies can and will support the increase in Volunteer numbers; development and negotiation of agency-specific agreements (Protocols d'Accord) with Peace Corps is essential.

2. Entry into the Diré Circle and the Timbuctou Region

Of the three areas visited by the Design Team, Diré was clearly the most in need and the most under-served. Due to limited staff and financial resources and logistical considerations, PC/M is not working anywhere in the Timbuctou Region, one of two Regions hit hardest by the drought.

With the introduction of the Food Systems Initiative and the possibility of additional resources, it will be feasible to expand into areas such as the Diré Circle where PC's activities will be highly visible and can have a significant impact on the agricultural sector. However, opening up this area will require a full-time APCD stationed in Diré. Given the distance from Bamako, the lack of a good communications systems, and the poor condition of the roads, especially during the rainy season, it would be impossible for a Bamako-based APCD to devote the time necessary to develop a viable program for the following reasons:

A collaborative framework must be established, initially with the Governor's office in Timbuctou, then with local authorities in the Diré Circle, including the Development Committee which is composed of the Commandant of the Circle, heads of

technical services and local leaders.

Extensive programming must be completed if Volunteers are to be assigned there in 1986. Although the Design Team spent eight days in Diré, this represented the first time that PC officially assessed the needs and explored the possibility of placing food systems Volunteers in this Region. The first programming task will be to identify one or more GRM agencies through which the four categories of Vs will work. The GRM representatives and the APCD will jointly define job descriptions, negotiate support requirements, determine numbers and select posts. It is anticipated that the group stationed in the Diré Circle will work closely with Africans; it is important that lines of authority and responsibility be defined to avoid confusion.

In addition to establishing collaborative links and developing the program, a third major task of the APCD will be to prepare for the arrival of the first group. Training needs must be identified and a training site chosen for the intensive Songhai language program which will take place during the latter part of the PST.

Fourth, the APCD must also supervise logistical support to the PSC who will be developing language and cross-cultural materials for the Diré area. Site surveys and setting up support systems (logistical medical, technical) for the Volunteers will also occupy much of his/her first year on the job. She/he will also play a major role in the design of the PST and in the selection and preparation of a site for the Songhai language training.

3. Other Budget Considerations.

Although PC/Mali budgeted for some increases in program and support costs for FY 86 and 87, (see pp.23-28.) their projections need to be revised as a result of the Design Team's recommendations if the staff is to continue to function efficiently and provide quality technical, material and personal support to Volunteers.

4. Funding for Small Projects.

External funding resources are presently available to individual Peace Corps Volunteers, and mechanisms have been developed by PC/Mali to assist Volunteers in using them. Many private voluntary organizations and governmental agencies make money available for community- initiated Small Projects.

The sources of funding used most often by PCVs are U.S. Government or private agencies, including CARE, Africare, Save the Children and Foster Parents Plan International. Also used extensively is the two-year old Small Projects Assistance Fund (SPAF) which is funded by USAID and provides \$40,000 annually for initiatives in food production, income generation and energy.

Most of the available resources are already being utilized extensively by the 80 PCVs now in country and will not be adequate if an additional 35- 40 Volunteers also need these resources.

5. Increased Work Load for the Administrative Section.

The workload of the APCD/Admin and his staff will increase in direct proportion to the number of new Volunteers and new staff who come on board. Given the difficulties of getting things done in Mali, the additional work required to set up

and maintain a regional office, and the necessity of providing support to PSCs, measures will need to be taken if the administrative staff is to continue to provide quality support.

Proposed Solutions

To address the five problem areas, the following actions need to be taken within the stated time frame (illustrated on p.19).

- I. Programming and Training demands
- A. To meet the increased demands that the AFSI will impose, it is recommended that PC/Mali expand their staff both by hiring new APCDs and by the judicious use of PSCs for particular technical areas.

PC/Mali currently has

- 1. APCD/Education and Small Enterprise Development (FSN).
- 2. APCD/P and T and Health (ETD: end of July 1985)
- 3. APCD/Ag and Rural Development (ETD: end of June 1985).

The FY 86 budget submitted to Washington proposes a fourth APCD position for an FSN.

The AFSI Design Team sees a need for two additional Bamako-based APCDs (1 FSN, 1 FP) and an APCD to be based in the Diré Circle of the Timbuctou Region (FP).

The justification for each position follows:

- 1. APCD/Regional Development (Diré) (FP)

This is a new position, which requires an experienced programmer and manager who can establish the PC program in the Timbuctou Region. In order of priority, this APCD will

- 1. Complete the program design and prepare for the arrival of the first group of food systems Volunteers in the Diré Circle of the Timbuctou Region.

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2. respond to requests for placing Vs in other sectors such as health and education in the Diré Circle
3. explore the possibilities for PC expansion into other Circles of the Timbuctou Region

An important role for this person will be to develop the institutional linkages with the local government agencies and administration.

This person would also see that a framework is set up for meeting the health, logistical and technical needs of the Vs first in the Diré Circle, then in the Timbuctou Region as PC expands.

The position requires a person with excellent programming skills, high French level, and good interpersonal skills.

2. APCD/Water Resource Management (FP)

This is a new Bamako-based position, for a person experienced in water supply for drinking and agricultural purposes. They will provide program support to the 18 Volunteers working with wells, small scale irrigation and water lift technology, and technical backup in areas related to water supply and use to the 15 gardening Volunteers and the 21 forestry Volunteers.

Given the stated need for improved water access and use at both the national and the village level, together with the development and refinement of Peace Corps Mali's water activities which the AFSI team is proposing, this is an essential new position. This person will also be responsible for programming for the suggested areas of future expansion such as rural works and developing links with GRM.

3. APCD/Forestry and Soil Conservation (FP)

The existing APCD for Agriculture/Rural Development is leaving at the end of June. We understand that Peace Corps/Washington is presently recruiting to fill this slot. We are suggesting that his replacement should be responsible for all the technical aspects of forestry, soil conservation and improved woodstove projects in Mali, providing input to the technical aspects of the PST and IST, technical backstopping to Volunteers and arranging for technical consultants as needed.

This APCD would also be responsible for establishing and maintaining contacts with the relevant Malian Government agencies and external donor agencies. The GRM considers this sector one of its top priorities and the forestry program is one of PC/Mali's fastest growing projects; with more than 20 Volunteers in the field by October 86, the integration of the improved wood stove Volunteers into the forestry/soil conservation program will increase the number of Volunteers to over thirty-five by October 1986. These activities justify an APCD Forestry/Soil Conservation.

4. APCD Programming, Monitoring and Evaluation (FP)

The existing APCD Health/Training will be leaving at the end of July. We are suggesting that Peace Corps/Washington fill this slot with an APCD Programming, Monitoring and Evaluation. If the Mali food systems program is to develop we foresee a role for an APCD, over and above the role of the technical APCDs. This person would be responsible for developing and implementing the team concept and for maintaining the long-range focus of the program activities.

If the proposed development into new program areas and building on previous Volunteers' efforts is to be institutionalized, someone has to be responsible for data collection and developing

the institutional memory; we foresee this person also serving as a resource and information specialist, collecting, synthesizing and making accessible relevant information for programming, training and technical backstopping of all the PC/Mali programs.

She/he would also be responsible for identifying possible areas of collaboration and funding sources for the existing and proposed future programs. Another important roll would be evaluating and monitoring programs and maintaining overall program quality. This person would require skills in PC programming, monitoring and evaluation and should have good French, both written and oral.

5. APCD/Agriculture (FSN)

Peace Corps Mali has already budgeted for a 1986, APCD Agriculture (FSN). Given new focus of the existing APCD/Agriculture (FP) position towards Forestry/Soil Conservation and the need for an APCD/Agriculture, we are recommending that this FSN position be recruited for as soon as possible. This would provide timely technical support to the development of the gardening program. Fifteen new Volunteers are proposed for FY 86 and recruitment of a FSN would remove the hiatus likely to occur if an FP was proposed for this position.

Gardening is a new program area for PC/Mali although ^{SOME}Volunteers have become involved in gardening activities. Prior to June 1986, the institutional arrangements for gardeners in the 3 regions have to be formalized, the program has to be developed, sites have to be selected and training packages developed. Given the diversity in crops, scales of production and ecological economic and structural constraints and opportunities among and between regions, program refinement and development of a new set of training materials will be a more than full-time job.

This person would fulfill all the usual roles of a technical APCD including technical support and backstopping, developing the institutional links and exploring new program areas such as community agricultural extension. They would also share skills and collaborate with the other APCDs.

6. APCD/Training (FSN)

The person filling this new position would be responsible for coordinating the expanded PST program and working with the technical APCDs to develop the new or modified ISTs in Water Supply, Forestry/Soil Conservation and Gardening. They would also be working with APCD/Diré to develop the new language and cross-cultural training for the area.

Given the expansion in Volunteer numbers, the increase in technical areas and the fact that the current APCD/Health and Training is already spending most of her time on training, we believe this new position is necessary and justified. The team has also attempted to program for Volunteer skill clusters with a high rate of fill. Recruitment of more generalist Volunteers increases the need for good appropriate technical training. We see this new position helping to address that need.

7. APCD/Education and Small Enterprise Development (FSN)

This position represents the only APCD slot in which neither the incumbent nor the scope of work changes.

B. In addition to these APCD positions, PC/Mali will need the expertise of 2 PSCs during FY 86 for the following tasks (See terms of reference pp.)

1. Development of Songhai and Tamachek language and cross-cultural materials (4 months)

2. Selection of water-lifting devices to be tried out by the Irrigation Tech Vs in the Diré area (6 months).

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II. Entry into a new Region.

The placement of Food Systems Volunteers into the Timbuctou Region, starting with the Diré Circle, will require a certain investment in time, energy and resources, but the long-term benefits will be impressive: there is an overwhelming need for the type of technical assistance that PC provides so well; the entry into Diré will be a test for the possibility of expansion into the entire Timbuctou Region; PC's efforts will have high visibility and a potentially significant impact on the agricultural sector.

It is therefore recommended that PC place an APCD in Diré and commit the resources necessary to establish the AFSI program there. (See "Additions to FY 86 Budget", p. 31)

Estimated costs for FY 86:

APCD Salary, benefits	\$35,000
APCD Residence, utilities	6,000
Support staff	9,000
Services and Supplies	15,000
Furniture, equipment	10,000
Set-up travel, other	5,000
	<hr/>
	\$74,000

III. Other Budget Considerations

In addition to the revised Budget request for FY 86 (see pp. 29-33), PC/Mali will need additional adjustments in both Volunteer Operations and Program Support if they are to train and place an additional 39 Volunteers.

Program Support

Total increase requested: \$128,000
(includes Diré office)

80 *mech*

Volunteer Operations

Total increase requested: \$9,400

(See pp. for line by line breakdown).

IV. Funding for Small Projects

By FY 86 the new food systems Volunteers will be looking for sources of funding for small community projects. In an attempt to address this need, at least partially, the Design Team recommends that the SPAF be increased to \$65,000 in FY 86 and \$100,000 in FY 87.

V. Increased Administrative Workload

PC/Mali's proposed FY 86 budget includes another secretarial position to share the additional workload generated by the increase in Volunteers numbers. In addition to this new position, the Design Team recommends that resources be committed to assuring that the computer is programmed and that at least 2 Malian staff are trained to use it.

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PROJECTED VOLUNTEER INPUT BY YEAR AND BY PROGRAM

<u>PROGRAM</u>	<u>Year 85</u>	<u>86</u>	<u>87</u>	<u>88</u>	<u>89</u>	<u>90</u>
Water Supply and Management	5	15	17	19	24	24
Forestry/Soil Conservation	8	13	15	17	16	18
Gardening/Agriculture	0	16	17	25	26	27
Improved Woodstoves	10	6	4	4	0	0
Small Enterprise Development	6	0	6	0	6	0
Community Health Education	0	5	5	5	5	5
Maths	9	7	7	7	7	7
College English	4	3	2	2	1	1
New Programs	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>10</u>	<u>15</u>
<u>TOTAL</u>	42	65	73	79	95	97

* These projections do not include expansion of the FSI into the other 4 regions. If resources are available, this expansion will commence in FY 87 in the Mopti region and the number of PCVs in-country will expand accordingly, reaching up to 200 by 1990.

Approximate no.
of Volunteers in country

103	120	135	154	167
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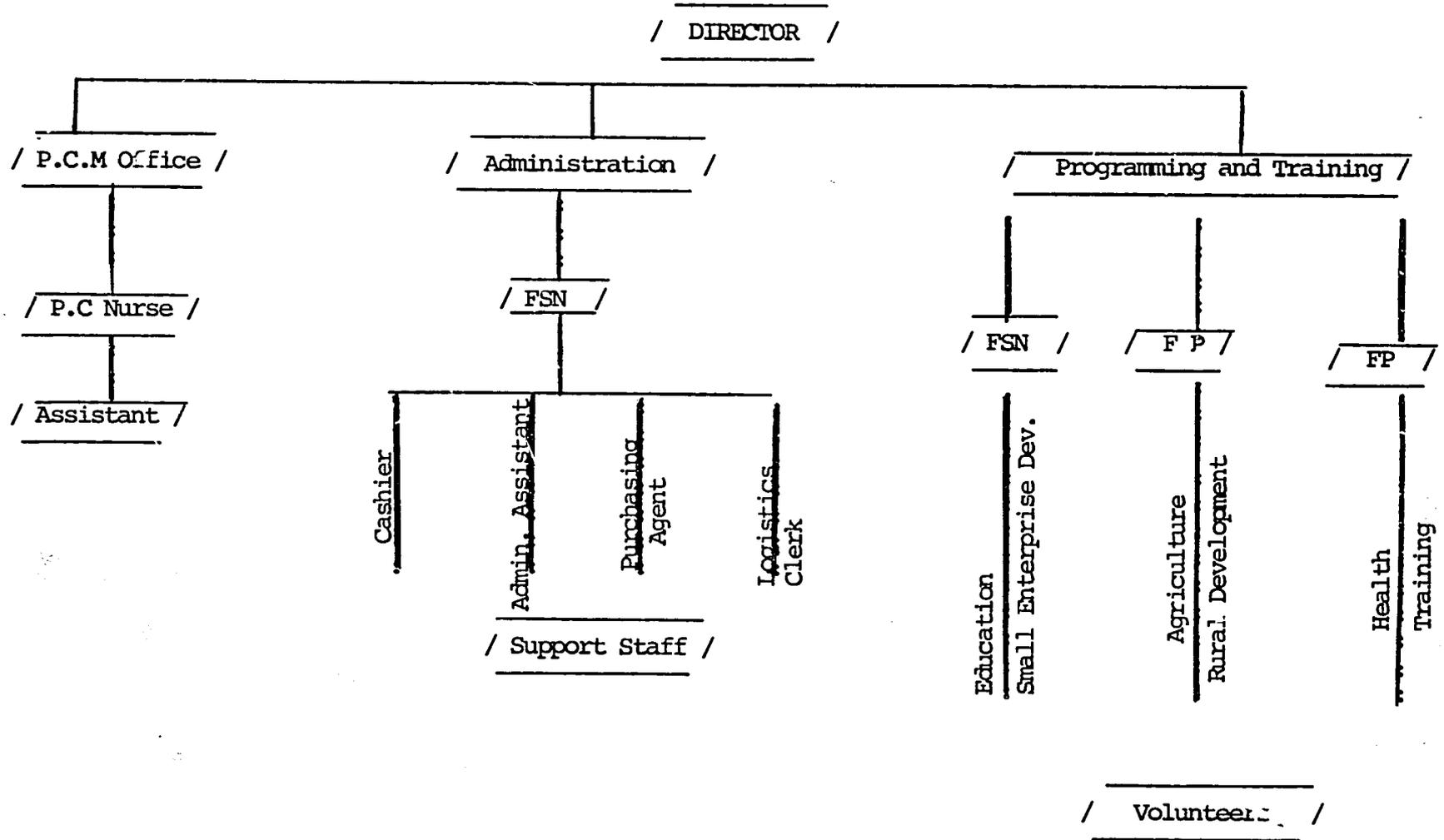
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PROJECTED VOLUNTEER INPUT IN THE 3 PILOT AREAS

<u>AREA</u>		85	86	87	88	89	90
Diré	1. Water.....	0	7	8	10	10	10
	2. Agriculture/Forestry.....	0	6	7	7	7	8
	3. New Programs.....	0	0	0	0	3	5
	TOTAL=..	0	13	15	17	20	23
Upper Niger Valley	1. Water	2	3	4	5	7	7
	2. Agriculture	0	5	5	8	10	10
	3. Forestry/Soil Conservat..	0	5	2	4	5	6
	4. New Programs.....	0	0	0	0	4	5
	TOTAL=..	2	13	11	17	26	28
Ségou	1. Water	3	5	5	5	7	7
	2. Agriculture.....	0	5	5	8	9	9
	3. Forestry/Soil Conservat..	0	2	3	3	5	5
	4. New Programs	0	0	0	0	3	5
	TOTAL =..	3	12	13	16	24	26

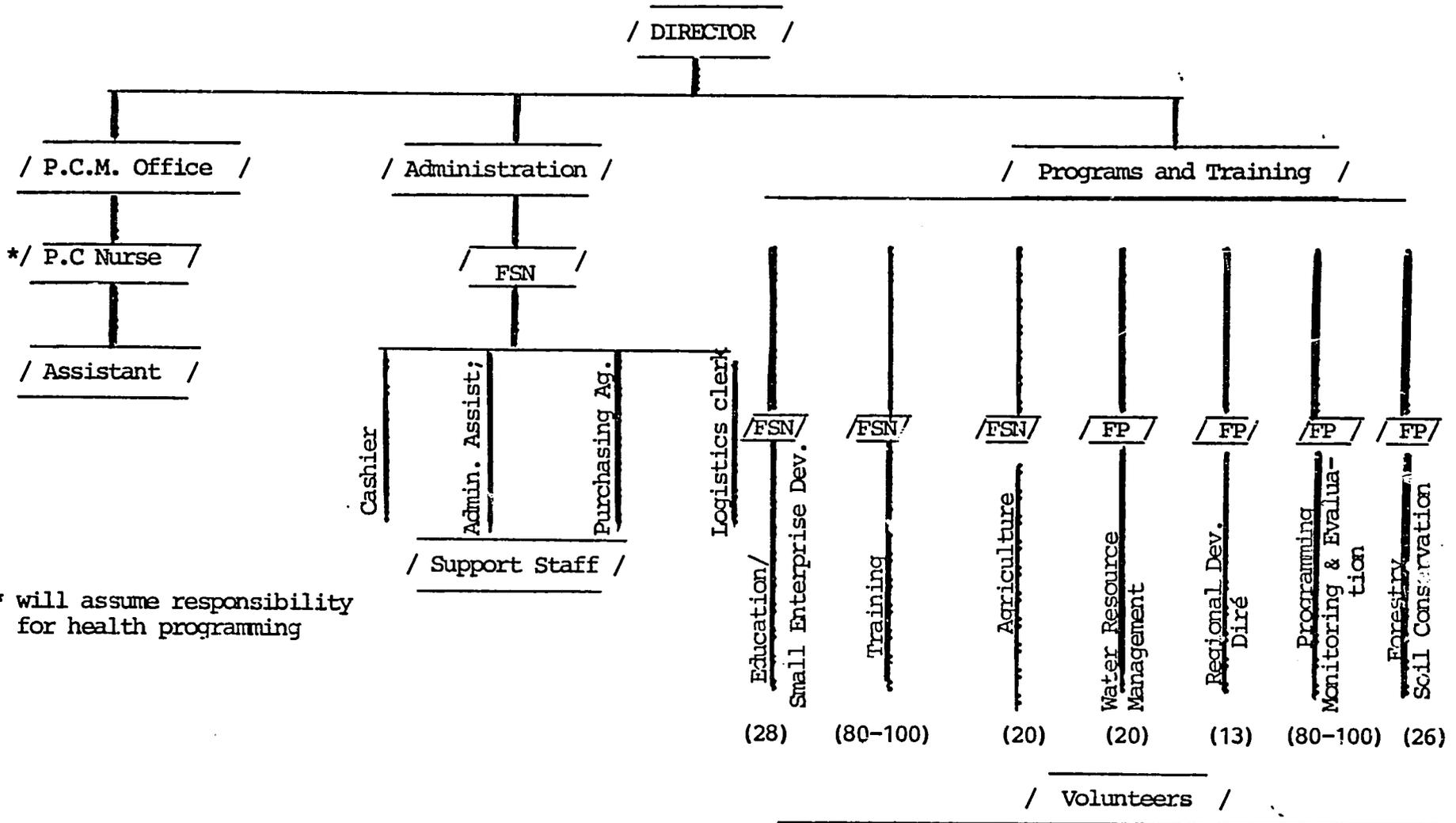
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ACTUAL STAFFING PATTERN : PEACE CORPS/MALI (FY 1985)



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PROPOSED REORGANIZATION : PEACE CORPS/MALI (FY 1986)



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* will assume responsibility for health programming

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TIME LINE OF DEVELOPMENT OF THE FOOD SYSTEMS PROGRAM (FY 86)

86
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REGION	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	APRIL
<u>Diré</u>	-	Determine extent and range of other donors' support.	Assign APCD/ Regional Development. Sign Protocol d'Accord.	Establish program with GRM. Following APCDs on board:	Collaborate with other agencies, especially Africa.	Develop preliminary TACs for program development.
<u>Séqou</u>	Revise TA/TACs	"	"	1. Water Resources 2. Programming, Monitoring, and Evaluation 3. Forestry and Soil Conservation. 4. Agriculture.	Sign Protocol d'Accord. Refine TA/TACs Develop PST/ICT Decide if SAVs are acceptable.	"
<u>Upper Niger Valley</u>	Revise TAs/TACs	"	Look at viability of HQ level PCV assignments; Sign Protocol d'Accord.		Refine TAs/TACs. Decide if SAVs are acceptable.	"

Gardening

(1987)	3 weeks in January	
With forestry	36 x 1 week =	
alone	15 x 1 week =	105 V-days
With water	33 x 1 week	

Small Enterprise Development

(1987)	4 days in March	
	4 x 4 days =	16 V-days

Improved Woodstoves

(1987)	1 week in February	
	15 x 7 days =	105 V-days

Health

(1987)	9 days in January	
	5 x 9 days =	45 V-days

Regional Volunteer meetings

Quarterly by region	4 days	
5 groups at 5 sites		
	C 80 x 4 days =	320 V-days

Trainer of Trainers

(1987)	1 week in March	
	30 x 7 days =	210 V-days

Close of Service in June

1986	35 x 3 days =	105 V-days
1987	35 x 3 days =	105 V-days

All Volunteer conference in June

1986	80 x 5 days =	400 V-days
1987	103 x 5 days =	515 V-days

SUMMARY OF T/V DAYS: FY 86

<u>Event</u>		<u>T/V Days</u>
SST		987
ICT		5,796
ISTs/Volunteer conferences		1,439
		<hr/>
		8,222 V-days
ICT (PSC)	Budgeted	\$163,800
	Cost/V day =	\$28
ISTs/Volunteer conferences		
	Budgeted	\$76,900
	Cost/V-days =	\$54

FY 87

SST		1,092
ICT		6,468
ISTs/Vol conferences		2,912
		<hr/>
		10,472 V-days
ICT (PST)	Budgeted	\$163,800
	Cost/V-day =	25.32
ISTs/Vol conferences	Budgeted	\$76,900
	Cost/V-day	\$26.40

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FY 86 BUDGET

SUBMITTED BY PC/MALI

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SUMMARY DATA SHEET - APPROPRIATED FUNDS

Form A (Rev. 11/82)

Entry: Mali

FY: 86

Level: R/R

Appropriated Amounts	Total	Exposure	Program Indicators
<u>Program Support</u>	<u>Budget</u>	<u>Rate</u>	<u>Staffing</u>
FP Sal. & Ben.	11641.41	N/A	61. FP: Staff-Years 1031.01
FP Allowances	1101.51	1.111	62. On board EOY 1031
FN Sal. & Ben.	1401.91	11.010	63. FN: Staff-Years 1041.01
Other Sal. & Ben	101.12	1.111	64. On board EOY 1041
In-Country Travel	101.12	1.111	<u>Trainees</u>
International Travel	101.12	N/A	71. Trainee Input 10161
Rents and Utilities	1611.41	1.111	72. ICT T-weeks 15191
Serv. & Supp.	1757.18	1.111	73. USPSC-weeks 13181
Furn. & Equip.	141.31	1.111	74. USPSC-trips 10121
PROGRAM SUPPORT TOT	13571.31		75. Trainee-ETs 10181
<u>Volunteer Operations</u>			<u>Volunteers</u>
<u>PST</u>			81. PCV Wrkshps/Conf 1111
Trainer Sal./Ben.	14101.12	1.111	82. V-days 1141391
Trainer Travel	191.31	1.111	83. Tutoring hrs 11111
Space, Supp. & Serv.	1611.10	1.111	84. Ts to Vs 1571
Trainee Costs	14101.11	1.111	85. Volunteer-ETs 10151
PST SUBTOTAL	115701.41		86. COSs 14151
<u>IST & Conf.</u>			87. V-Years 18121.181
Trainer Sal./Ben.	12101.10	1.111	88. Extendees 10121
Trainer Travel	161.41	1.111	<u>International Travel</u>
Space, Supp. & Serv.	12141.19	1.111	91. # Trips: 10151
Volunteer Costs	11621.31	1.111	
Volunteer Tutoring	1151.15	1.111	Proposed Activities to be Separately Funded (attach specific proposals):
IST & CONF. SUBTOTAL	116191.19		<u>Stateside or Third-Ctry Training</u>
<u>Volunteer Support:</u>			93. # Groups: 111
Settling-in Allow.	1221.18	1.111	94. # Trainees: 1111
Leave Allow.	1231.18	N/A	95. # Trainee-wks: 11111
Living Allow.	110101.19	1.111	<u>U.S. Trainers (PST/IST)</u>
COS and ET Travel	1871.10	N/A	96. USPSC-weeks: 111
Extension Travel	13161.10	N/A	97. USPSC trips: 111
In Country Travel	1211.15	1.111	<u>Other:</u>
Health Costs	13161.18	1.111	98. _____ 1111.11
Supplies, Service, Equip	18101.31	1.111	99. _____ 1111.11
Other	13157.41	1.111	
VOL. SUP. SUBTOTAL	161321.15		
VOL. OPS. TOTAL	1181521.18		

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FY 86 BUDGET - SUBMITTED BY PC/MALI
VOLUNTEER YEAR CHART

FY 86

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1986

1 Country Mali
2 Date _____

3 T Attrition Rate _____
4 V Attrition Rate _____
5 Extension Rate _____

TRAINEE & VOLUNTEER STATUS	FIRST QUARTER				SECOND QUARTER				THIRD QUARTER				FOURTH QUARTER			
	OCT	NOV	DEC	TOTAL	JAN	FEB	MARCH	TOTAL	APRIL	MAY	JUNE	TOTAL	JULY	AUG	SEP	TOTAL
6 Trainee Requests																
7 Trainees on Board-Begin														63	62	
8 Trainee Input													65			
9 Trainee Early Terminations													2	1	5	8
10 Trainees Become Volunteers															57	
11 Trainees on Board-End													63	62	0	
12 Volunteers on Board-Begin	95	85	85	265	84	84	83	516	83	82	82	763	80	72	72	987
13 Trainees Become Volunteers															57	57
14 Volunteers Transferring In																
15 Volunteer Early Terminations			1	1		1		2	1		2	5				5
16 Volunteers Transferring Out																
17 Volunteers Complete Service	10			10				10				10	9		26	45
18 Volunteers on Board-End	85	85	84	254	84	83	83	504	82	82	80	748	71	72	103	994
19 Volunteer Years				21.17				42.00			62.33					82.83

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JUSTIFICATION - REQUIREMENT LEVEL

As stated in the narrative design of the Africa Food Systems Initiative is presently only evolving leaving major question marks around almost all planning and budget elements. Volunteer numbers, support options, resources, travel, training, staffing patterns and nearly every other element is up in the air. Despite this feeling of operating in a vacuum we have attempted to base both budget levels on the premise that certain current Peace Corps Mali activities will be integrated into the AFSI.

Based on early negotiations with the GRM we are proposing an additional T-input of 22 to be added to our planning level of 43. As over half of the planning level T's were to be integrated into the AFSI (27), this will put a total of 49 of 65 trainees under the AFSI. At this level we are also budgeting for 5 additional extensions which would likewise come under the AFSI.

At this level funds are requested for :

PROGRAM SUPPORT :

Line 1 - anticipated staff salary - level including PCD and APCD replacement	39.2
Line 2 - increase in FP allowance	3.5
Line 3 - step increases for FSN staff.....	.5
Line - to hire and train new AFSI APCD/Ag (FSN).....	10.8
- to hire new secretary to support additional AFSI workload.....	3.4
Line 7 - to pay anticipated increases in rent and utilities..	7.5
Line 8 - to pay increase in maintenance based on AFSI space and workload increase	11.9

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Line 9 - to purchase furniture for new APCD (AFSI) and secretary's secretary's offices	3.0
- construction of new storeroom necessitated by Volunteer increase	1.0
- installation of new security lighting system at office.....	1.0
Line 10 - Total Program Support	80.8

VOLUNTEER OPERATIONS :

PST

Line 21 - to cover costs of two additional USPSCs in technical areas to be determined	4.0
Line 22 - Trainer travel and per diem	3.0
Line 23 - PST site preparation for AFSI	12.4
Line 24 - AFSI Volunteer Costs	14.2
Total PST	33.6

IST

Line 31 - salary increases to PSC staff (admin ass't, secretaries)	1.5
Line 32 - Trainee travel	6.4
Line 33 - To support additional AFSI-specific	9.0
ISTs in : horticulture (4.0) water (2.0) management (1.0)	
Line 35 - To contract 7 additional language teachers for PST	5.0
- supplemental language training5
Line 36 - Total	22.4

VOLUNTEER SUPPORT :

Line 41 - settling-in new AFSI PCVs	7.8
Line 42 - leave allowance extensions	1.3
Line 43 - living allowance - extensions.....	11.1

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Line 44 - ET/COS	7.5
Line 45 - 5 extensions	15.0
Line 46 - in-country travel	0.5
Line 47 - additional health costs extensions/ trainees	13.4
Line 48 - housing for PCVs.....	22.9
Line 50 - Total Volunteer Support.....	113.7

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FY 86 BUDGET

PROPOSED BY AFSI DESIGN TEAM

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FY 86 BUDGET - PROPOSED BY AFSI DESIGN TEAM

SUMMARY DATA SHEET - APPROPRIATED FUNDS

Form A (Rev. 11/82)

Country: Mali

FY: 1986

Level: 111

Appropriated Amounts	Total	Exposure	Program Indicators
Program Support	Budget	Rate	Staffing
1. FP Sal. & Ben.	21191.14	N/A	61. FP: Staff-Years <u>111.11</u>
2. FP Allowances	1171.15	1.111	62. On board EOY <u>11</u>
3. FN Sal. & Ben.	16101.12	11.1010	63. FN: Staff-Years <u>111.11</u>
4. Other Sal. & Ben	10101.10	1.111	64. On board EOY <u>11</u>
5. In-Country Travel	1151.10	1.111	<u>Trainees</u>
5. International Travel	10101.10	N/A	71. Trainee Input <u>1111</u>
7. Rents and Utilities	1771.14	1.111	72. ICT T-weeks <u>11111</u>
8. Serv. & Supp.	19101.18	1.111	73. USPSC-weeks <u>1111</u>
9. Furn. & Equip.	1141.13	1.111	74. USPSC-trips <u>1111</u>
10. PROGRAM SUPPORT TOT	14851.13		75. Trainee-ETs <u>1111</u>
<u>Volunteer Operations</u>			<u>Volunteers</u>
<u>PST</u>			81. PCV Wrkshps/Conf <u>111</u>
1. Trainer Sal./Ben.	14161.19	1.111	82. V-days <u>11111</u>
2. Trainer Travel	1191.13	1.111	83. Tutoring hrs <u>111111</u>
3. Space, Supp. & Serv.	16161.15	1.111	84. Ts to Vs <u>1111</u>
4. Trainee Costs	14101.11	1.111	85. Volunteer-ETs <u>1111</u>
5. PST SUBTOTAL	116131.18		86. COSs <u>1111</u>
<u>IST & Conf.</u>			87. V-Years <u>1111.11</u>
1. Trainer Sal./Ben.	1211.13	1.111	88. Extendees <u>1111</u>
2. Trainer Travel	1191.14	1.111	<u>International Travel</u>
3. Space, Supp. & Serv.	1271.19	1.111	91. # Trips: <u>11</u>
4. Volunteer Costs	1121.13	1.111	
5. Volunteer Tutoring	1161.12	1.111	
6. IST & CONF. SUBTOTAL	117161.19		
<u>Volunteer Support:</u>			Proposed Activities to be Separately Funded (attach specific proposals):
1. Settling-in Allow.	1221.18	1.111	<u>Stateside or Third-Ctry Training</u>
2. Leave Allow.	1231.18	N/A	93. # Groups: <u>111</u>
3. Living Allow.	118181.19	1.111	94. # Trainees: <u>1111</u>
4. COS and ET Travel	1871.10	N/A	95. # Trainee-wks: <u>11111</u>
5. Extension Travel	1361.10	N/A	<u>U.S. Trainers (PST/IST)</u>
6. In Country Travel	1211.15	1.111	96. USPSC-weeks: <u>111</u>
7. Health Costs	1361.12	1.111	97. USPSC trips: <u>111</u>
8. Supplies, Service, Equip	1801.13	1.111	<u>Other:</u>
9. Other	11351.14	1.111	98. <u>1111.11</u>
10. VOL. SUP. SUBTOTAL	161321.15		99. <u>1111.11</u>
11. VOL. OPS. TOTAL	118911.12		

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FY 1986

ADDITIONS TO PROGRAM SUPPORT

Line 1: Anticipated addition of 2 new APCDs at start FY'86

Diré, program development APCD	30,000
Bamako, water resource management APCD.....	25,000
	<hr/>
	55,000

Line 2: Increase in FP allowance 7,000

Line 3: FN salaries and benefits

1 FSN APCD Training	11,000
1 Program/Admin Assistant, Diré	3,500
1 Secretary, Diré.....	3,000
1 Driver/Mechanic	2,500
	<hr/>
	20,000

Line 5: Set up travel for Diré 5,000

Line 7: 1 APCD residence, Bamako, rent utilities..... 10,000

1 APCD residence, Diré, rent utilities..... 6,000

Line 8: Diré service and supplies 15,000

Line 9: Furniture and equipment 10,000

<u>TOTAL</u>	DOLS.	128,000
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TRAINING BUDGET FY 86

Increases requested for:

PST

<u>Line 21</u>	1 additional horticulture coordinator		
		250 x 8 =	\$2,000
	1 additional logistics coordinator		
		120 x 24	2,880
	1 additional language coordinator		
		120 x 12	1,440
	1 additional secretary		
		50 x 12	600
			<hr/>
			\$6,920
<u>Line 23</u>	Additional supplies and services to prepare Diré PST site		\$5,500
			<hr/>
	Total increase for PST		\$12,420

IST/Conferences

<u>Line 31</u>	Increase in administration costs =		500
<u>Line 32</u>	Trainee travel =		3,000
<u>Line 33</u>	Addition to Forestry IST =		3,000
<u>Line 35</u>	3 additional Songhai teachers =		2,400
	Additional language training =		500
			<hr/>
	Total increase for IST		\$9,400

GRAND TOTAL= \$21,820

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FY 87 BUDGET

SUBMITTED BY PC/MALI

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SUMMARY DATA SHEET - APPROPRIATED FUNDS

Form A (Rev. 11/82)

Country: Mali

FY: 1987

Level: VKVA

Appropriated Amounts	Total	Exposure	Program Indicators
Program Support	Budget	Rate	Staffing
1. FP Sal. & Ben.	1164.14	N/A	61. FP: Staff-Years 1031.01
2. FP Allowances	112.15	11.000	62. On board EOY 1031
3. FN Sal. & Ben.	140.19	21.000	63. FN: Staff-Years 104.12
4. Other Sal. & Ben	100.10	11.000	64. On board EOY 104
5. In-Country Travel	100.10	1.111	<u>Trainees</u>
6. International Travel	100.10	N/A	71. Trainee Input 1065
7. Rents and Utilities	162.10	1.111	72. ICT T-weeks 1559
8. Serv. & Supp.	175.18	1.111	73. USPSC-weeks 1318
9. Furn. & Equip.	115.10	1.111	74. USPSC-trips 102
0. PROGRAM SUPPORT TOT	1357.16		75. Trainee-ETs 1018
<u>Volunteer Operations</u>			<u>Volunteers</u>
<u>PST</u>			81. PCV Wrkshps/Conf 111
1. Trainer Sal./Ben.	140.10	1.111	82. V-days 14139
2. Trainer Travel	119.13	1.111	83. Tutoring hrs 11001
3. Space, Supp. & Serv.	161.10	1.111	84. Ts to Vs 100
4. Trainee Costs	140.11	1.111	85. Volunteer-ETs 157
5. PST SUBTOTAL	1157.14		86. COSs 1015
<u>IST & Conf.</u>			87. V-Years 190.16
1. Trainer Sal./Ben.	120.18	1.111	88. Extendees 1012
2. Trainer Travel	116.14	1.111	<u>International Travel</u>
3. Space, Supp. & Serv.	124.19	1.111	91. # Trips: 11
4. Volunteer Costs	112.13	1.111	
5. Volunteer Tutoring	115.15	1.111	
5. IST & CONF. SUBTOTAL	1169.19		Proposed Activities to be Separately Funded (attach specific proposals):
<u>Volunteer Support:</u>			<u>Stateside or Third-Ctry Training</u>
1. Settling-in Allow.	122.18	1.111	93. # Groups: 11
2. Leave Allow.	126.11	N/A	94. # Trainees: 111
3. Living Allow.	1217.16	1.111	95. # Trainee-wks: 1111
4. COS and ET Travel	187.10	N/A	<u>U.S. Trainers (PSY/IST)</u>
5. Extension Travel	136.10	N/A	96. USPSC-weeks: 111
6. In Country Travel	124.10	1.111	97. USPSC trips: 11
7. Health Costs	143.17	1.111	<u>Other:</u>
8. Supplies, Service, Equip	100.10	1.111	98. _____ 111.11
9. Other	153.16	1.111	99. _____ 111.11
10. VOL. SUP. SUBTOTAL	1711.18		
11. VOL. OPS. TOTAL	1193.11		

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VOLUNTEER YEAR CHART

FY 87

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3 T Attrition Rate _____
 4 V Attrition Rate _____
 5 Extension Rate _____

1 Country Mali
 2 Date _____

TRAINEE & VOLUNTEER STATUS	FIRST QUARTER				SECOND QUARTER				THIRD QUARTER				FOURTH QUARTER			
	OCT	NOV	DEC	TOTAL	JAN	FEB	MARCH	TOTAL	APRIL	MAY	JUNE	TOTAL	JULY	AUG	SEP	TOTAL
6 Trainee Requests																
7 Trainees on Board-Begin														63	62	
8 Trainee Input													65			
9 Trainee Early Terminations													2	1	5	8
10 Trainees Become Volunteers															57	57
11 Trainees on Board-End													63	62	0	
12 Volunteers on Board-Begin	103	93	93	289	92	92	91	561	91	90	90	835	88	79	79	1081
13 Trainees Become Volunteers															57	57
14 Volunteers Transferring In																
15 Volunteer Early Terminations			1	1		1		2	1		2	5				5
16 Volunteers Transferring Out																
17 Volunteers Complete Service	10			10				10				10	9		26	45
18 Volunteers on Board-End	93	93	92	278	92	91	91	552	90	90	88	820	79	79	110	1088
19 Volunteer Years				23.16				46.00				68.33				90.67
20 Volunteers Extending													4		8	12

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FY 87 BUDGET

PROPOSED BY ASFI DESIGN TEAM

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SUMMARY DATA SHEET - APPROPRIATED FUNDS

Form A (Rev. 11/82)

Entry: MALI

FY: 87

Level: 111

Appropriated Amounts	Total	Exposure	Program Indicators
Program Support	Budget	Rate	Staffing
1. FP Sal. & Ben.	21191.41	N/A	61. FP: Staff-Years 151.101
2. FP Allowances	1171.51	1.111	62. On board EOY 151
3. FN Sal. & Ben.	1601.91	1.10101	63. FN: Staff-Years 151.101
4. Other Sal. & Ben	1001.12	1.111	64. On board EOY 151
5. In-Country Travel	1151.01	1.111	<u>Trainees</u>
6. International Travel	1001.01	N/A	71. Trainee Input 177
7. Rents and Utilities	1791.41	1.111	72. ICT T-weeks 1131412
8. Serv. & Supp.	1901.81	1.111	73. USPSC-weeks 1111
9. Furn. & Equip.	1151.31	1.111	74. USPSC-trips 1111
10. PROGRAM SUPPORT TOT	14881.31		75. Trainee-ETs 1111
<u>Volunteer Operations</u>			<u>Volunteers</u>
<u>PST</u>			81. PCV Wrkshps/Conf 111
1. Trainer Sal./Ben.	14161.91	1.111	82. V-days 11111
2. Trainer Travel	1191.31	1.111	83. Tutoring hrs 111111
3. Space, Supp. & Serv.	1661.51	1.111	84. Ts to Vs 167
4. Trainee Costs	1401.11	1.111	85. Volunteer-ETs 1151
5. PST SUBTOTAL	11631.81		86. COSs 145
<u>IST & Conf.</u>			87. V-Years 191.151
1. Trainer Sal./Ben.	1211.31	1.111	88. Extendees 112
2. Trainer Travel	1191.41	1.111	<u>International Travel</u>
3. Space, Supp. & Serv.	1271.91	1.111	91. # Trips: 111
4. Volunteer Costs	1121.31	1.111	
5. Volunteer Tutoring	1161.01	1.111	
6. IST & CONF. SUBTOTAL	117161.91		
<u>Volunteer Support:</u>			Proposed Activities to be Separately Funded (attach specific proposals):
1. Settling-in Allow.	1261.81	1.111	<u>Stateside or Third-Ctry Training</u>
2. Leave Allow.	1261.31	N/A	93. # Groups: 111
3. Living Allow.	121191.61	1.111	94. # Trainees: 1111
4. COS and ET Travel	1871.12	N/A	95. # Trainee-wks: 11111
5. Extension Travel	1316.10	N/A	<u>U.S. Trainers (PST/IST)</u>
6. In-Country Travel	1241.21	1.111	96. USPSC-weeks: 111
7. Health Costs	1391.61	1.111	97. USPSC trips: 111
8. Supplies, Service, Equip	1101.12	1.111	<u>Other:</u>
9. Other	1531.61	1.111	98. 1111.11
10. VOL. SUP. SUBTOTAL	171131.11		99. 1111.11
11. VOL. OPS. TOTAL	119711.81		

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FY 87 BUDGET - PROPOSED BY AFSI DESIGN TEAM

VOLUNTEER YEAR CHART

FY 87

101

1 Country MALI 3 T Attrition Rate _____
 2 Date _____ 4 V Attrition Rate _____
5 Extension Rate _____

TRAINEE & VOLUNTEER STATUS	FIRST QUARTER				SECOND QUARTER				THIRD QUARTER				FOURTH QUARTER			
	OCT	NOV	DEC	TOTAL	JAN	FEB	MARCH	TOTAL	APRIL	MAY	JUNE	TOTAL	JULY	AUG	SEP	TOTAL
6 Trainee Requests																
7 Trainees on Board-Begin														73	82	
3 Trainee Input													75			
9 Trainee Early Terminations													2	1	5	8
10 Trainees Become Volunteers															67	67
11 Trainees on Board-End													73	72		
12 Volunteers on Board-Begin	103	93	93	289	92	92	91	564	91	90	90	835	88	79	79	1081
13 Trainees Become Volunteers															67	67
14 Volunteers Transferring In																
15 Volunteer Early Terminations			1	1		1		2	1		2	5				5
16 Volunteers Transferring Out																
17 Volunteers Complete Service	10			10				10				10	9		26	45
18 Volunteers on Board-End	93	93	92	278	92	91	91	552	90	90	88	820	79	79	120	1098
19 Volunteer Years				23.16				46.00				68.33				91.5
20 Volunteers Extending													4		8	12

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RECOMMENDATIONS FOR TRAINING

If the PCVs coming on board under the auspices of the AFSI are to be effective in their assignments, their training from PST to IST to COS must be carefully designed, especially for the skill-trained generalists. We suggest some modifications in both PST and ISTs to accommodate the team concept and some of the new activities the PCVs will be doing. We believe that these modifications will help PC/Mali to build on the successful programs they already have. (See Proposed Training Schedule, p.17)

I. PST (Pre-Service Training)

All PC/Mali trainees participate in the Summer Omnibus, an in-country, village-based training program which does an excellent job of providing Volunteers with the language skills, cross-cultural orientation and community development philosophy necessary for establishing their credibility in the Malian context. We do not envisage any major changes in the in-country training. (See p.19 for the model now being used for the in-country part of the 1986 PST)

We do recommend, however, that prior to ICT, all the trainees for the food systems projects participate in an intensive Stateside technical training program (SST). (See PST Schedule, p.18)

A. SST

To provide the type of training required for these assignments, the SST must be Mali-specific and must focus on

-Gardening; Water Supply; Forestry/Soil Conservation

The same contractor should design and implement the program. The ideal situation would be to have a contractor who could (1) assist PC/Mali in the final program development and site selection in Mali prior to SST and then (2) follow through on the technical component during the in-country training and the in-service training 3-4 months after SST.

The suggested time frame for the SST is three weeks in June, 1986. This would allow for recruitment of some 1986 graduates and would integrate well into Mali's training calendar as ICI runs from July to September.

The best location is the Southwestern States. This would allow training in field techniques under climatic conditions approximating parts of Mali. It is obviously difficult to find physical conditions and skilled trainers in water supply, forestry and horticulture in one spot. It may be more useful to design a good technical curriculum, combined with Mali-specific information, then to find a suitable venue for presenting a more theoretical program and fly ⁱⁿ good trainers with relevant experience to that site. The number of trainees would be

-45 to 50 in FY 86

-50 to 55 in FY 87

Areas of concentration to be developed in the training design by the contractor include

1. Horticulture
2. Forestry/soil conservation
3. Water supply
4. Mali conditions
5. PC/Mali's strategy and the trainees' part in it.
6. Community development.

109A #4

A suggested approach is to provide community organizing, communication techniques and skill transfer to each of the technical groups. In the job-specific training, the contractor should include:

- likely problem areas to be encountered
- alternative potential solutions
- core information in detail
- introduction to potential program development areas

The teaching techniques used will also be outlined by the contractor in the training program. Suggestions include group problem solving, hands-on techniques, and lectures followed by discussions and technical handouts for future reference.

The trainers selected by the contractor should be proficient in their field and must have had relevant experience working at the level of Peace Corps interventions, using the kinds of techniques which Volunteers will be using.

The deadline for preparation of the training plan is December, 1986, including budgets, training materials required and responsibilities for logistics and procurement. It should also include a format for evaluation of trainees and the training program, together with a mechanism for incorporating training suggestions for both post-SST and an IST after the first six months of Volunteers service.

- B. Immediately following the SST, with its emphasis on technical knowledge and skills, the group will arrive in Mali for the village based in-country training (ICT), focusing on language acquisition and cross-cultural adaptation.

They will join the rest of the Mali training group and follow basically the same schedule throughout. At one point, however,

the trainees assigned to Diré will go to the Timbuctou Region for an intensive Songhai language program. This may be scheduled for the last phase of the Omnibus program. . The technical sections of the design now used will need adapting to meet the needs of the new kinds of Volunteers. The live-ins should preferably be with a Volunteer already working in the area of the trainee's assignment, i.e. forestry, water or gardening. The site visits will be somewhat different for each type of Volunteer although some of the site visits can probably be profitably combined, eg. visits to irrigated gardens.

The necessity of learning sufficient language skills to function means that probably little can be added to the existing 56 hours of technical training. Areas to highlight include the overall philosophy of the food systems program, techniques for integrated team work, the potential areas of future interventions, and the concept of building a base for future Volunteers' activities. (See p. for a generic Statement of Work for the three area-specific Technical Coordinators).

PST: Broad Goals and Objectives For Technical
Training During PST (SST, ICT)

Gardening

- A. Stateside: By the end of SST, the trainee will demonstrate that she/he has the ability to
1. Describe the major types of agricultural production in Mali.
 2. Use a variety of extension techniques, such as group meetings, field visits, demonstration plots, on-farm trials.
 3. Identify a range of crop species grown in Mali, including indigenous vegetables and condiments.
 4. Briefly outline the cultural requirements for the major crops grown.
 5. Troubleshoot the major vegetable production problems in Mali including identification of the field symptoms of the major pests and diseases, nutrient deficiencies and drought.
 6. Describe the major soil types in Mali and their potential and limitations for production.
 7. Correctly apply the common fertilizers found in Mali and explain their effects.
 8. Demonstrate an awareness of the requirements for planning a production season, including crop scheduling, inputs required and their timing.
 9. Rank crops into cold season and hot season crops by water requirement and by length of growing season.
 10. Appreciate the inter-relationships between the diverse agricultural activities in Mali.
 11. Suggest and discuss the pros and cons of various types of storage and conservation techniques for food crops.

112 117

12. Describe the inter-relationships between food and nutrition.

B. In-Country training: By the end of ICT, the trainee will demonstrate that she/he has the ability to

1. During field trips, identify and name the various uses of the local crops and their importance in the local economy.
2. Name the major soil types and their limitations and potential for agricultural production.
3. Discuss the various approaches to a village/regional agricultural survey, with their advantages and disadvantages, and demonstrate the ability to make a synthesis of survey data and a preliminary list of problem areas and potential interventions.
4. Show an awareness of the reasons for the types of agriculture found in Mali and which of the major constraints are potentially resolvable.
5. Be sensitive to village norms and needs and to foresee the repercussions of his/her activities.
6. Review and place in a Malian context the technical information received in the SST.

Forestry and Soil Conservation.

A. Stateside: By the end of SST, the trainee will demonstrate that she/he has the ability to

1. State the prerequisites which must be met before a mini-nursery should be established.
2. Establish mini-nurseries.
3. Keep accurate records of all nursery activities.
4. State the silvicultural requirements of indigenous and exotic tree and shrub species found in Mali.
5. Describe the theory behind how windbreaks, berms on contour lines, terracing etc. decrease soil erosion.

6. Correctly use a hose-level to locate contour lines.
7. Establish berms on contour lines.
8. Establish check dams in gullies or small seasonal streams.

B. In-Country: By the end of ICT, the trainee will demonstrate that she/he has the ability to:

1. Identify on site indigenous and exotic tree and shrub species commonly found in Mali and state local uses and name of the trees.
2. Identify soil types and the characteristics associated with these soils.
3. Survey villages to assess their interest in reforestation activities, species preference, views on why previous reforestation efforts failed, ideas on soil erosion problems.
4. Increase villagers interest in reforestation projects.
5. Teach farmers how to plow their fields along the contour lines.
6. Establish live-fences from cuttings of local tree and shrub species.
7. Work with a team of PCTs and others to look at the whole picture rather than an individual task.

Water Supply/Sanitation

- A. Stateside: By the end of SST, the trainee will demonstrate that she/he has the ability to:
1. State the basic theory of ground water availability and its relationship to geology of an area.
 2. Briefly outline the basic theory of reinforced concrete design and construction particularly as it relates to well construction.
 3. Describe the theory of the relationship between water, sanitation and health, particularly the oral-fecal route of disease - transmission and control of water-borne diseases.
 4. Demonstrate health education techniques using locally available tools.
 5. Demonstrate safety in well digging and construction.
 6. Prepare estimates of materials and labor needed for individual projects.
 7. Work with a team of PCTs and others to look at the whole picture rather than an individual task.
- B. In-country training: By the end of ICT, the trainee will demonstrate that she/he has the ability to:
1. Demonstrate the different methods of well construction methods currently being used in Mali, and describe their relative advantages and disadvantages.
 2. Describe the different methods of well digging techniques in different types of soil conditions: clay, sand, rock, etc.
 3. Describe how the different hand pump models available in Mali operate, their comparative advantages and disadvantages and prices.

4. Correctly mix and manage concrete at a work site.
5. Prepare reinforced steel cagings.
6. Organize and direct work crews.
7. Prepare a logical proposal for external funding.
8. State the technical services and assistance available in Mali.
9. Briefly outline community protocol, list the people in a community that should be contacted and describe how to get their support.
10. Conduct community meetings, both formal and informal, to discuss water supply issues.

Irrigation Technology

A. Stateside: By the end of SST, the trainee will demonstrate that she/he has the ability to:

1. Describe irrigation theory and practice including location and evaluation of water sources, storage and conveyance systems and on-farm infrastructure.
2. Describe the methods of construction of irrigation systems in different soil types.
3. Survey and level a plot of land using locally available materials.
4. Outline water requirements for irrigated crops, such as, number, timing and quantities of irrigation needed.
5. Describe crop rotation and crop diversification and their impact on soil fertility.
6. List inputs other than water such as, fertilizers, herbicides, fungicides, etc. and their effects on water quality and crop production.
7. State the health impacts of using irrigation water such as, schistosomiasis - its prevalence in Mali and preventive techniques.
8. Describe water distribution methodologies - gravity and pumping.
9. Describe the theory and practice of construction of earth dams.
10. Design experiments to test the use and effectiveness of pumps and irrigation methods. Develop the parameters to be tested, measures of testing, forms and tables to record results and ability to analyze the results.
11. Work with a team of PCTs and others to look at the whole picture rather than an individual task.

B. In-country training: By the end of ICT, the trainee will demonstrate that she/he has the ability to:

1. Design and construct water storage and conveyance systems including open channels and pipes and on-farm infrastructures including ditches, furrows, drainage channels, etc.
2. Describe the basic theory of pumping and the equipment used in pumping.
3. Install, modify and repair the different types of water lifting devices being tried in the area.
4. Describe the methods of water recharge of wells using ground water and river water as sources.
5. Survey an area and to make recommendations for installation of wells and water lift technologies.
6. Train and effectively use others at a work site.
7. Briefly outline community protocol, list the people in a community that should be contacted and describe how to get their support.

II. IST

To follow up on PST and to acquire additional skills, all PCVs in Mali participate in at least one in-service training per year.

This group of Volunteers will have their respective ISTs at the same time with some joint sessions. (see calendar on page .) The existing ISTs for other programs will continue as programmed. The training APCD in conjunction with the technical APCDs and possibly the SST contractor will be responsible for developing the ISTs.

The in-service training will be held in the early part of 1987 and will be for three weeks for each of the technical areas: water, forestry/agriculture. A one-week overlap of training is planned for the forestry and gardening Volunteers, to be held at the National Fruit and Vegetable Research Center, with shared and concurrent sessions in basic water supply and irrigation management.

A. For Gardening Volunteers

The IST will include 1 week at the National Centre for Research in Fruits and Vegetables (CNFRM) in conjunction with the forestry/soil conservation Volunteers. Time will be spent on reviewing the ongoing research in fruit and vegetables; working with hands-on grafting and budding techniques; reviewing techniques between the activities of forestry and gardening Volunteers, especially areas of live fences, tree crops, and wet season tree planting in villages.

The second week will be designed in response to the Volunteers' stated needs and will focus on areas of common interest, further developing the technical areas introduced in the SST and ICT. It will include field trips to local producers and marketing agents in Bamako, as well as agricultural input supply sources, eg. pumps, fertilizer, chemicals, seeds. The second week will allow Volunteers to see a variety of scales and types of production systems in the Bamako area as well as to become familiar with

resources available for gardening, the costs and their uses.

The third week will be held in conjunction with water supply Volunteers and will concentrate on water supply and irrigation management issues; possible collaborative projects should be discussed, as well as techniques suitable for individual interventions.

The broad goals of the three weeks of in-service training for the gardening Volunteers are

1. To develop their skills in selected areas, such as crop protection, water management, local varieties of crop, storage, marketing, planning, etc.
2. To become aware of the possible areas of collaboration with forestry and water supply Volunteers.
3. To assess the resources available for gardening in Mali: literature, people, organizations and inputs.

B. For Forestry Volunteers

A one week IST will be held at the National Center for Research in Fruits and Vegetables in Bamako. The timing of the training should be during the period of mid-December to the end of February, preferably sometime in January. The subjects to be taught are silvicultural requirements of fruit trees commonly found in Mali and grafting and budding techniques of these fruit trees. The Malian person at the Center will teach by holding hands-on technical sessions in French.

A two week IST will be held at the OXFAM project near Yatanga, Burkina Faso. The timing of the training should be immediately preceding or following the Center's training. The training will reinforce and expand upon PST sessions concerning establishment of berms on contour lines. Other saving/harvesting

technologies will include how to construct microcatchments, small check dams, etc. The staff at the OXFAM project will hold hands-on training sessions in French.

The broad goals of this two-part IST at the Center are

1. Learn the silviculture requirements of fruit trees commonly found in Mali.
2. Graft and bud fruit tree species.

At the OXFAM project in Burkina Faso:

1. Establish berms on contour lines, using various local materials.
2. Develop other water saving technologies, such as microcatchment and small check dams.

The current director of the German Development Agency, GTZ, has experience in soil conservation techniques in Burkina Faso similar to what OXFAM is doing near Yatanga. One of the director's mandates is to teach non-governmental organizations (NGOS) those soil conservation techniques. If the director is still in Bamako during the Volunteers' PST or IST he will be another possible resource for training.

The APCDs for Training and for Forestry/Soil Conservation should collaborate in the design and implementation of the IST at the Bamako Center at OXFAM in Burkina Faso. The training staff during the two phases will be the personnel at the two stations. The APCDs must receive confirmation that the staff at both sites are available to train the PCVs at the proposed time and that the staff can and are willing to teach the PCVs. The personnel at both stations have either taught PC/Mali PCVs and their counterparts or have stated an interest in training them. Therefore, it is doubtful that there would be a problem in arranging the IST with these two organizations.

All soil conservation/forestry PCVs should attend both sessions and the gardening Volunteers from Diré should be trained in fruit tree silvicultural and grafting (budding) techniques. These gardening PCVs can continue with horticultural training with the rest of the gardening Volunteers while the soil/conservation/forestry PCVs continue on to the Burkina-Faso phase.

The OXFAM project near Yatanga was selected as a possible site for soil conservation techniques because the staff there has had nine years experience in the area.

The forestry Volunteers in the Mopti region have started experimenting with establishing berms along the contour lines during the past few months. If the APCD Forestry/Soil Conservation feels the staff in Mopti have had enough experience with the techniques involved in berms establishment by January, 1987 the Burkina-Faso^{phase} of the IST may not be necessary if the same objectives could be met in country.

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C. For Water Supply and Irrigation Technology Volunteers.

One week will be held in conjunction with the Gardening Volunteers and will concentrate on irrigation issues. Topics to be covered will include crop and human needs for water, planning and management of irrigation systems, water lift technologies, etc.

The Water Supply and Irrigation Technology Volunteers will also spend two weeks covering water resource technologies in more detail. During this two weeks the pros and cons of the different water lifting devices will be discussed as well as well improvement, construction details of dikes, channels, etc., and irrigation timing, frequency and application.

The broad goals of the three weeks of in-service training for the Water Supply and Irrigation Technology Volunteers are

1. To increase awareness of the possible areas of collaboration with Forestry and Gardening Volunteers.
2. To further develop their skills in irrigation issues such as crop and human needs for water and the effects of using the same source of water for human consumption and other uses.
3. To increase the Volunteers' knowledge of water lifting and irrigation techniques.
4. To further develop their construction skills in channels, dikes and other irrigation infrastructures.
5. To increase the Volunteers' knowledge of irrigation planning and management.

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PROPOSED PRE-SERVICE TRAINING (FY 86)

<u>PROGRAM</u>		<u>TRAINEES</u>		<u>SST</u>		<u>ICT</u>
Water supply and management	} Mali Food Systems	17	} 47	From	} 69	
Forestry/Soil Conservation		14		June 14, 86		
Gardening/Agriculture		16		to		
Improved Wood stoves	6	July 5, 86		From		
Small Enterprise Development	0	-		July 12, 86		
Community Health Education	5	-		to		
Math	8	-		September 28, 86		
College English	3	-				

TRAINING PHASES: PST

I. TRAINING PHASES

Phase 1 (Week 1-4)

The first week is devoted to the introduction of the realities trainees will be facing in a developing country and F.S.I. testing for their language level. Most training hours in phase 1 will be devoted to language learning with introductory sessions in technical areas, cross-cultural and personal health.

Phase 2 (Week 5-8)

The live-in when trainees visit volunteers at their sites begins phase 2 in week five. The live-in gives trainees the necessary break from training as well as a valuable opportunity to have some field experience, putting their training in context with realities of life in Mali. Language and technical training receive more hours than in Phase 1. Motorcycle skills and maintenance training begins in week 6. In week 8, the foresters begin their 2 week mini stage in the Northern region of Mopti.

Phase 3 (Week 9 -12)

During the last phase of training, the Education trainees (Math Education and University English) move to Bamako for their practice teaching component. The foresters complete their second week of their mini-stage in week 9. Trainees in the Health Education and Improved Stoves program go on their site visit in week 9 to visit their prospective site. Education trainees are sworn in as Volunteers at the end of week 11 while remaining trainees are sworn in at the end of week 12.

II. PROGRAM COMPONENTS

The four major program components which will be addressed throughout training are:

- a. Language
- b. Cross-Cultural
- c. Community Development
- d. Personal Health

Below is a brief review of each program component by the following format:

1. Goals
2. Overview
3. Behavioral Objectives

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A) LANGUAGE COMPONENT

1. Goal: The overall goal of the Language program is to adequately trainees to effectively communicate in French and local language in reaching this goal the trainees must obtain a minimum of (1+ -2) in French on the Foreign Service Institute (FSI) Exam for all programs, except for Math Education which requires a minimum of (2 - 2+), and a (1- 1+) for all trainees in a local language.

2. Overview: The language program will be divided into three distinct phases:

Phase 1: Week one - Week four

From the beginning of Pre-Service Training until the Volunteer "Live-in", classes will be set up according to the trainee's basic French level. The first week will be devoted to introductory Bambara lessons to facilitate social interactions with trainees' host families. After the first week, language training will focus on the study of French. There will also be some Bambara classes and the trainees will be encouraged to practice Bambara with their families outside formal classes.

Phase 2: Week five - Week eight

This phase is from the Volunteer "live-in" until their "site visit". The beginners will keep on as in phase 1. Those advanced in French will have more hours of Bambara study. The number of hours spent working with technical vocabulary training will increase.

Phase 3: Week nine - Week twelve

From the "site-visit" until the end of the training program the trainees will concentrate on the study of one language, depending upon their individual needs. For example, Math and University English teachers will most likely focus on French, trainees assigned to the Northern region will focus on Fulani, and Bambara for all other trainees, unless French is needed to meet the required F.S.I. 2 level at the end of training.

3. Behavioral Objectives: At the end of the training program, they will be able

-To effectively communicate in French and a Malian language in a social situation and in regards to their job assignment.

-To reach minimum FSI required levels according to each trainees program assignments.

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B. CROSS-CULTURAL COMPONENT

1. Goal: The goal of the cross-cultural training component is to create an experiential learning environment to help trainees acquire knowledge about Malian cultural and the skills needed to live and work comfortably as a Peace Corps Volunteer in Mali.
2. Overview: In addition to the specific cross cultural sessions, and community development classes. The program will provide opportunities to benefit from the resources found in the everyday life of the training village. Through lectures, discussions, role plays, and field trips, other important aspects of Malian culture will be presented. As the language professors will be sharing the village life experience with the trainees, they will play a major role as cross cultural guides. By the fourth week of the training, most of the trainees will be given the opportunity to practice and reinforce their cross cultural skills by spending a week living with another PCV.

A second opportunity will be given to the trainees to use their newly acquired skills for a week visit to their assignment site, allowing them to pinpoint specific skills needed to learn in the last three weeks of training.

3. Behaviorial Objectives: At the end of training the trainee will be able to:
 - Demonstrate an awareness of the cultural norms of Malian society and be able to integrate into that society.
 - Express himself/herself in French and a local language in order to interact socially.
 - Identify and gather different sources of information in an culturally appropriate manner.

C. COMMUNITY DEVELOPMENT

1. Goal: The community development training will introduce to the trainee the fundamental community development philosophy Peace Corps Mali represents as well as skills to help the trainee become an effective community development advocate.
2. Overview: Decision-making, empowerment, capacity-building, and grassroots initiative are ideas which will be introduced to trainees. Practical exercises will also be introduced to try to demonstrate the challenges the trainees will face as community development workers.

Peace Corps Mali believes that as a philosophy interwoven into all its Volunteers and staff; community development is the most applicable tool to use while working with Malians to improve Mali's development efforts.

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3. Behavioral Objectives: At the end of training, the trainee will be able to:

- Demonstrate his/her role as a community development agent while participating in the community development activities of training.
- Articulate general ideas about the community development process, and also those pertaining to his/her particular technical sector.
- Conduct an "étude du milieu" with the necessary observation, cross-cultural and language skills and write a time-phased, work plan.

PROJECT PLAN

Project Title: MALI FOOD SYSTEMS/UPPER NIGER RIVER VALLEY

Project Code: _____ Sector: AGRICULTURE

Start Date: OCTOBER, 1986

Date Original Plan Prepared: JUNE, 1985

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SECTION 1: PROJECT RELATIONSHIPS

A. Host Agency

Ministry of Agriculture

B. Sponsoring Unit

Division of Production in the Upper Niger River Valley Operation (OHV)

C. Primary Function of Sponsoring Unit

The Division of Production is one of four divisions of OHV. Its mandate is to implement, coordinate and monitor activities in the following broad areas:

- Extension and supervision of field agents
- Training
- Integrated activities
- Horticulture and tobacco farming

D. Address of Sponsoring Unit

Opération Haute Vallée

B.P. 178

Bamako, Mali

E. Title of officials in Sponsoring Unit responsible for Project Supervision

- Head, Division of Production (Bamako headquarters level)
- ZER Chief, Base Sector Chief (field level)

F. Collaborating Agencies

- USAID: Provides funding, equipment and technical expertise
- Foster Parents Plan and CARE/Mali: potential collaborators
- FED: Provides funding for tobacco farming

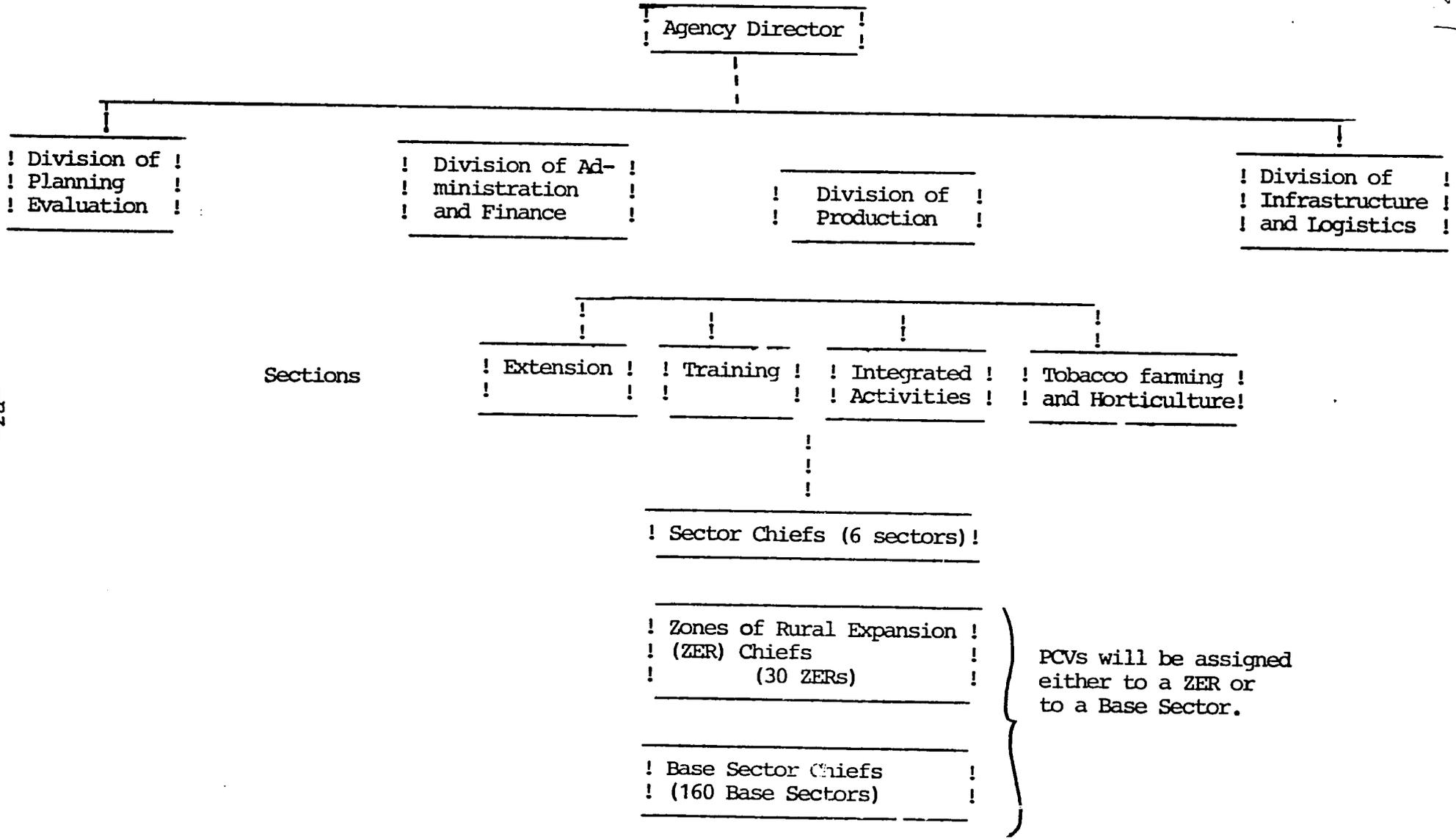
G. Lines of Authority

The Volunteers will all be assigned to the field; their GRM Supervisor will be either a ZER (Zone of Rural Expansion) Chief or a Base Sector Chief.

At the headquarters level, their overall Supervisor will be the Head of the Division of Production. Volunteers will be assigned to one of the four Sections under his Supervision, depending on their area of specialty (See Figure 1: Administrative Structure of OHV).

FIGURE 1: LINES OF AUTHORITY FOR PCVs IN OHV

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SECTION 2: PROBLEM ANALYSIS

A. State the problem which the project treats.

Mali's hope of rising above being one of the five poorest nations in the world is based in large part on the growing of cotton, most of which is produced in the Upper Niger River Valley area of the third Region. The Upper Niger River Valley is an area of approximately 31,530 square kilometers with a population of 477,240 living in 939 villages. The current Sahelian drought has so severely affected the northern two-thirds of the country that there is an ever-increasing demand placed upon the third Region to produce food crops. In addition, the drought is causing a large migration into the area, putting strains on the food resources presently available. This influx of population is so affecting land use that there are serious problems of soil erosion. It is crucial, therefore, to significantly increase food production of both grain crops and garden products without reducing cash crops upon which the nation's economy is so highly dependent.

B. State the major causes or factors contributing to the problem.

Most of the land adjacent to the Niger River is presently being used for cotton and tobacco as cash crops, which is supported by the Malian Textile Development Company (CMDT) and Upper Niger River Valley Operation (OHV) project. There is an adequate amount of rainfall in the area to grow millet, sorghum and garden products. However, farmers are cultivating them using traditional techniques that are not efficient enough to meet the increased production requirements of the country, including those of the large numbers of migrants who have recently come into the area. The additional demands for increased food production, coupled with inefficient cultivation techniques, are causing severe soil erosion and inadequate use of water resources.

C. Describe the consequences of this problem for people.

As the demand for food production causes a strain on land and water resources, farmers are more motivated to grow cash than food crops, using the latter only to meet their own basic subsistence requirements. This is true for most of the 53,806 farms in the OHV circles, and affects the majority of the population living in the area. Most of the population are traditionally agriculturalists and belong to either the Bambara, Malenke or Mande-speaking ethnic groups.

In many areas gardening and other food production activities are coming under the control of women who are not given adequate support in terms of inputs and necessary credit to grow enough for market. The emphasis on cash crops has caused men to turn away from food production and has not permitted sufficient markets to develop to promote such production beyond the subsistence level. Consequently, there is little information available in villages about efficient gardening and grain cultivation techniques, methods for avoiding soil erosion, or the availability of markets for food crops. This severely limits the amount of food available for new migrants coming into the area and precludes the production of enough food to meet the regions and the growing requirements.

D. Describe the information sources consulted when defining this problem.

1. Annual reports of OHV, 1983-1984; 1984-1985
2. Evaluation Opération Haute Vallée Mali, RONCO Consulting Corporation, USAID January, 1985
3. "Local Organizational Capacity" by Alice Morton, anthropological consultant for RONCO Consulting Corporation, January, 1985
4. Pre-Diagnostic Régional for Region of Koulikoro, January, 1984
5. Rapport Technique, prepared by Lassane, B.A., Génie Rural and Aliou Dabo, OHV, August, 1984

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6. Esquisse Pour un Plan de Développement dans la Haute Vallée du Niger,
OHV, March, 1985
7. Politique de la Maîtrise de l'Eau, OHV, March, 1985
6. Note sur Quelques Points, à l'attention du Corps de la Paix,
OHV, 1985
9. "Potential and Options for Peace Corps Programming in Mali"
AFSI Assessment Team Report, February, 1985
10. Discussions held with the Director, Deputy Director and heads
of various divisions within OHV, including expatriate consultants
11. Discussions with various PVOs, including CARE, Plan International
(Foster Parents); also met with representatives of UNESCO, UNICEF,
World Vision, FED and World Bank
12. Interviews with chiefs, chief's councils, ton presidents and
committees, and leaders of various other village associations in
a representative sample of Bambara and Malenke villages in the
OHV area
13. Interview with Director of Regional Office of Malian Water and
Forest Agency for the Upper Niger River Valley area

E. Describe the existing efforts to treat the problem.

After independence the Malian Company for Textile Development (CMDT) was formed as the major foreign exchange-earning enterprise in Mali. Its mandate is the production and marketing of cotton in the third Region. Starting in 1978 USAID provided funding to a complementary organization, the Upper Niger River Valley Operation (OHV); its mandate includes both cash and food crop production, but the USAID funding is designed to encourage increased cereal production. A system of credit was established whereby farmers receive various types of credit for agricultural inputs and machinery on both a short and long-term basis.

In 1981 OHV initiated a program to establish a type of village association called ton villageois, named after traditional collective groups or ton that existed for centuries in Bambara and Malenke villages. These associations are considered grass-roots, community-based organizations for the economic, social and cultural development of their constituent villages. Communities having ton must qualify by demonstrating solidarity by organizing some collective project, electing a governing body and having at least five individuals who are functionally literate in Bambara to manage the corporate books.

These associations receive credit from the OHV and distribute the resources to their members. The farmers in turn pay back their debts directly to the ton and sell their cotton to them. The ton sell their products directly to the CMDT at a profit, which they use to finance a shop in their villages and to pay for various community projects such as wells and farming equipment.

In addition to the ton there are various other collective groups involved in agricultural production that have not yet met all the requirements for official ton status. These latter groups function in a similar manner to ton, but do not have all the same credit advantages. Although these associations are organized for the growing and marketing of cotton, they also promote cereal production on fields in years following a cotton crop. Depending on the motivation of a village's association, these products are marketed along with garden produce. Many associations have created other groups for young men and women, who plant collective cereal crop fields for member consumption and markets. The profits from those enterprise are used for community celebrations and for various village development projects.

The most successful associations are in communities adjacent to the Niger River where there is an adequate supply of water. Unfortunately, parts of the Upper Niger River Valley have complex geological formations which make well construction difficult. Peace Corps Volunteers have been successful in constructing wells in villages near the river, but cannot presently be involved in the majority of the Region.

PVOs such as CARE and UNICEF are constructing wells at selected sites which require complicated and expensive technologies. Government and UNICEF sponsored geological surveys are now being conducted to determine the best way to increase well activity throughout the area.

In order to promote soil conservation and forestry activities in these areas the Malian Water and Forestry Service (Eaux & Forêts) has seven nurseries in the circles of the Upper Niger River Valley region. These nurseries produce seedlings ranging from 5,000 to 20,000 per year, and make them available to interested villagers. There is another donor (FAC) funded forestry project in the Third Region, which includes part of OHV's domain. The project is also managed by the Malian Water and Forestry Service to promote village woodlots. Seedlings are sold to farmers at a price of 175 to 250 CFA per seedling. In addition, recently the CMDT has begun to encourage their extension agents to advise farmers to plow their fields along contours. These efforts would be greatly enhanced by Peace Corps involvement.

Foster Parents' Plan (FPP) (Plan International in French) also has two major projects in the OHV area, with offices in Banamba and Kangaba. The former has been in operation for over nine years and the latter began in 1983. FPP's approach to development includes financing activities and providing gifts for wells construction, gardening, pharmacies, maternities, animal traction equipment and the like. FPP has financed 30 different types of development projects over their tenure in the country. This year the organization is changing its strategy by requiring villages to provide up to 50% of costs to encourage local responsibility and accountability for projects.

In spite of the continued emphasis on cotton and tobacco production many communities now express strong interest in experimenting with improved soil conservation techniques and, given required inputs, in participating in garden activities. For example, in one village where there is a PCV currently assigned, a group of farmers independently organized themselves as an ad hoc ton-type group for growing potatoes.

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They petitioned the PCV for assistance and for help in negotiating with local merchants for credit and the purchase of their crop when harvested. Likewise, other communities that successfully developed gardens have requested assistance in marketing activities. Consequently, there is a high level of motivation among farmers for improving their cereal and garden production activities, and for marketing outside of their communities.

SECTION 3: GOALS AND OBJECTIVES FOR PROJECT COMPONENTS

The goals and objectives outlined on the following pages state what the initial group of PCVs in each of the three components of the project will accomplish during their two-year tour. Once Peace Corps/Mali determines the length of their involvement in the Upper Niger River Valley Project, long-term overall goals and objectives will be established.

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SECTION 3: WATER SUPPLY (UPPER NIGER RIVER VALLEY)

GOALS AND OBJECTIVES (PERIOD COVERED: OCT. 1986 TO OCT. 1988)

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A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
Conduct survey of water supply situation and select six initial work sites and six potential sites by December, 1986.	Survey completed, at least six sites identified and comprehensive programs addressing water supply issues prepared. Village meetings held and all possible options including hand pumps, deepening existing wells, improvements in well sites and new wells considered, discussed and work sites chosen.	Survey report; PCV reports; supervisor's reports and site visits.
Initiate projects for three existing site improvement by February, 1987.	Villages mobilized, necessary materials acquired, construction completed at the three sites.	Quarterly reports; supervisor's reports and site visits.
Three new wells projects initiated and completed by June, 1987.	Villages mobilized, necessary funding and materials acquired, construction completed.	Same as above.
Improvements in sanitation at eighteen new and improved well sites by October, 1988.	Constructions of aprons, head walls, animal watering troughs.	Same as above.

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A. GOALS

MEASURES OF ACHIEVEMENT

SOURCES OF INFORMATION

Completion of six additional new wells and improvements made on six existing wells by October, 1988.

Same as 2 and 3 above.

Same as above.

Capacity Goals

To train six teams in well construction, i.e., site selection, planning, organization of resources and technical skills.

Villages (organized around water needs) producing new wells. Six well teams functioning effectively by July, 1988.

Site visits; Volunteers' COS report; supervisor's report.

To transfer skills to three counterparts in well improvement.

Three counterparts trained in well improvement techniques.

Same as above.

To train three counterparts in the organization of teams for wells construction and improvement.

Three counterparts trained in the organization of teams for wells construction and improvement by October, 1988.

Same as above.

Counterparts and villagers understand the connection between water, sanitation and health.

Sound principles of sanitation and health followed at all well sites.

Same as above.

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B. OBJECTIVES

Survey the water supply situation around the Volunteer's placement site by January, 1987.

Survey completed.

APCD and supervisor's review and approval of survey report.

Selection of potential work sites in conjunction with villages by February, 1987.

Village meetings held and sites selected.

PCV report and site visits.

Organize funding for well construction and improvement projects for first year projects by April, 1987.

Funding obtained for selected projects; proposals submitted if required.

PCV report.

Develop work plan in concert with counterparts and villagers by April, 1987.

Village meetings held and plans formalized.

PCV report.

Check technical feasibility of plans with Water Supply Specialist APCD or other relevant parties by April, 1987.

Plans formally approved.

PCV report; APCD or other specialist report and site visit.

Complete construction of at least six sites sites (three improvement and three new wells) by July, 1987.

Construction completed.

PCV report; supervisor's report and site visits.

Replicate steps 3-6 for twelve work sites by October, 1988.

See 2-6 above.

See 2-6 above.

SECTION 3: GARDENING (UPPER NIGER RIVER VALLEY)

GOALS AND OBJECTIVES (PERIOD COVERED: OCT. 1986 TO OCT. 1988)

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A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
To increase the total horticultural output at five sites in the OHV region by October, 1988.	Expansion of existing horticultural activities in the OHV region, at five sites.	Pre and post-placement surveys by Volunteers' quarterly reports; site visits by OHV and PC/Mali staff.
To improve the standards of horticultural production techniques at three more sites in the OHV region by October, 1988.	Increased horticultural output/unit of input at three sites.	All of the above, plus field visits and discussions with farmers by OHV and PC/Mali staff.
To expand out-of-season horticultural production at these three sites, by October, 1988.	Extension of the production season at three sites.	Volunteers' quarterly reports; farmer interviews; site visits by OHV and PC/Mali staff.
To develop or expand marketing at these three sites, by October, 1988	Improved marketing at three sites, increased sale volume.	All of the above, plus market survey.
To augment returns to horticultural production by improved harvest quality product storage, and conservation at these three sites, by October, 1988.	Higher quality produce at point of sale, improved storage and conservation techniques at three sites.	All of the above sources.

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N.B.:

Returns to farmers can be increased in a number of different ways, including:

- Increasing the area of production.
- Increasing the output/unit of input from the existing area of production.
- Improving the quality of the products being produced.
- Marketing the products being produced more efficiently.
- Shifting the timing of supply towards out-of-season sales via timing of production changes, i.e., staggered planting dates, shorter season varieties, and improved storage practices.
- Changing the nature of the product, i.e., conservation and processing.

In the first year Volunteers would concentrate on one site/Volunteer and would be expected to start, increase and/or improve production at that site. In their second year, they would continue these types of activities at two sites/Volunteer, and work on the more qualitative aspects at a third site. The third site could conceivably be the site of their first intervention or a new site identified in Year One.

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A. GOALS

Capacity Goals

To improve the planning and management capabilities of horticultural producers at three or more locations in the OHV region.

Changes observed in farm planning and management activities at three or more locations.

Program evaluations;
Volunteer surveys.

To encourage, expand, and/or improve existing production and marketing organizations in the OHV region.

Awareness of the requirements for planning and implementing successful cooperating structures in at least three locations.

Pre-and post-placement Volunteer surveys; site visits and discussions by PC/Mali and OHV staff with cooperating groups.

To transfer the technical skills required for improved horticultural production to twenty or more farmers in the OHV region.

Use of existing and new inputs in the recommended manner by at least twenty producers or producer groups.

Volunteer quarterly reports; site visits and discussions by PC/Mali and OHV staff at Volunteer sites; APCDs' reports.

To improve the technical skills required for improved marketing and storage to five or more farmers in the OHV region.

Adoption of improved marketing and storage practices by at least five producers or producer

All of the above.

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A. GOALS

To transfer the technical skills and organizational ability required for developing horticultural production, marketing and storage in the OHV region to three counterparts.

Instigation and development of new horticultural interventions in the OHV region by Volunteers' counterparts.

Site visits by PC/Mali and OHV staff; APCDs' and OHV reports.

B. OBJECTIVES

Initial survey of horticultural activities around the Volunteer work site.

Survey completed satisfactorily within three months of PCV's arrival on site.

APCD, OHV review of survey report.

Selection of an area of concentration for first year activities.

Sites selected, preliminary planning of first year activities completed by January, 1987.

Work plan submitted by Volunteer; In-Service training request made.

To work with five farmers or farming groups in developing and implementing the first year work plan.

Ten farmers or farming groups completed training program, techniques understood and being utilized correctly by end of first year.

Site visit by PC/Mali and OHV staff; Volunteer quarterly reports.

B. OBJECTIVES

To improve the supply and utilization of horticultural inputs to three locations by the end of year two.

Increased access to inputs and their utilization by ten or more farmers or farming groups.

Volunteer pre and post-placement survey; APCD, OHV reports.

OR

To improve the marketing of horticultural outputs in three locations by the end of year two.

Increased marketing activities and use of improved storage and conservation techniques by ten or more farmers or farming groups.

Volunteer pre and post-placement survey; Volunteer quarterly reports; market survey; APCD, OHV site visits.

To discover, document and disseminate appropriate existing local responses to horticultural problems and opportunities.

Appropriate local responses eg. new crops, varieties and techniques, introduced and adopted in three new locations by the end of the second year.

Volunteer quarterly reports; site visits by PC/Mali; OHV staff reports.

To start the definition of the major categories/types of horticulture in the OHV region.

Description of the major recommendation domains for future Volunteers; report on file with PC/Mali.

Volunteer and APCD, reports.

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1171

SECTION 3: SOIL CONSERVATION/FORESTRY (UPPER NIGER RIVER VALLEY)

GOALS AND OBJECTIVES (PERIOD COVERED: OCT. 1986 TO OCT. 1988)

1987

A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
Decrease the soil erosion on at least twenty farmers' fields by October, 1988.	Established berms on the contours in at least twenty farmers' fields.	PCV supervisors' reports; Volunteers' quarterly reports; OHV and PC/Mali staff site visits.
	At least twenty farmers plowing their fields along the contour lines.	
	Small check dams established in gullies or small seasonal streams to slow down the flow of water in at least three locations.	
Increase in woody vegetation in villages and in and along farmers' fields in at least thirty villages by October, 1988.	Mini-nurseries established in at least nine villages.	Same as above.
	Trees from the mini-nurseries planted in at least thirty villages and farmers' fields.	

1987

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A. GOALS

Natural regeneration protected,
live-fences planted from cutting,
and/or areas direct-seeded in at
least ten locations.

To produce budded citrus trees
in conjunction with Gardening
Volunteers and local farmers at
5 sites by October, 1988.

Trees being successfully budded
at 5 sites.

Sites visits; reports by Volunteers,
APCDs, OHV staff; pre-and post
placement village survey.

Capacity Goals

To improve the soil conserva-
tion skills of OHV extension
agents, Malian Water and
Forest Service agents, teachers
and/or farmers by October, 1988.

Changes observed in the farm
planning and management acti-
vities at twenty or more
locations.

Program evaluation; Volunteer
surveys; PC/Mali and OHV site
visits.

To improve the reforestation
skills of OHV extension
agents, Malian Water and
Forest Service agents,
teachers and/or farmers.

At least eighteen Malians
trained to establish and
maintain mini-nurseries.

Same as above.

At least thirty Malians trained
to plant and maintain tree seedlings.

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A. GOALS

At least ten Malians trained in protecting natural regenerating tree species, in live-fence establishment from cuttings, and/or in the techniques of direct seeding.

To train 5 Malians in the principles and practice of fruit tree budding, in conjunction with the gardening Volunteer.

Training sessions held; trees being budded.

Site visits and APCD, Volunteer reports.

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B. OBJECTIVES

Complete survey of soil erosion problems in ten villages by January, 1987.

Survey completed and report written within three months of PCV's arrival.

PCVs' report to OHV and PC/Mali; reviewed by OHV personnel and APCD by February, 1987.

Complete survey of villagers' interest in reforestation activities, species desired, why old reforestation activities failed, agroforestry activities currently practiced, possible nursery sites, etc. in at least ten villages by January, 1987.

Survey completed and report submitted within three months of PCV's arrival.

PCV's reports to OHV and PC/Mali.

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B. OBJECTIVES

Berms are established along the contours in at least two fields by June, 1987.

Twenty hands-on training sessions attended by OHV extension agents, Water and Forest agents, and/or villagers.

PCVs' report to OHV and PC/Mali; OHV extension agents reports; site visits by PC/Mali staff and OHV headquarters staff.

At least four fields are plowed following the contour lines by mid-July, 1987.

At least eight hands-on training sessions attended by OHV extension agents, Water and Forests agents, villagers.

PCVs' reports to OHV and PC/Mali; OHV extension agents' reports; site visits by PC/Mali staff and OHV headquarters staff.

At least four fields are plowed along the contours, and the implementors understand the rationale behind why the fields have been plowed in that manner.

At least twenty farmers visit the fields to see the effects of decreasing soil erosion by plowing and establishing berms along the contour lines by October, 1987.

The fields are effective demonstrations of the effects of soil conservation techniques.

PCVs' report to OHV and PC/Mali; OHV extension agents' reports; site visits by PC/Mali staff and OHV headquarters staff.

At least four visits are arranged to the demonstration fields to see the effects of plowing along and establishing berms on the contour lines.

B. OBJECTIVES

Berms are established and/or farmers are plowing along the contour line. in at least twenty fields by mid-July, 1987.

At least eighty hands-on training sessions attended by OHV extension agents and villagers. Fields are installed with effective soil conservation techniques.

PCVs' report to OHV and PC/Mali; OHV extension agents' reports; site visits by PC/Mali staff and OHV headquarters staff.

Nine mini, village-level nurseries established and maintained by July, 1988.

At least sixty hands-on nursery establishment and tree maintenance training sessions attended by school officials, OHV extension agents, and/or villagers. Nurseries are functioning without major PCV involvement.

Nursery records; seedling quality; OHV extension agents' reports; site visits by PC/Mali staff and OHV headquarters staff.

Increased villager interest in reforestation activities in at least thirty villages by October, 1988.

A total of at least sixty village meetings are held concerning reforestation in at least thirty villages. Trees planted and/ maintained in or near at least thirty villages.

Demand for trees produced in nurseries expressed by villagers; at least 75% survival rate in trees planted; PCVs' reports; site visits by PC/Mali staff.

Decrease water erosion and increase water infiltration and storage capacities in gullies and/or small seasonal streams in at least nine locations by October, 1988.

Water available for longer periods of time and a temporary rise in the watertable effected.

PCVs' reports to OHV and PC/Mali; OHV extension agents' reports; site visits by PC/Mali and OHV staff.

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B. OBJECTIVES

5 village level mini-nurseries established and maintained by July, 1988.

At least 20 hands-on citrus budding training sessions attended by villagers; nurseries functioning without major PCV involvement.

PCV reports; OHV agents reports; budded citrus quality; site visits by PC/Mali and OHV staff.

Training Class Name SUMMER OMNIBUS 1986		Project Name and Assignment Title -24- MALI FOOD SYSTEMS: ALL 3 REGIONS GARDENING		Project Code
Start Date	5. Trainees Requested	6. Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give numbers and restrictions in item 17.)		
Training Information: Come <input type="checkbox"/> Med/Admin <input type="checkbox"/> Other <input type="checkbox"/> Dates: .. To ..				
Class I.C.	9. Assignment No.	10. COI	11. Nominee	
12. Allocation: <input type="checkbox"/> Generic <input type="checkbox"/> IP <input type="checkbox"/> UNV	13. NRD	14. Allocation: <input type="checkbox"/> AT <input type="checkbox"/> NY <input type="checkbox"/> CH <input type="checkbox"/> DA <input type="checkbox"/> SV		
Codes (primary code first)		15. Placement Contact/Code		

- Requirements/Restrictions (Education and Experience, list in order of preference; other skills, languages, marital restrictions)
- A. BS/BA or AS in Agronomy or Horticulture and experience in vegetable production, extension or marketing OR
 - B. BS/BA in Agricultural Education with experience in vegetable production extension or marketing OR
 - C. One year's work experience in horticulture production, extension or marketing.
 - D. BS/AS in the Natural Sciences and work experience in any of the above fields.
 - E. Demonstrated skills in gardening.
- You must have at least 2 years of high school French, or one year of college French or have lived in a French speaking country for at least 6 months. The same background in another Romance Language (Spanish, Italian, Portuguese) can qualify you.
- Previous experience working with community projects is highly desirable.

Project Assignment Description or Summary (Flexibility, commitment, project goals, objectives, duties, working/living conditions, training)

PROJECT BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is predominantly agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target regions. At the request of the Malian Government, these teams of 3-5 Volunteers will work directly with villagers in gardening, soil conservation, small-scale forestry and water supply activities.

JOB: As a Gardening Volunteer, you will be assigned to (1) Operation Rice-Ségou (ORS) in the Upper Valley (OHV) (both are government organizations responsible for integrated development activities in specific geographical areas) or to a government agency in the area. You will work with your counterpart villagers to increase the horticultural production of the area. This could involve working anywhere along the spectrum of production and depending on your placement site, with a variety of types and scales of production, from household garden plots to intensive pump irrigated perimeters.

Your first task you will have once you have settled into your village will be to produce a survey of the overall horticultural situation in your village, together with a more focused survey on areas of particular interest. These areas of interest will be chosen after consultation with your Malian counterpart and the villagers. Possible areas of emphasis could include: site selection and farm layout, site preparation, terracing, water management, spacing/planting techniques, improvements in irrigation techniques, spacing/cultivation, pest disease control, improvements in fertilizer/manure use, seed selection and storage, marketing, produce storage and conservation, overall planning and management, etc.

You will find that your theoretical knowledge of gardening is useful only to the extent that it allows you to suggest practical solutions to the constraints to vegetable production in the area. Many of the limiting factors will be beyond your control and you will also find that many of the practices you initially perceived as "wrong" are due to extraneous limiting

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PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name
MALI SUMMER OMNIBUS 1986

Project Title/Assignment Title
MALI FOOD SYSTEMS: ALL 3 REGIONS
GARDENING

Factors which become apparent as you grow to know the system better. You will be frustrated by your inability to effect massive changes but you will learn to concentrate on solving one or two of the major impediments to production, in close conjunction with your counterpart and your host farmers. One very important aspect of being a Peace Corps Volunteer is the transfer of skills to your counterparts and to the communities in which you will be working.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as soil conservation/forestry and water supply, within a short motorcycle drive from your village. These Volunteers may request your assistance in helping the villagers in their area with horticulture and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in general overview of Malian agriculture; Malian climate, soils, crops, farming practices; small scale irrigation systems; crop production; fruit and vegetable species and varieties; cultural techniques; storage and conservation; extension methods, communication; community organizing; tropical soils and fertilizer use; farm management; enterprise budgeting; marketing.

Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in one Malian language; community development techniques; technical sessions in specific areas, depending on your site, and expanding on your Stateside training; cultural adaptation; personal health orientation; motorcycle riding, maintenance and repair.

During this time you will also begin to acquire skills in team-building with other potential Volunteers and with Malian counterparts. Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps or the agency you are working for.

LIVING AND WORKING CONDITIONS: You will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region, the area around Bamako, or the Diré area. You will be at least one day's travel from the capital city and the Peace Corps office. You will not have running water or electricity; your diet will most likely be the same as that of your Malian neighbors, sauce served on millet or rice. You will be expected to learn to ride and maintain a small motorcycle to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards.

Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralized bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities. Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciative of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

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TIME FRAME: GARDENING/FORESTRY PCV
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ACTIVITY	1986					1987					1988																			
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S			
1) PST (ICT)																														
2) Settle-in village																														
* 3) Survey of villagers' interest in reforestation, nursery site selection, etc .																														
4) Organize gardeners																														
5) Gardening season.																														
6) Marketing and storage of produce.																														
* 7) Nursery establishment and teaching nursery maintenance, etc.																														
* 8) Village meetings to stimulate interest in reforestation activities.																														
9) Plant tree seedlings from nurseries.																														
10) Plant live-fences of <u>Euphorbia</u> Spp. cuttings.																														
* 11) Follow-up to see that trees are well maintained.																														
* 12) Anti-water erosion activities.																														

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* Flexible

TASK ANALYSIS: GARDENING VOLUNTEERS
SEGOU, UPPER NIGER VALLEY, DIRÉ

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TASK

MEASURES

DUTIES

To identify the governmental, donor and private organizations working in your area.

Has contacted and developed links with all relevant organizations.

A. To make a list of all active organizations in your area, governmental, donors and private, working in the areas of extension, input supply credit, training, marketing, with their mandates and actual activities.

B. To make contact with the above organizations/individuals and identify potential resources, support or collaborative roles.

To do a reconnaissance survey of the area.

Survey report.

A. To develop a topical outline after discussions with all interested parties.

B. To survey the area in a general way with your homologue.

C. To discuss the results with all interested parties.

D. To focus on specific areas and resurvey.

To formulate hypotheses on the attributes and constraints of the existing horticultural systems in the area, identify the major types of production, define and prioritize problems and identify areas of interest and deficiencies of knowledge and/or resources.

To plan and implement a strategy to address the major needs of the area.

Problem, constraints and opportunities listed and prioritized.

Intervention underway.

E. Hold group meetings, household visits, field visits and discussions with all interested parties, survey the literature.

A. To describe the types of horticultural production in the area.

B. To list the major problems by type of production after discussions with villagers, GRM officials, homologues and other interested parties.

C. To outline a potential strategy to address the major problems/opportunities.

A. To search out knowledge, skills, resources available in the area.

B. Discuss strategy with all interested parties.

C. In conjunction with all interested parties, plan strategy, including roles, needs, timing, linkages res-

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Review and evaluation the 1st year's activities. Define and plan second year's activities.

Report produced and discussed with all interested parties.

To implement 2nd yr. strategy.

Intervention underway.

- D. Implement strategy on a number of sites.
- E. Keep records, discuss progress and describe impact.
- F. Identify areas of future need, training, inputs, support, techniques.
- G. Summarize and report to all interested parties.

- A. To refine strategy and discuss with all interested parties.
- B. To plan 2nd yr interventions with all interested parties. Define needs, partition roles and responsibilities.

- A. Implement new or improved strategy.
- B. Keep records, discuss.
- C. Evaluate.

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To train counterparts in improved techniques, in the testing and evaluation of improved techniques and in their dissemination.

Provide input to Peace Corps Mali's PCT and help with program refinement.

Maliens continuing ongoing farm testing and development of improved techniques.

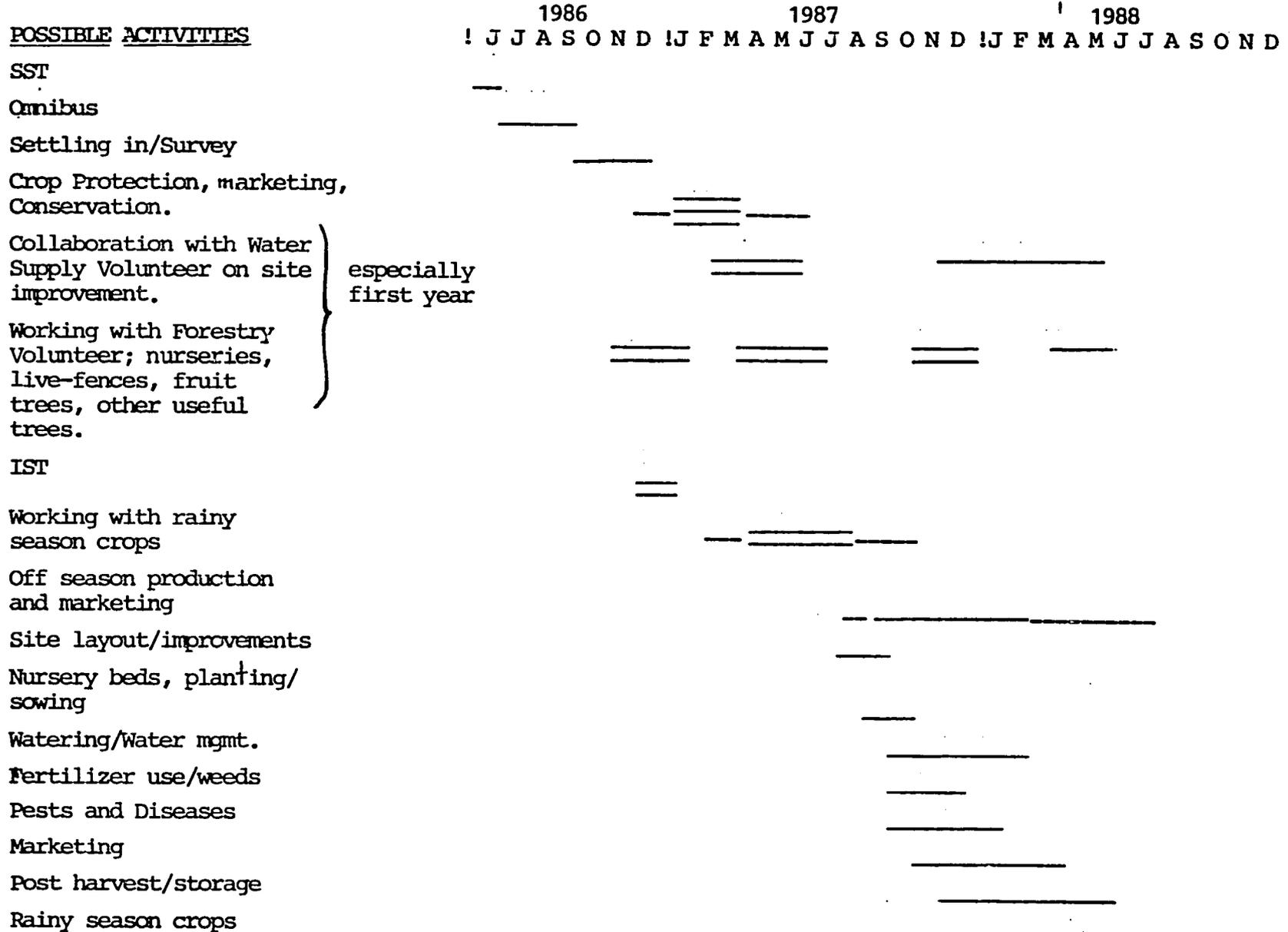
Assists APCD/GRM in site selection and reviews training materials/methods.

- D. Summarize and report to all interested parties.
- E. Suggest improvements and potential activities/Sites for new Volunteers.
- A. Work closely with Malian counterpart in selection, designing planning and implementing strategies.
- B. Evaluate and refine strategies in conjunction with Malian counterpart.
- C. Include Malian counterpart in IST.
- A. To produce a summary report on activities.
- B. To suggest areas for program development.
- C. To list skill requirements for new Volunteers.
- D. To define areas of technical information required for job success.

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TIME FRAME: GARDENING
DIRÉ, SEGOU, UPPER NIGER VALLEY.

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especially first year

1 Training Cross Name SUMMER OMNIBUS 1986		2 Project Name and Assignment Title MALI FOOD SYSTEMS: ALL 3 REGIONS. WATER SUPPLY		3 Project Code
4 Date		5 Trainees Requested	6 Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give numbers and restrictions in item 17)	
7 Training Information: Comp _____ Mgr/Admin _____ Other _____ Dates: _____ To _____				
8 Class I.D.		9 Assignment No.	10 CDI	11. Admins.
12. Generic _____ IP _____ UNV _____		13 NRD	14. Allocation: AT _____ NY _____ CH _____ DA _____ ST _____	
15. (primary coord first)		16. Placement Contact/Coord		
17. Comments/Restrictions (Education and Experience, list in order of preference, other skills, languages, marital restrictions)				

You must have either:

- A) BA/BS in Geology or Water/Soil Conservation OR
- B) Demonstrated skills in masonry, construction, carpentry, mechanics or farming.

You must have at least 2 years of high school French or 1 year of college French or have lived for 6 months in a French-speaking country. The same background in another Romance language (Spanish, Italian or Portuguese) can also qualify you.

Previous experience working with community groups is highly desirable.

Assignment Description or Summary (Flexibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is primarily agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target regions. At the request of the Malian Government, these teams of volunteers will work directly with villagers in gardening, soil conservation, small-scale irrigation and water supply activities. The chronic shortage of water for agriculture and daily use is a serious problem for the millions of rural Malians living in villages throughout the country. Many village wells dry up each year and Malian farmer's ability to meet their daily needs for human and animal consumption are severely hampered.

JOE: As a Water Supply Volunteer, you will be assigned to either Operation Rice Ségou or Operation Upper Valley (OHV) or to a Government organization in Diré. These Government organizations are responsible for integrated rural development activities in specific geographical areas. You will be responsible for constructing wells for both domestic/drinking and agricultural uses, and for improving existing wells in your area of assignment.

Your first task you will have once you have settled into your village will be to produce a survey of the existing water supply situation and select sites for the construction of new wells and for improvement of existing wells. These areas will be chosen after consultation with your Malian counterpart and the villagers. You will also work to improve the sanitation of all well sites by constructing aprons, head walls and animal watering troughs. In addition, you will, where appropriate, install various types of water lifting devices, such as hand pumps, foot pumps, etc.

Part of your work will be involved in organizing villagers, obtain funding and materials, and training workers at your projects. An on-going activity in all of your work will be to transfer your skills to counterparts in well construction and improvement, as well as the organizational aspects of the work.

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PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name MALI SUMMER OMNIBUS 1986	Project Title/Assignment Title MALI FOOD SYSTEMS: ALL 3 REGIONS WATER SUPPLY
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You will find your theoretical knowledge of water resources is useful only to the extent that it allows you to suggest practical solutions to construction problems. Many of the limiting factors will initially be beyond your control and you will find that some of the practices you initially perceived as "wrong" are due to extraneous factors which become apparent as you grow to know the system better. You may be frustrated by your inability to effect massive changes, but you will learn to concentrate on the specific challenges of each construction in providing a water system appropriate to the particular needs of the project at hand.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as soil conservation/forestry and gardening, within a short motorcycle drive from your village. These Volunteers may request your assistance in helping the villagers in their area with wells construction or improvement, and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in how to assess water supply in an area, geology with a water resource focus, water resource management, irrigation systems, wells construction and improvement design, and community organization. Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in a Malian language; community development techniques; technical sessions in wells construction, with an emphasis on the types of problems to be encountered in your area of assignment, irrigation and water resource management; cultural adaptation; motorcycle riding, maintenance and repair. During this time you will also begin to acquire skills in team-building with other potential Volunteers and with Malian counterparts.

Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps or the agency you are working for.

LIVING AND WORKING CONDITIONS: You will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region, the area around Bamako, or the Diré area. You will be at least one day's travel from the capital city and the Peace Corps Office. You will not have running water or electricity; your diet will most likely be the same as that of your neighbors, sauce served on millet or rice. You will be expected to learn to ride and maintain a small motorcycle, to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards.

Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralised bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities. Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciate of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

Peace Corps and the Malian Government invite you to participate in this high priority

Program. Your tour of service will be two of the most interesting and we hope
 16-3 91 JAA

TASK ANALYSIS: WATER SUPPLY
DIRÉ, UPPER NIGER VALLEY, SEGOU.

TASK

Determine the needs of the village in water supply and sanitation.

MEASURES

A survey report showing choice of locations and a work plan designed in consultation with villagers and counterpart.

DUTIES

Survey the village and different sections of villages, farms and gardens to determine current facilities for water supply and sanitation, inadequacies and possible solutions.

Consider different options available such as deepening existing wells, use of hand pumps, need for new wells with concrete linings, head walls, aprons and animal watering troughs.

Discuss the solutions, costs, labor and timetable with your counterparts, village leaders, development committee and community groups.

Select four or five possible projects. Arrange them in order of priority based on the urgency of needs and local priorities. as well as the

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Assist villages in preparing for the selected projects.

Funding received, labor organized, and materials and equipment acquired.

enthusiam of people to participate through labor contributions, equipment and other requirements.

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Prepare a plan in conjunction with counterparts and village representatives for the selected projects.

Discuss your project with technical agencies in your area, such as Malian Government officials and donor agencies such as UNDP, CARE, UNICEF, etc.

Prepare proposals for external funding where needed.

Work with village associations to obtain when possible contributions in cash and kind.

Purchase and arrange for equipment and materials to be delivered to site in conjunction with counterparts, villagers and local merchants.

Organize labor, supervise work and complete tasks.

Mobilization at site work completed.

Enlist Volunteers from village and organize them into work crews. Brief them on the work to be done and the role each will play. Make a local person responsible for the crew as foreman.

Complete construction. Check for adequacy in terms of structural safety and sanitation.

Hand over the completed facility to armer representatives and instruct in how to maintain it. Occasionally inspect the work to make sure it is being properly maintained.

Repeat steps above on other sites in order of determined priority.

Train counterpart and other villagers in procedures used.

At least two crews trained to help other farmers.

During course of the above steps train interested villagers in methods of surveying, organizing, construction, etc.

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Train your GRM counterpart in cost analysis, how to approach different donor agencies and proposal preparation.

Provide water lifting devices where appropriate.

Install hand, foot or other type of pump and/or water lifting device as appropriate to needs of site.

Meet with Volunteers and/or APCD with water resources expertise to determine best device to use on selected site.

Obtain necessary funding, coordinate project and install appropriate device.

Assist other members of your team of PCVs

At least two farms on which joint assistance is provided.

Meet with other team members and apprise them of needs of farmers in community.

Arrange meetings between PCVs and farmer representatives to plan appropriate projects relevant to the tasks of your team members.

Develop project plan and obtain funding as necessary.

Advise PC/Mali on usefulness
of continuing program.

Final comprehensive report
and recommendations.

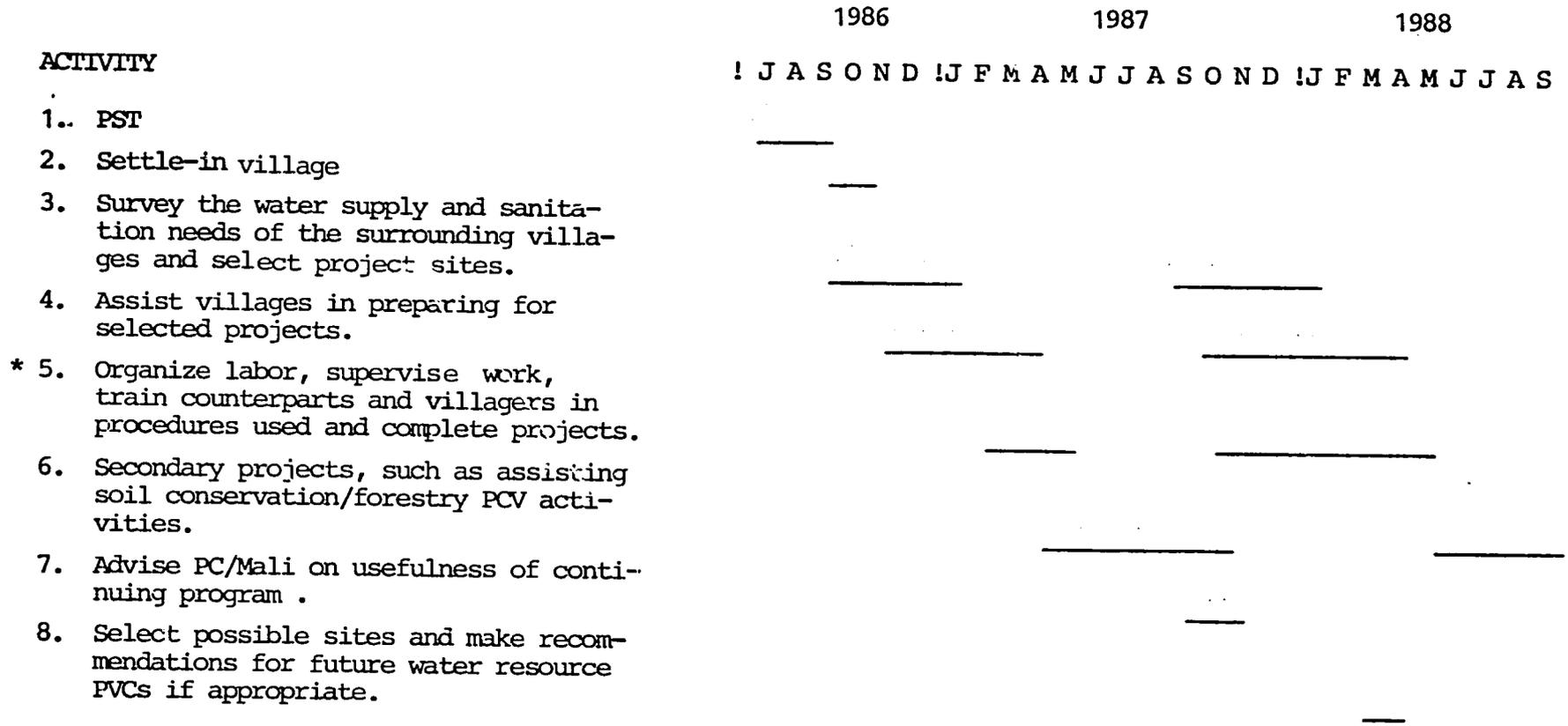
Assist fellow PCVs in project and
supervise all work done at site.

Prepare comprehensive report and
actively participate in OOS confe-
rence.

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TIME FRAME: WATER/SANITATION VOLUNTEER
 SEGOU, UPPER NIGER VALLEY

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* During year two, work schedule is flexible.

Date: _____ 5 Training Required: _____ 6 Married Couples? Yes No (If yes, give numbers and restrictions in item 17.)

7 Information: Comr _____ Mgr/Admin _____ Other _____ Dates: _____ To _____

8 Assignment No. _____ 10 COI _____ 11 Nominee _____

9 Generic _____ IP _____ UNV _____ 13 WRD _____ 14 Allocation: AT _____ NY _____ CM _____ DA _____ SI _____

15 Placement Contact/Code _____

16. Restrictions (Education and Experience, list in order of preference, other skills, languages, marital restrictions)

You must have either:

- 1) BS/AS in General Forestry, Conservation, Natural Resources Management, Environmental Sciences or Ecology, OR
- 2) BS in Biology, Botany or Horticulture OR
- 3) BS/AS in the Natural sciences and work experience in any of the fields in A and B above OR
- 4) One year work experience in a forestry-related job or an extension service.

Previous experience working with community groups is highly desirable.

You must have at least 2 years of high school French, or one year of college French, or have lived in a French speaking country for at least 6 months. The same background in another Romance Language (Spanish, Italian, Portuguese) can also qualify you.

17. Assignment Description or Summary (Feasibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is primarily agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves. In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target regions. At the request of the Malian Government, these teams of volunteers will work directly with villagers in gardening, soil conservation, small-scale irrigation and water supply activities. One of the most serious problems facing the agricultural sector is the increasingly rapid rate of desertification of major portions of the country. Desertification is caused by drought conditions of little or no rainfall year after year, uncontrolled cutting of trees and bushes for fuelwood and clearing land for agriculture. 90% of all energy needs of Mali is derived from firewood, and trees are being cut faster than they are being planted. The effects of uncontrolled cutting of trees has led to a fuelwood shortage and a decrease in soil productivity. Top soil is being eroded away and agricultural productivity is on the decline.

DE: As a Soil Conservation/Forestry Volunteer, you will be assigned to either Operation Upper Valley (OVS) or Operation Upper Valley (OHV); both are Government organizations responsible for integrated rural development activities in specific geographical areas. You will work with your Malian counterpart and villagers to increase the awareness of the need for soil conservation and forestry activities. Therefore, the first task you will have once you arrive at your work site will be to complete a survey in surrounding villages to discover the soil conservation problems, villagers' interest in reforestation activities, species desired, reasons why previous forestry projects failed, current agroforestry activities practiced in the area, possible nursery sites, etc.

Other possible duties that could follow the survey are holding village meetings to increase awareness of the project; teaching farmers to plow their fields along the contour lines and to plant cover crops on the contours to decrease erosion, establishing mini-nurseries, assisting

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PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name
MALI SUMMER OMNIBUS 1986

Project Title/Assignment Title
MALI FOOD SYSTEMS: SEGOU, UPPER NIGER VALLEY
SOIL CONSERVATION/FORESTRY.

in the planting of trees, etc.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as gardening and water supply, within a short motorcycle drive from your village. These Volunteers may request your assistance in helping the villagers in their area with soil conservation or forestry activities and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in soil conservation, nursery establishment, nursery management, etc. Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in one Malian language; community development techniques; technical sessions in: dendrology, silviculture, soil conservation, pedology, etc; cultural adaptation; personal health orientation; motorcycle riding; maintenance and repair.

LIVIN AND WORKING CONDITIONS: Once assigned to your post, you will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region or the area around Bamako. You will be at least one day's travel from the capital city and the Peace Corps office. You will not have running water or electricity; your diet will most likely be the same as that of your Malian neighbors, sauce served on millet or rice.

You will be expected to learn to ride and maintain a small motorcycle, to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards. Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralised bureaucracy, low literacy and education levels multilingual demands for communication and great distances between cities.

Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciative of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

Peace Corps and the Malians Government invite you to participate in this high priority Program. Your tour of service will be two of the most interesting and we hope rewarding years of your life.

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TASK ANALYSIS: SOIL CONSERVATION/FORESTRY
SEGOU, UPPER NIGER VALLEY.

MAJOR TASK

Survey area for soil erosion problems, villagers' interest in reforestation activities, species preference, why old reforestation activities failed, current agro-forestry activities, possible nursery sites, etc.

Teach plowing along the contour lines and establishment of berms on the contours in farmers' fields.

MEASURES

At least ten villages surveyed per PCV.

At least ten OHV extension agents, water and forest agents, farmers know how to plow along the contours and how to establish berms on the contour lines (per PCV).

DUTIES

Survey villages and submit a report to OHV supervisor and PC/Mali.

Hold hands-on training sessions on the use of a clear plastic hose level to determine the contour lines in a field.

Demonstrate the effect that berms and plowing along the contours have in decreasing water erosion.

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Survey area for soil erosion problems, villagers' interest in reforestation activities, species preference, why old reforestation activities failed, current agro-forestry activities, possible nursery sites, etc.

Teach plowing along the contour lines and establishment of berms on the contours in farmers' fields.

Establish mini, village-based nurseries.

At least ten villages surveyed per PCV.

At least ten villages, OHV extension agents, Water and Forestry agents and/or farmers know how to plow along the contour lines (per PCV)

At least four Malians/PCV are trained to manage mini-nurseries and the nurseries and the nurseries are functioning without major PCV involvement.

Survey villages and submit a report to OHV Supervisor and PC/Mali.

Hold hands-on training sessions on the use of a clear plastic hose level to determine the contour lines in a field.

Demonstrate the effect that the berms and plowing along the contours have on decreasing water erosion.

Select locations for nurseries with villagers' aid.

Assure there is:

1. a year-around source of water
2. adequate protection
3. a dependable seed source and

Outplant the seedlings from the nurseries.

At least 75% of the seedlings planted are living one year after being planted.

Hold village meetings to stimulate interest in reforestation.

Assure that there is adequate protection for the seedlings before they are planted.

Match tree species with villagers' preferences and the ecological constraints of the area.

Teach proper tree planting and maintenance techniques.

Continue visits with villagers long after the trees have been planted to assure the trees are being well maintained.

Increase bio-mass in the area by means other than by planting seedlings.

At least three projects are implemented per PCV per year and Malians are trained to implement similar projects.

Demonstrate how natural regeneration becomes established in areas protected from livestock and man.

Decrease water erosion and storage capacities in gullies and small seasonal streams.

Water available for periods of time and temporary rise in the watertable. Malians are trained to implement similar projects in at least one site per PCV per year.

If there is an interest, assist villagers to protect natural regenerating tree seedlings in farmers' fields, establish live-fences from Euphorbia spp. cuttings, and direct seed areas with appropriate tree seeds.

Organize villagers to construct small check dams out of rocks to slow down the water in gullies and small seasonal streams.

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TIME FRAME: SOIL CONSERVATION/FORESTRY PCV
SEGOU

17/6-87

ACTIVITY	1986					1987					1988															
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
1) PST (ICT)	_____																									
2) Settle-in village	_____																									
3) Survey of villagers' interest in reforestation, nursery site selection, etc.	_____																									
4) Nursery establishment, teaching nursery maintenance, grafting and/or budding techniques, etc.	_____																									
* 5) Teaching the use of the hose level to determine the contour lines, establishing berms, etc.	_____																									
6) Teaching plowing with the contours.	_____																									
* 7) Village meeting to stimulate interest in reforestation and soil conservation techniques.	_____																									
8) Plant tree seedlings from nurseries.	_____																									
9) Plant live-fences of local tree and shrub cuttings.	_____																									
* 10) Follow-up to see that trees are well maintained.	_____																									
11) Direct seedling of areas with tree seeds if appropriate.	_____																									
* 12) Anti-water erosion activities in gullies and small seasonal streams.	_____																									

ACTIVITY

1986

1987

1988

! J A S O N D ! J F M A M J J A S O N D ! J F M A M J J A S

- * 13) Protection of natural regeneration of tree species.
- 14) Use farmers' fields with berms and which have been plowed along the contours as demonstration fields to stimulate interest in these techniques.

* Flexible

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SECTION 5: PROJECT RESOURCES

A. Peace Corps Volunteers

1. Assignment Title	2. Vs On Board as of 6/85	3. Trainee Requests a. Current FY _____	b. Projected			
			FY <u>86</u>	FY <u>87</u>	FY <u>88</u>	FY <u>89</u>
Improved Woodstoves	5	2	3	3	3	3
Soil Conservation/ Forestry	0	0	7	3	5	7
Gardening	0	0	7	7	9	9
Water Supply	0	2	4	4	4	4
Agriculture Extension	0	0	0	0	4	4

SECTION 5: PROJECT RESOURCES

B. Other Resources

1. Personnel

PSC to design PST technical training component for both SST and ICT for following assignments :

- a. Gardening
- b. Soil Conservation/Forestry
- c. Water Supply

2. Training Items (PST, IST)

Complete PST training design for SST and ICT, including technical, language and cross-cultural components

Technical literature on gardening, forestry, soil conservation and water supply

Materials and supplies for hands-on IST for all PCV assignments

Budget and design for IST, including field trip to Burkina Faso for soil conservation/forestry PCVs

2. Responsible Party

PC/W, PC/Mali

PC/Mali, PC/W,
Contractor

PC/W

PC/W, PC/Mali, USAID

PC/W, PC/Mali

3. Date Needed

December, 1985

April, 1986

August, 1986

November, 1986

November, 1986

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B. Other Resources

3. Program Items:

Program design completed	PC/Mali with OHV	October, 1985
List of potential placement for PCVs	OHV	November, 1985
Initial site selection visits	PC/Mali, OHV	January, 1986
125 cc. motorbikes for 1986 PCVs	PC/Mali, PC/W, USAID	June, 1986
Funding for open well construction, irrigation, small scale forestry and soil conservation projects	Self-Help Funds, SPAF, local contributions (Government, beneficiaries)	October, 1986 on-going
Ten-meter sections of clear plastic hose for Soil Conservation PCVs and Counterparts	OHV	October, 1986
Ground water map which can be used to select possible sites for open well construction	UNDP	October, 1986
125 cc. motorbikes for 1987 PCVs	PC/Mali, PC/W, USAID	June, 1987
Proven effective agricultural extension packages for the OHV zone	ICRISAT, SAFGRAD, Ministry of Agriculture, OHV extension division, PC/Mali, etc.	December, 1987

SECTION 6: PROJECT MANAGEMENT

A. Monitoring Arrangements

1. Procedures

If appropriate, evaluation of SST at end of training.

Testing in language, cross-cultural, technical skills, and for awareness of Peace Corps Mali overall philosophy and its long term strategy, approaches to community development.

Initial survey of site completed for

- horticultural
- soil conservation or forestry
- water

Situation by Volunteer

Project planned for 1st year's activities in

- horticulture
- soil conservation and forestry
- water supply

by Volunteer, reviewed by APCD.

2. Events/Timing

SST May/June, 1986

End of PST October, 1986

Survey report completed
December, 1986

Project plan submitted
January, 1986, reviewed
and approved by APCD

3. Participants

Volunteers, trainers

Volunteers, PC/Mali trainers

Relevant Volunteers,
APCD

Relevant Volunteers,
APCD, and OHV

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Visit Volunteer site and hold formal and informal meetings with PCVs, Supervisors, counterparts villagers, etc. using CPR-M site visit Appraisal Form.

Read and submit written comments on PCVs' quarterly reports.

Training for PCVs and their counterparts in their relevant technical area, followed by formal review of program, training, PC/Mali, etc. using CPR-M PCVQ as a guide.

Review of PC/Mali program and Upper Niger River Valley program in particular, using CPR-M PCVQ and Programming Quality Forms and PCV evaluation forms as guides.

Review of program using CPR-M PCVQ and programming quality forms and PCV evaluation forms as a guide.

Site visits/4 times a year for 1st year-of service and at least twice during 2nd year of service

Review PCVs' quarterly reports

IST during the first six months of service

All Volunteer conference approximately one year after PCVs arrive in Mali.

COS conference; during last four months of PCVs' service.

APCD, Volunteers, villagers

APCD and OHV supervisors

PCVs in similar program throughout Mali, APCDs, PSCs.

PCVs from all projects in Mali, PC/Mali staff.

All PCVs completing their tours of duty

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B. EVALUATION PLANS

Most programs are evaluated about three years after the start-up date; however, since AFSI is a pilot initiative with possibilities for Peace Corps - wide applicability, the Upper Niger River Valley project should be evaluated during the tour of the first group of Volunteers.

The ideal time for the evaluation to take place is approximately 18 months after start-up date. However, given Peace Corps' programming deadlines, the evaluation should be completed before TACs are due for the second group of PCVs.

Consultants, preferably with former Peace Corps experience, will work with PC/Washington and PC/Mali to design and carry out the evaluation.

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SECTION 7: STEPS TO BE TAKEN TO FINALIZE THE PROJECT PLAN

<u>Task</u>	<u>To be Completed by</u>
Meet with current OHV Volunteers to revise, if needed, the Task Analyses and TACs.	July, 1985
Determine to what extent USAID will continue to provide financial and technical assistance to OHV. If the level of assistance is reduced, determine the impact on Peace Corps' effectiveness.	August, 1985
Determine viability of PCV assignments requested by OHV at the headquarters level.	September, 1985
Negotiate job description, numbers, resource and support issues with OHV. - Assure that an Agreement between PC/Mali and OHV is signed (Protocol d'Accord).	September, 1985
Determine probable length of PC involvement in the Project (Note: Goals and Objectives in this draft are set for the first two years only). - Expand Goals and Objectives accordingly and refine the Project Plan where needed.	November, 1985

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Refine the Task Analyses and TACs

- Do representative site surveys for potential PCV placements
- Develop language and cross-cultural objectives.

November, 1985

Decide if SAVs are acceptable

- Begin to explore possible placements for them (to be completed before trainees arrive in June, 1986).

November, 1985

Develop Preliminary TACs for the following potential assignments:

- a. Crop Protection
- b. Agriculture Extension
- c. Marketing/Small Enterprise Development.

April, 1986

Explore potential for collaboration with other organizations working in the Upper Niger region, eg.

National Association of Malian Women (UNFM).

May, 1986

Assure that Resource Requirements listed on pp. are met by the established deadlines.

See pp.

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PROJECT PLAN

Project Title: MALI FOOD SYSTEMS/SEGOU

Project Code: _____ Sector: AGRICULTURE

Start Date: OCTOBER, 1986

Date Original Plan Prepared: JUNE, 1985

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SECTION 1: PROJECT RELATIONSHIPS

A. Host Agency

The Ministry of Agriculture

B. Sponsoring Unit

Community Development Section of Operation Rice-Ségou

C. Primary Function of Sponsoring Unit

The Community Development Section has a broad responsibility for developing and delivering socio-economic services in the Operation Rice-Ségou (ORS) agricultural development zone. It is not responsible for anything directly related to rice production, but has a flexible mandate to engage in integrated community development activities, with responsibility to supply technical assistance in food crop production, facilitate community institution building, and encourage local efforts in other areas such as reforestation, wells, and health services.

D. Address of Sponsoring Unit

Section du Développement Communautaire

Opération Riz-Ségou (ORS)

B.P. 117

Ségou, Mali

E. Title of official responsible for project supervision

Director of Community Development.

F. Collaborating Agencies

The European Development Fund of the European Economic Community (FED) has provided funding and technical support to Operation Rice-Ségou since 1972. Other donors active in the Ségou area include Africar which has funded wells projects in the area and UNICEF which is

supporting an applied nutrition program. The French Volunteers (Volontaires du Progrès) and both Protestant and Catholic Mission also operate in the Ségou area.

G. Lines of Authority

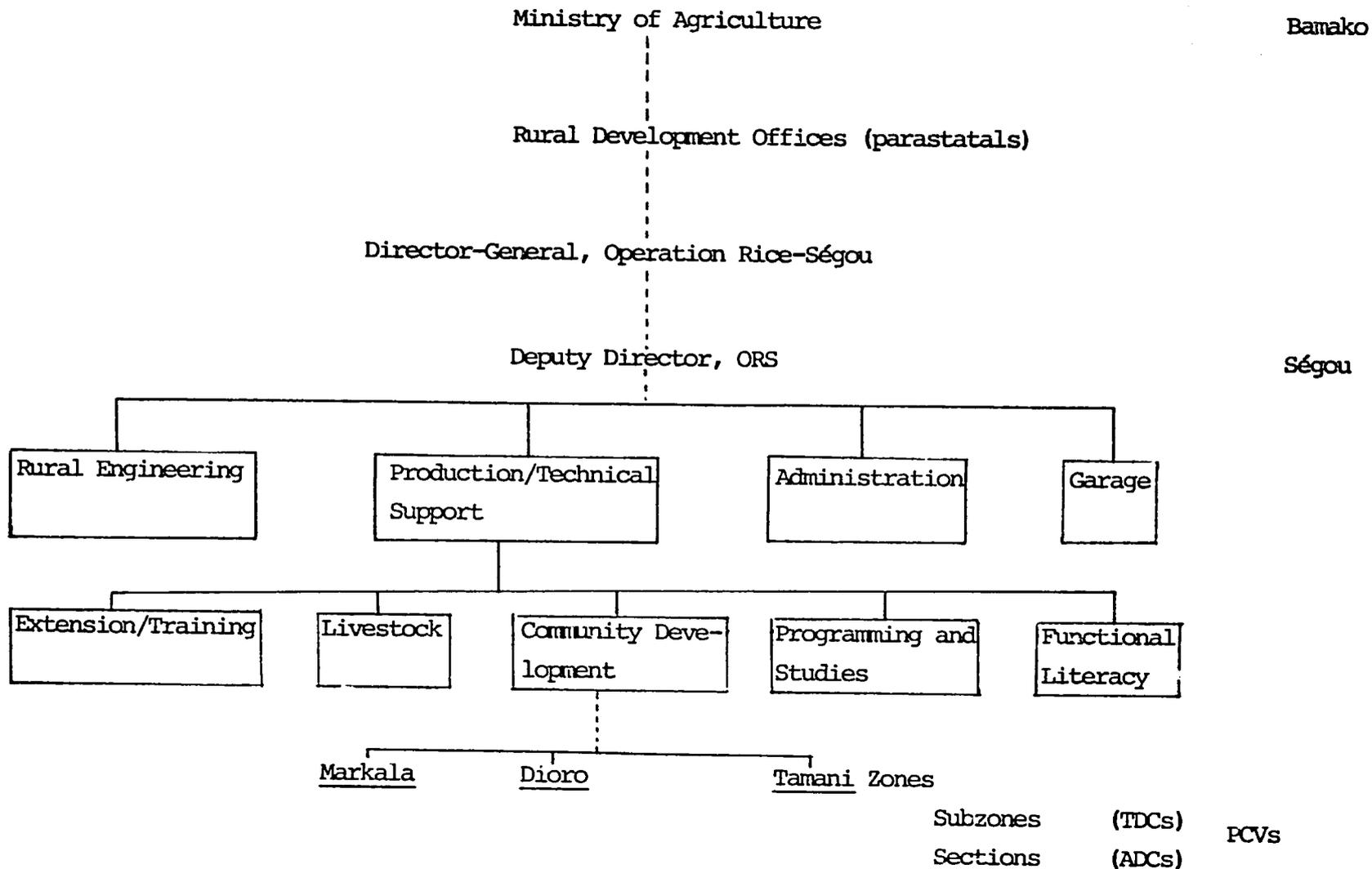
The Peace Corps Volunteers will work primarily with the village based Community Development Technicians (TDC-Techniciens du Développement Communautaire) or with Community Development Agents (ADC-Agents du Développement Communautaire), depending on the placement site. Volunteers have also previously worked in the Ségou area with Directors of Community Development Centers who report to the Ministry of Social Affairs.

The Director of the Community Development Section of ORS in Ségou would be the PCVs' Government Chief of Service and, in conjunction with the APCD, would be responsible for supervising their work. As shown in the chart in Figure 1 on the following page, the Operation Rice-Ségou region is divided into zones, subzones (casiers) and sections (sous-casiers). Volunteers would work with the TDC at the subzone level or the ADC at the section level.

(See Figure 1: Chart of ORS Organization).

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FIGURE 1 LINES OF AUTHORITY



SECTION 2: PROBLEM ANALYSIS

A. State the problem which the project treats.

In recent years Mali has suffered from drought and a reduction in the flood levels of the Niger River. As a result, agricultural production has been disrupted and population shifts are occurring. In the Operation Rice-Ségou (ORS) area, dryland millet and sorghum production has been hit by the erratic, reduced rains; irrigated rice production in the area has also fallen. The resultant decrease in cereal production has exacerbated the flood deficit in the area, particularly during the period just prior to the cereal harvests.

The country-wide drought has also caused a migration into the area from the harder-hit areas in the North, increasing the pressure on the already over-extended resource base. The pressures of reduced cereal production, declining fish harvests and ⁱⁿcreasing population is causing changes in farming practices and influencing shifts in traditional ethnic occupations and sexual divisions of labour.

The drought has not only had negative repercussions on the predominantly agricultural economy, but on other sectors as well. The falling watertable in the area, for example, is causing wells to dry up, or to provide only limited amounts of water during the dry season, decreasing both the availability of sanitary drinking water and of water for off-season vegetable production.

B. State the major causes or factors contributing to the problem.

The primary cause of the problems in the area is the drought: rain fall is erratic, ill-distributed in time and space, and deficient in quantity. Also, the seasonal flood of the Niger River is reduced

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in quantity and unpredictable in its timing. The ORS canal and intake structures, designed for higher flood levels than are presently occurring, do not provide sufficient water to many of the irrigated perimeters. These are also extensive operation and maintenance problems with this system.

The reduction in the area adequately irrigated for rice is also leading to increased competition for rice land and a trend towards control of the more productive areas by individuals with political or economic power, often from outside the local area. The emphasis on rice production in the region has been to the detriment of dryland production and irrigated horticulture. Technical advice and resources for marketing and production of dryland crops and irrigated vegetables are in short supply.

The lack of cereal crops for consumption is causing seasonal migration of young men out of the area during food deficit periods, causing changes in labour availability and disrupting the social organizations in the villages. The increased risk involved in cereal production is leading to more people diversifying their farming activities and to a concentration in the small-scale horticultural activities along the river.

C. Describe the consequences of this problem for people.

The drought, combined with reduced food availability, the influx of migrants from the north, and declining incomes from fishing and cereal production, has led to a need for alternative economic activities and risk-reducing strategies. Already important changes are occurring in the traditional ethnic and sexual division of labour and farming activities in the area.

There has been an expansion of the numbers and intensity of small scale vegetable production in the area, especially along the river, but also around wells. This expansion has created new needs in the area for technical advice and skills development.

The most significant negative consequence of the overall problem is a net reduction in potential food production. This reduction is a consequence of various factors, exacerbated by

- the movement of unexperienced producers into the food system
- the intensification of vegetable production by existing producers, with a concomitant lag in the development of support structures for horticulture.

If some of the causes of the problem are addressed in a timely manner, the potential for increasing food production, by doing vegetable gardening, for instance, during the off-season, is excellent. This increased production would help offset the Region's food deficit and add variety and nutrients to the cereal-based diet.

D. Describe the information sources consulted when defining this problem.

The AFSI Program Design Team went to Ségou and had a series of meetings and field trips to gather information on development activities. The team interviewed:

- the ORS staff: Director General, Deputy Director, Director for Community Development, Director for Rural Engineering, field staff at all levels
- The Governor and his Development Advisor
- The Commandant of Macina Circle and his staff
- The F.E.D. technical advisors in the area
- Technicians working on a Dutch bilateral Aid Project
- Community leaders in 11 Centers
- Peace Corps Volunteers working with ORS, the Chamber of Commerce and the Education Sector
- Farmers, gardeners and fishermen

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In Bamako, members of the Team consulted with F.E.D., the Director of Africare and technical advisors in the Ministry of Agriculture.

Documents consulted for background information included

1. Approches De Quelques Aspects Socio-Economiques Au sein de l'O.R.S. (November, 1983)
2. Plan Quinquenal de Développement: 1981-1985
3. Développement des Cultures Irrigées au Mali (C.I.L.S.S. 1979):
Ségou
4. "Programme d'Aide d'Urgence: Ségou"
5. "Office du Niger: Approche pour le Plan de Vulgarisation"
6. FED Evaluation of O.R.S

E. Describe existing efforts to treat the problem.

Operation Rice-Ségou has been working since 1972 on irrigated rice production in the area, providing extension and training to rice farmers and organizing inputs and credit for rice production. The Operation is also responsible for maintaining and managing the rice perimeter and collecting fees from participating rice farmers; they also have responsibility for organizing village associations around rice production.

In the area of socio-economic development, O.R.S. agents are engaged in community development, functional literacy, reforestation, wells construction, health services and small livestock production. They have expressed an interest in collaboration in the areas of organizing associations, formation of production and marketing cooperatives, and agricultural extension for non-rice crops.

Peace Corps has been working in the Ségou region since 1978, engaged in community development activities which ORS via woodstove Volunteers, who have also been active in well digging and gardening

projects. Since 1983, one Volunteer has been working in Ségou, collaborating with the Chamber of Commerce by working in small enterprise development; this project will be expanded in 1985 to 4 Volunteers.

The European Economic Community's Development Fund (FED) has been providing funding to ORS since 1972; they are currently concentrating their efforts on the strengthening of ORS management capabilities and construction of a canal linking the Office of the Niger to the ORS perimeter. FED, like other multi- and bilateral donors, is encouraging liberalization of cereals marketing. This proposed shift of responsibility for marketing, from the parastatals to the private sector, will if it occurs, have a variety of economic implications for the area. The proposed project activities in vegetable marketing will prepare Peace Corps Mali to address some of the new needs which may arise in rice marketing.

Africare is financing wells projects in the area, as is the local Government. Both of these funding sources have been used previously by Peace Corps Wells Volunteers and will be available for future projects. UNICEF is supporting an applied nutrition program in the area, which Volunteers have collaborated with.

The communities themselves have mobilized for activities such as well digging by providing contributions of labour and money. A number of groups are already engaged in various types of communal and cooperative production and marketing of vegetables. The Malian people are continuing to develop new solutions to the problems posed for them by the drought, showing a resourcefulness and willingness to initiate new activities. Their efforts could be enhanced by Peace Corps' collaboration and they have much to contribute to making a Volunteer's experience in Mali a productive one.

SECTION 3: GOALS AND OBJECTIVES FOR PROJECT COMPONENTS

The goals and objectives outlined on the following pages state what the initial group of PCVs in each of the three components of the project will accomplish during their two-year tour. Once Peace Corps Mali determines the length of their involvement in the Ségou project, long-term overall goals and objectives will be established.

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SECTION 3: GARDENING (SEGOU)

GOALS AND OBJECTIVES (PERIOD COVERED OCT. 1986 TO OCT. 1988)

A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
To increase the total horticultural output at 10 sites in the Ségou region by October, 1988.	Expansion of existing horticultural activities in the Ségou region, at 10 sites.	Pre-and post-placement surveys by Volunteers; Volunteers quarterly reports; site visits by ORS and PC/Mali staff.
To improve the standards of horticultural production techniques at 5 more sites in the Ségou region by October, 1988.	Increased horticultural output/unit of input at 5 sites.	All of the above, plus field visits and discussions with farmers by ORS and PC/Mali staff.
To expand out of season horticultural production at these 5 sites, by October, 1988.	Extension of the production season at 5 sites.	Volunteers quarterly reports; farm interviews; site visits by ORS and PC/Mali staff.
To develop or expand marketing at these 5 sites, by October, 1988.	Improved marketing at 5 sites, increased sales volume.	All of the above, plus market survey.

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To augment returns to horticultural production by improved harvest quality, product storage and conservation at these 5 sites, by October, 1988.

Higher quality produce at point of sale, improved storage and conservation techniques at 5 sites.

All of the above sources.

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N.B.:

Returns to farmers can be increased in a number of different ways, including :

- Increasing the area of production
- Increasing the output/unit of input from the existing area of production
- Shifting the timing of supply towards out of season sales, via production changes, (i.e., staggered planting dates, shorter season varieties) and via improved storage practices.
- Marketing the products being produced more efficiently
- Improving the quality of the products being produced
- Changing the nature of the product, i.e., conservation and processing.

In the first year Volunteers would concentrate on 1 site/Volunteer and would be expected to increase and/or improve total production at that site. In their second year they would continue these types of activities at 2 sites/Volunteer, and work on the more qualitative aspects at a third site. The third site could conceivably be the site of their first intervention or a new site identified in year 1.

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A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Capacity Goals</u>		
To improve the planning and management capabilities of horticultural producers at five or more locations in the Ségou region, by October, 1988.	Changes observed in farm planning and management activities at 5 or more locations.	Program evaluations; Volunteer surveys.
To encourage, expand and improve existing production and marketing organizations in the Ségou region, by October, 1988.	Awareness of the requirements for planning and implementing organizations in 5 villages.	Pre-and post-placement Volunteer survey; site visits and discussions by PC/Mali and ORS staff with cooperating groups.
To transfer the technical skills required for improved horticultural production to 20 or more farmers in the Ségou region, by October, 1988.	Use existing and new inputs in the recommended manner by at least 20 producers or producer groups.	Volunteer quarterly reports; site visits and discussions by PC/Mali and ORS staff at Volunteer sites; APCDs' reports.

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To improve the technical skills required for improved marketing and storage to 10 or more farmers in the Ségou region, by October, 1988.

Adoption of improved marketing and storage practices by at least 10 producers or producer groups.

All of the above.

To transfer the technical skills and organizational ability required for developing horticultural production, marketing and storage in the Ségou region to five counterparts, by October, 1988.

Initiation and development of new horticultural interventions in the Ségou region by Volunteer's counterparts.

Site visits by PC/Mali and ORS staff; APCDs and ORS reports.

B. OBJECTIVES

To make an initial survey of horticultural activities around the Volunteer's work site.

Survey completed satisfactorily within 3 months of PCV's arrival on site.

APCD and ORS review of survey report.

To select a location and an area of concentration for 1st year activities. See Task Analysis for more details.

Sites selected, preliminary planning of 1st year activities completed by December, 1986.

Work plan submitted by Volunteer; in-service training request made.

To work with 5 farmers/
farmers groups in developing
and implementing the 1st
year work plan.

5 farmers/farmers's groups completed
training program; techniques understood
and being utilized correctly by end
of 1st year.

Site visit by PC/Mali and ORS
staff; Volunteer's quarterly
reports.

To increase the ability of
villagers to supply and
utilize horticultural
inputs to 5 locations
by the end of the
second year.

Increased access to inputs and their
correct utilization by 20 or more
farmers/farmers' groups.

Volunteer pre-and post-placement
survey; APCD and ORS reports.

OR

To improve the marketing of
horticultural output in 5
locations by the end of
the second year.

Increased marketing activities and
use of improved storage and conser-
vation techniques by 20 or more
farmer/farmers' groups.

Volunteers pre-and post-placement
survey; Volunteer quarterly
reports; market survey; APCD
and ORS site visits.

To start to collect data
on the major categories/
types of horticulture in
the Ségou region.

Description of the major recommen-
dation domains for future Volunteers;
report on file with PC/Mali.

Volunteer and APCD's reports.

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To discover, document and disseminate appropriate existing local responses to horticultural problems and opportunities.

Based on the first year's results, to select a primary and a secondary activity. (See task analysis).

To work with 5 farmers/farmers' groups in developing and implementing the 2nd year primary activity.

To work with 5 farmers/farmers' groups in developing and implementing the 2nd year secondary activity.

Appropriate local responses eg. Crops, varieties and techniques, introduced and adopted in 5 new locations by the end of the 2nd year.

Areas of concentration chosen, preliminary planning of 2nd year activities completed by August, 1987.

5 farmers/farmers' groups completed training program; techniques understood and being utilized correctly by August, 1988.

Same as above.

Volunteer quarterly reports; site visits by PC/Mali; ORS staff reports.

Work plan submitted; APCD review.

Site visit by PC/Mali and supervisor; Volunteer's quarterly reports.

Same as above.

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SECTION 3: WATER SUPPLY (SEGOU)

GOALS AND OBJECTIVES (PERIOD COVERED OCT. 1986 TO OCT. 1988)

A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
To conduct survey of water supply situation and select 5 initial work sites and 5 potential sites by December, 1986.	Survey completed, at least five sites identified and comprehensive programs addressing water supply issues prepared. Village meetings held and all possible options including hand pumps, deepening existing wells, improvements in well sites and new wells considered, discussed and work sites chosen.	Survey report; PCV reports; supervisor's reports and site visits.
To initiate projects for 5 existing sites improvement by February, 1987.	Villages mobilized, necessary materials acquired, construction completed at the five sites.	Quarterly reports; supervisor's reports and site visits.
Five new wells projects initiated and completed by June, 1987.	Villages mobilized, necessary funding and materials acquired, construction completed.	Quarterly reports; supervisor's reports and site visits.
To improve in sanitation at new and improved well sites by October, 1988.	Construction of aprons, head walls, animal watering troughs, etc.	Same as above.

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To complete 10 additional new wells and improvements made on 10 existing wells by October, 1988.

Same as 2 and 3 above.

Same as above.

Capacity Goals

Train two teams per Volunteer in well construction, i.e., site selection, planning, organization of resources and technical skills.

Villages organized around water needs producing new wells. Two well teams per Volunteer functioning effectively by July, 1988.

Site visits; Volunteer's COS report; supervisor's report.

Transfer skills to one counterpart per Volunteer in well improvement.

One counterpart per Volunteer trained in well improvement techniques.

Same as above.

Train one counterpart per Volunteer in the organization of teams for wells construction and improvement.

One counterpart per Volunteer train in the organization of teams for wells construction and improvement by October, 1989.

Same as above.

Counterpart and villagers understand the connection between water, sanitation and health.

Sound principles of sanitation and health followed at all well sites.

Same as above.

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To survey the water supply situation around the Volunteer's placement site by January, 1987.

Survey completed.

APCD and supervisor's review and approval of survey report.

To select potential work sites in conjunction with villages by February, 1987.

Village meetings held and sites selected.

PCV report; site visits.

To organize funding for well construction and improvement projects for first year project by April, 1987.

Funding obtained for selected projects, proposals submitted if required.

PCV report.

To develop work plan in concert with counterparts and villagers by April, 1987.

Village meetings held and plans formalized.

PCV report.

To verify technical feasibility of plans with Water Supply Specialist APCD or other relevant parties by April, 1987.

Plan formally approved.

PCV report; APCD or other specialist report; site visit.

To complete construction at two site per Volunteer (one improvement and one new well) by July, 1987.

Constructed completed.

PCV report; supervisor's report; site visits.

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To replicate step 2 -
6 above for three work
sites by October, 1988.

See no.2 - 6 above.

See above.

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SECTION 3: SOIL CONSERVATION/FORESTRY (SEGOU)

GOALS AND OBJECTIVES (PERIOD COVERED OCT. 1986 TO OCT. 1988)

A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
To start soil conservation activities on 10 farms in the Ségou region by October, 1988.	Construction of contour berms on ten farms, installation of a wind break on 1 farm.	Site visits by PC/Mali and ORS; reports by Volunteer, APCD, ORS staff.
To establish live fences around 6 orchards or gardens by October, 1988.	Fences established on 6 sites.	Same as above.
To protect naturally regenerating seedlings in farmers' fields.	Protection occurring in fields at six new locations.	Same as above.
To increase tree planting activities in twenty villages by October, 1988.	Trees being planted and protected in 20 villages.	Site visits; reports by Volunteer, APCD, ORS staff.
To produce grafted fruit trees at two sites by October, 1988.	Trees being successfully grafted at 2 sites.	See as above.

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To establish ten mini-nurseries by October, 1988.

Ten mini-nurseries established and maintained.

See as above.

Capacity Goals

To train 10 Malians in the principles, practice and rationale for mini-nurseries by October, 1988.

Training sessions held, 10 Malians successfully establishing new mini-nurseries.

Site visits; Volunteer, APCD, ORS reports.

To train villagers in 20 villages in the concept and practice of tree planting and maintenance by October, 1988.

Village meetings held, 20 villages planting and protecting trees.

Same as above.

To train 6 Malian counterparts and 6 Malians farmers in the design, layout and rationale for contour berms, and other appropriate soil conservation practices by October, 1988.

Training sessions held.

Same as above.

To train 2 Malians in the principles and practice of fruit tree grafting by October, 1988.

Training sessions held; trees being grafted.

Site visits and APCD, Volunteer reports.

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B. OBJECTIVES

To complete a survey of soil erosion problems in ten villages by January, 1987.

Survey completed and report written within three months of PCV's arrival.

PCV's reports to ORS and PC/Mali; reviewed by ORS personnel and APCD by February, 1987.

Complete survey of villagers' interest in reforestation activities, species preference, why old reforestation activities failed, agro-forestry activities currently practiced, possible nursery sites, etc. in at least ten villages by January, 1987.

Survey completed, report and plan of action submitted within three months of PCVs arrival.

Same as above.

Berms are established along the contours in at least two fields by June, 1987.

At least twenty hands-on training sessions attended by ORS agents, Water and Forest Service agents, and/or villagers.

PCV's reports to ORS and PC/Mali; ORS personnel reports; site visits by PC/Mali and ORS staff.

At least four mini-nurseries established and maintained by July, 1987.

Four mini-nurseries established and maintained. Seedlings are at the correct age to be outplanted during the month of July.

Nursery records; PCV's reports; ORS agents' reports; site visits by PC/Mali and ORS staff.

Farmers are plowing along the contours lines in at least two fields by July 1987.

At least eight hands-on training session attended by ORS agents, Water and Forest Service agents, and/or villagers. Fields are plowed along the contours in at least four locations and everyone understands the rationale behind the fields being plowed in that manner.

PCVs and ORS agents reports; site visits by ORS and PC/Mali staff.

At least twenty farmers visit the demonstration fields to see the effects of decreasing soil erosion by plowing and establishing berms along the contour lines, by October, 1987.

The fields are effective demonstrations of the effects of soil conservation techniques. At least four visits are arranged to the demonstration fields to see the effects of plowing along, and establishing berms, on the contour lines.

PCV and ORS agents reports; site visits by PC/Mali and ORS staff; interviews with farmers.

Increased villagers' interest in reforestation activities in at least ten villages by October, 1987.

A total of at least twenty village meetings held concerning reforestation activities in fifteen villages. Demand for seedling produced in nurseries is expressed by villagers. Trees planted and well maintained.

At least 75% of the trees are living; PCV and ORS staff reports; site visits by ORS and PC/Mali staff.

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Berms are established and/or farmers are plowing along the contour lines in at least ten fields by mid-July 1988.

At least forty hands-on training sessions attended by ORS agents, Water and Forest Service agents (WFS), and/or villagers. Fields are installed with effective soil conservation techniques.

PCV and ORS agents reports; site visits by PC/Mali and ORS staff.

Ten mini, village-level nurseries established and maintained by July, 1988.

At least sixty hands-on nursery establishment and tree maintenance and grafting training sessions attended by school officials, ORS and WFS agents, and/or villagers. Nurseries are functioning without major PCV involvement.

Nursery records; PCV reports; ORS agents' report, seedling quality; site visits by PC/Mali and ORS staff.

Increased villager interest in reforestation activities in at least twenty locations by October, 1988.

Trees planted and maintained, naturally regenerated seedling protected, or live-fences established from cuttings, etc. in at least forty locations. Survival rates of seedling planted at least 75%. High demand for trees produced in nurseries.

Nursery records; survival rate records; PCV and ORS reports; site visits by ORS and PC/Mali staff.

Decrease water erosion and increase water infiltration and storage capacities in gullies and/or small seasonal streams in at least two locations by October, 1988.

Water available for longer periods of time and a temporary rise in the watertable.

Watertable records; PCV and ORS reports; site visits by ORS and PC/Mali staff.

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SECTION 4: VOLUNTEER ASSIGNMENTS - ORS

To address the problem described in Section 2, Peace Corps Mali will place groups of 2-3 PCVs with complementary skills in continuous villages.

Schematically presented:

ORS Headquarters (Ségou)

1 Volunteer Coordinator

Field Level

Group I

- Gardening PCV
- Water supply PCV

Group II

- Gardening PCV
- Water supply PCV

Group III

- Gardening PCV
- Water supply PCV

Group IV

- Gardening PCV
- Water supply PCV

Soil Conservation/
Forestry PCV working with
2 or more groups of gardening
and water supply PCVs.

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Trainee Assignment Criteria

Preliminary

Final

1. Training Class Name MMER OMNIBUS 1986		2. Project Name and Assignment Title MALI FOOD SYSTEMS: SEGOU, UPPER NIGER VALLEY SOIL CONSERVATION/FORESTRY		3. Project Code
-28--				
4. Trainees Requested		5. Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give numbers and restrictions in item 17.)		
Information: Comp ___ Med/Admin ___ Other ___ Dates: ___ .. Yes ..				
6. I.D.		7. Assignment No.	8. COI	9. Nominee
10. Generic ___ IP ___ UNV ___		11. NRD	12. Allocation: AT ___ NY ___ CH ___ DA ___ SF ___	
13. Primary code (first)		14. Placement Contact/Code		

15. Restrictions (Education and Experience, list in order of preference; other skills, languages, marital restrictions)

Must have either:
 /AS in General Forestry, Conservation, Natural Resources Management, Environmental Sciences or Ecology OR
 in Biology, Botany or Horticulture OR
 /AS in the Natural sciences and at least 6 mos. work experience in any of the fields A and B above OR
 1 year work experience in a forestry-related job or an extension service.

Must have at least 2 years of high school French, or one year of college French, or lived in a French-speaking country for at least 6 months. The same background in other Romance Language (Spanish, Italian, Portuguese) can also qualify you.

16. Assignment Description or Summary (Flexibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is primarily agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves.

In order to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target regions. At the request of the Malian Government, these teams of volunteers will work directly with villagers in gardening, soil conservation, small-scale irrigation and water supply activities. One of the most serious problems facing the agricultural sector is the increasingly rapid rate of desertification of major portions of the country. Desertification is caused by drought conditions of little or no rainfall year after year, uncontrolled cutting of trees and bushes for fuelwood and clearing land for agriculture. Most of all energy needs of Mali is derived from firewood, and trees are being cut faster than they are being planted. The effects of uncontrolled cutting of trees has led to a wood shortage and a decrease in soil productivity. Top soil is being eroded away and agricultural productivity is on the decline.

As a Soil Conservation/Forestry Volunteer, you will be assigned to either Operation Upper Valley (ORS) or Operation Upper Valley (OHV); both are Government organizations responsible for rural development activities in specific geographical areas. You will work with the Malian counterpart and villagers to increase the awareness of the need for soil conservation and forestry activities. Therefore, the first task you will have once you arrive at your work site will be to complete a survey in surrounding villages to discover the soil conservation problems, villagers' interest in reforestation activities, species desired, reasons why forestry projects failed, current agroforestry activities practiced in the area, possible sites, etc.

Other possible duties that could follow the survey are holding village meetings to increase awareness in the project; teaching farmers to plow their fields along the contour lines and to establish berms on the contours to decrease erosion, establishing mini-nurseries, assisting

PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name
MALI SUMMER OMNIBUS 1986

Project Title/Assignment Title
MALI FOOD SYSTEMS: SEGOU, UPPER NIGER VALLEY
SOIL CONSERVATION/FORESTRY

the planting of trees, etc.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as gardening and water supply, within a short motorcycle ride from your village. These Volunteers may request your assistance in helping the villagers in their area with soil conservation or forestry activities and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in soil conservation, nursery establishment, nursery management, etc. Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in one Malian language; community development techniques; technical sessions in: dendrology, silviculture, soil conservation, pedology, etc; cultural adaptation; personal health maintenance; motorcycle riding; maintenance and repair.

LIVING AND WORKING CONDITIONS: Once assigned to your post, you will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region or the area around Bamako. You will be at least one day's travel from the capital city and the Peace Corps office. You will not have running water or electricity; your diet will most likely be the same as that of your Malian neighbors, sauce served on flat bread or rice.

You will be expected to learn to ride and maintain a small motorcycle, to communicate in French and a Malian language on a daily basis with your colleagues and friends, to maintain your health in an environment that presents many potential health hazards. Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralised bureaucracy, low literacy and education levels multilingual demands for communication and great distances between cities.

Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciative of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

The Peace Corps and the Malians Government invite you to participate in this high priority Program. Your tour of service will be two of the most interesting and we believe rewarding years of your life.

TASK ANALYSIS: SOIL CONSERVATION/FORESTRY
SEGOU, UPPER NIGER VALLEY.

MAJOR TASK

Survey area for soil erosion problems, villagers' interest in reforestation activities, species preference, why old reforestation activities failed, current agro-forestry activities, possible nursery sites, etc.

Teach plowing along the contour lines and establishment of berms on the contours in farmers' fields.

MEASURES

At least ten villages surveyed per PCV.

At least ten OHV extension agents, water and forest agents, farmers know how to plow along the contours and how to establish berms on the contour lines (per PCV).

DUTIES

Survey villages and submit a report to OHV supervisor and PC/Mali.

Hold hands-on training sessions on the use of a clear plastic hose level to determine the contour lines in a field.

Demonstrate the effect that berms and plowing along the contours have in decreasing water erosion.

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Survey area for soil erosion problems, villagers' interest in reforestation activities, species preference, why old reforestation activities failed, current agro-forestry activities, possible nursery sites, etc.

Teach plowing along the contour lines and establishment of berms on the contours in farmers' fields.

Establish mini, village-based nurseries.

At least ten villages surveyed per PCV.

At least ten villages, OHV extension agents, Water and Forestry agents and/or farmers know how to plow along the contour lines (per PCV)

At least four Malians/PCV are trained to manage mini-nurseries and the nurseries and the nurseries are functioning without major PCV involvement.

Survey villages and submit a report to OHV Supervisor and PC/Mali.

Hold hands-on training sessions on the use of a clear plastic hose level to determine the contour lines in a field.

Demonstrate the effect that the berms and plowing along the contours have on decreasing water erosion.

Select locations for nurseries with villagers' aid.

Assure there is:

1. a year-around source of water
2. adequate protection

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Outplant the seedlings from the nurseries.

At least 75% of the seedlings planted are living one year after being planted.

Hold village meetings to stimulate interest in reforestation.

Assure that there is adequate protection for the seedlings before they are planted.

Match tree species with villagers' preferences and the ecological constraints of the area.

Teach proper tree planting and maintenance techniques.

Continue visits with villagers long after the trees have been planted to assure the trees are being well maintained.

Increase bio-mass in the area by means other than by planting seedlings.

At least three projects are implemented per ECV per year and Malians are trained to implement similar projects.

Demonstrate how natural regeneration becomes established in areas protected from livestock and man.

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Decrease water erosion and storage capacities in gullies and small seasonal streams.

Water available for periods of time and temporary rise in the watertable. Malians are trained to implement similar projects in at least one site per PCV per year.

If there is an interest, assist villagers to protect natural regenerating tree seedlings in farmers' fields, establish live-fences from Euphorbia spp. cuttings, and direct seed areas with appropriate tree seeds.

Organize villagers to construct small check dams out of rocks to slow down the water in gullies and small seasonal streams.

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To collaborate with other PCVs
in improving food systems in
the area.

Collaborative projects set up

- A. Discuss survey report and strategies with other PCVs.
- B. Work with forestry/soil conservation Volunteers in establishing live-fences, fruit trees and other projects.
- C. Work with water supply Volunteers in improving water supply and irrigation systems to gardens.

TIME FRAME: SOIL CONSERVATION/FORESTRY PCV
UPPER NIGER VALLEY

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ACTIVITY	1986												1987												1988											
	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S									
1) PST (ICT)	_____																																			
2) Settle-in village.	_____																																			
3) Survey of villagers' interest in reforestation, nursery site selection, etc.	_____												_____																							
4) Nursery establishment, teaching nursery maintenance, grafting (budding) techniques, etc.	_____												_____												_____											
* 5) Teaching the use of the hose level to determine the contour lines, establishing berms, etc.	_____												_____												_____											
6) Teaching plowing with the contours.	_____												_____												_____											
7) Village meetings to stimulate interest in reforestation and soil conservation techniques.	_____												_____												_____											
* 8) Plant tree seedlings from nurseries.	_____												_____												_____											
9) Plant live-fences of local tree and shrub cuttings.	_____												_____												_____											
10) Follow-up to see that trees are well maintained.	_____												_____												_____											
* 11) Direct seeding of areas with appropriate tree seeds.	_____												_____												_____											
* 12) Anti-water erosion activities in gullies and small seasonal streams.	_____												_____												_____											

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* Flexible

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ACTIVITY

1986

1987

1988

I J A S O N D I J F M A M J J A S O N D I J F M A M J J A S

- * 13) Protection of natural regeneration of tree species.
- * 14) Use farmers' fields with berms and which have been plowed along the contours as demonstration fields to stimulate interest in these techniques.

* Flexible

1 Training Class Name SUMMER OMNIBUS 1986		2 Project Name and Assignment Title MALI FOOD SYSTEMS: ALL 3 REGIONS. WATER SUPPLY		3 Project Code
4 Training Dates		5 Training Requested	6 Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give number and restrictions in item 17.)	
7 Training Information Comp _____ Mtd/Admin _____ Other _____ Dates _____ To _____				
8 Class I.D.		9 Assignment No.	10 CDI	11 Nonlinear
12 General IP UNV		13 NRD	14 Allocation AT _____ NY _____ CM _____ DA _____ ST _____	
15 Codes (primary code first)		16. Placement Contact/Code		
17 Comments/Restrictions (Education and Experience, list in order of preference, other skills, languages, marital restrictions)				

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You must have either
 BA/BS in Geology or Water/Soil Conservation OR
 Two years' work experience in masonry, construction, carpentry, mechanics, or farming.
 You must have at least 2 years of high school French or 1 year of college French or have lived for 6 months in a French-speaking country. The same background in Spanish, Italian or Portuguese can also qualify you.
 Previous experience working with community, youth or church groups is highly desirable.

18. Assignment: Description or Summary (Flexibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is primarily agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target regions. At the request of the Malian Government, these teams of volunteers will work directly with villagers in gardening, soil conservation, small-scale forestry and water supply activities. The chronic shortage of water for agriculture and daily use is a serious problem for the millions of rural Malians living in villages throughout the country. Many village wells dry up each year and Malian farmer's ability to meet their daily needs for human and animal consumption are severely hampered.

DE: As a Water Supply Volunteer, you will be assigned to either Operation Rice Ségou or Operation Upper Valley (OHV) or to a Government organization in Diré. These Government organizations are responsible for integrated rural development activities in specific geographical areas. You will be responsible for constructing wells for both domestic/drinking and agricultural uses, and for improving existing wells in your area of assignment.

The first task you will have once you have settled into your village will be to produce a report on the existing water supply situation and select sites for the construction of new wells and for improvement of existing wells. These areas will be chosen after consultation with your Malian counterpart and the villagers. You will also work to improve the sanitation of all well sites by constructing aprons, head walls and animal watering troughs. In addition, you will, where appropriate, install various types of water lifting devices, such as hand pumps, foot pumps, etc.

If your work will be involved in organizing villagers, obtain funding and materials, and training workers at your projects. An on-going activity in all of your work will be to transfer your skills to counterparts in well construction and improvement, as well as the educational aspects of the work.

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PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name

MALI SUMMER OMNIBUS 1986

Project Title/Assignment Title

MALI FOOD SYSTEMS: ALL 3 REGIONS
WATER SUPPLY

You will find your theoretical knowledge of water resources is useful only to the extent that it allows you to suggest practical solutions to construction problems. Many of the limiting factors will initially be beyond your control and you will find that some of the practices you initially perceived as "wrong" are due to extraneous factors which become apparent as you grow to know the system better. You may be frustrated by your inability to effect massive changes, but you will learn to concentrate on the specific challenges of each construction in providing a water system appropriate to the particular needs of the project at hand.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as soil conservation/forestry and gardening, within a short motorcycle drive from your village. These Volunteers may request your assistance in helping the villagers in their area with wells construction or improvement, and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in how to assess water supply in an area, geology with a water resource focus, water resource management, irrigation systems, wells construction and improvement design, and community organization. Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in a Malian language; community development techniques; technical sessions in wells construction, with an emphasis on the types of problems to be encountered in your area of assignment, irrigation and water resource management; cultural adaptation; motorcycle riding, maintenance and repair. During this time you will also begin to acquire skills in team-building with other potential Volunteers and with Malian counterparts.

Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps or the agency you are working for.

LIVING AND WORKING CONDITIONS: You will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region, the area around Bamako, or the Diré area. You will be at least one day's travel from the capital city and the Peace Corps Office. You will not have running water or electricity; your diet will most likely be the same as that of your neighbors, sauce served on millet or rice. You will be expected to learn to ride and maintain a small motorcycle, to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards.

Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralised bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities. Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciate of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

Peace Corps and the Malian Government invite you to participate in this high priority

Program. Your tour of service will be two of the most interesting and we hope rewarding years of your life.

TASK ANALYSIS: WATER SUPPLY
DIRÉ, UPPER NIGER VALLEY, SEGOU.

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TASK

Determine the needs of the village in water supply and sanitation.

MEASURES

A survey report showing choice of locations and a work plan designed in consultation with villagers and counterpart.

DUTIES

Survey the village and different sections of villages, farms and gardens to determine current facilities for water supply and sanitation, inadequacies and possible solutions.

Consider different options available such as deepening existing wells, use of hand pumps, need for new wells with concrete linings, head walls, aprons and animal watering troughs.

Discuss the solutions, costs, labor and timetable with your counterparts, village leaders, development committees and community groups.

Select four or five possible projects. Arrange them in order of priority based on the urgency of needs and local priorities, as well as the

Assist villages in preparing for the selected projects.

Funding received, labor organized, and materials and equipment acquired.

enthusiasm of people to participate through labor contributions, equipment and other requirements.

Prepare a plan in conjunction with counterparts and village representatives for the selected projects.

Discuss your project with technical agencies in your area, such as Malian Government officials and donor agencies such as UNDP, CARE, UNICEF, etc.

Prepare proposals for external funding where needed.

Work with village associations to obtain when possible contributions in cash and kind.

Purchase and arrange for equipment and materials to be delivered to site in conjunction with counterparts, villagers and local merchants.

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Organize labor, supervise work and complete tasks.

Mobilization at site work completed.

Enlist Volunteers from village and organize them into work crews. Brief them on the work to be done and the role each will play. Make a local person responsible for the crew as foreman.

Complete construction. Check for adequacy in terms of structural safety and sanitation.

Hand over the completed facility to armer representatives and instruct in how to maintain it. Occasionally inspect the work to make sure it is being properly maintained.

Repeat steps above on other sites in order of determined priority.

Train counterpart and other villagers in procedures used.

At least two crews trained to help other farmers.

During course of the above steps train interested villagers in methods of surveying, organizing, construction, etc.

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Train your GRM counterpart in cost analysis, how to approach different donor agencies and proposal preparation.

Provide water lifting devices where appropriate.

Install hand, foot or other type of pump and/or water lifting device as appropriate to needs of site.

Meet with Volunteers and/or APCD with water resources expertise to determine best device to use on selected site.

Obtain necessary funding, coordinate project and install appropriate device.

Assist other members of your team of PCVs

At least two farms on which joint assistance is provided.

Meet with other team members and apprise them of needs of farmers in community.

Arrange meetings between PCVs and farmer representatives to plan appropriate projects relevant to the tasks of your team members.

Develop project plan and obtain funding as necessary.

Advise PC/Mali on usefulness
of continuing program.

Final comprehensive report
and recommendations.

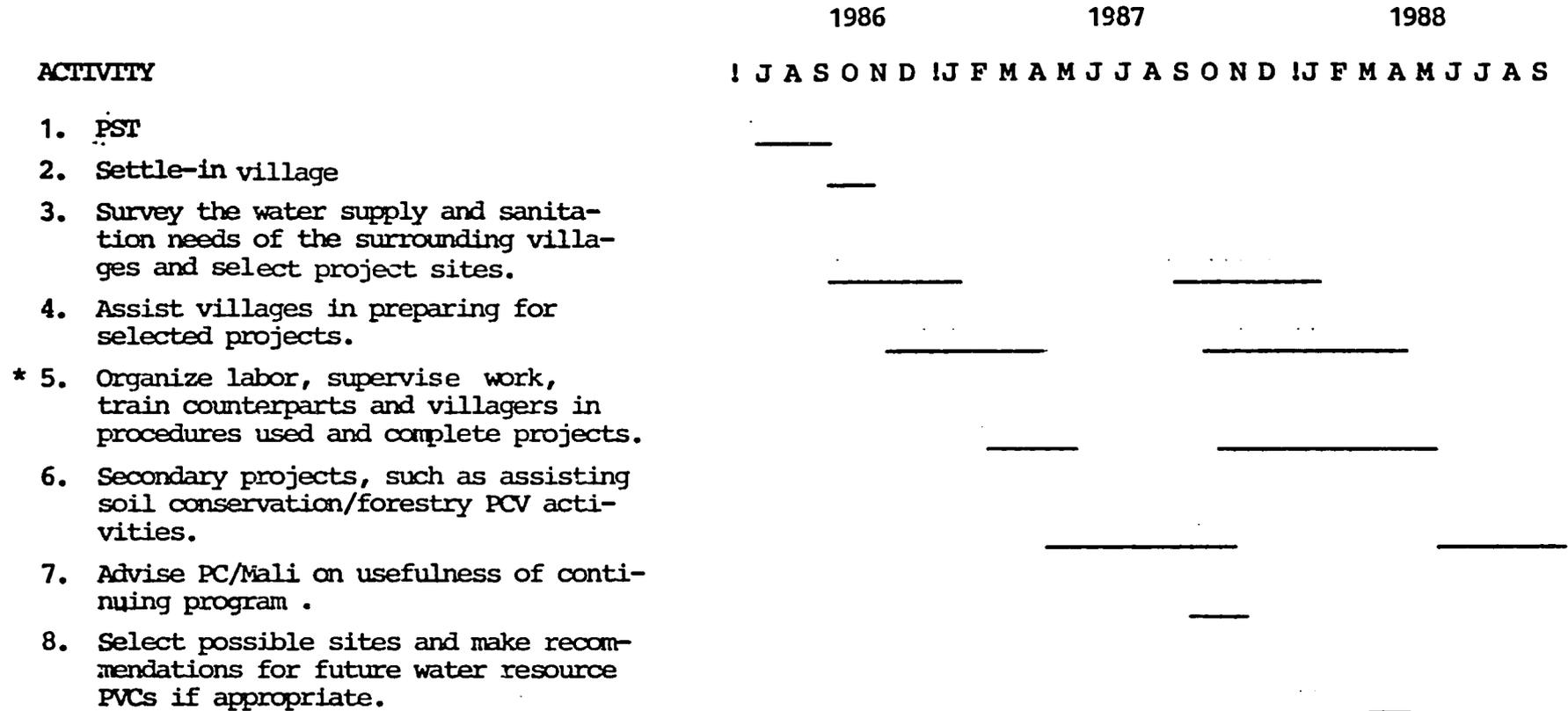
Assist fellow PCVs in project and
supervise all work done at site.

Prepare comprehensive report and
actively participate in COS confe-
rence.

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TIME FRAME: WATER/SANITATION VOLUNTEER
 SEGOU, UPPER NIGER VALLEY

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* During year two, work schedule is flexible.

1 Date	5 Trainees Requested	6 Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give number and restrictions in item 17.)
7 Personal Information: Comp _____ Med/Admin _____ Other _____ Dates: _____ To _____		
8 Class I.D.	9 Assignment No	10 CDI
11 Homeless	12 Genetic _____ IP _____ UNV _____	13 NRD _____
14 Allocation AT _____ NY _____ CH _____ DA _____ SF _____		15 Placement Contact/Code

Requirements/Restrictions (Education and Experience, list in order of preference, other skills, languages, marital restrictions)

- BA/BS or AS in Agronomy or Horticulture and one years' experience in vegetable production, extension or marketing OR
- BA/BS in Agricultural Education with one years' experience in vegetable production, extension or marketing OR
- Three years' work experience in vegetable production, extension or marketing.

You must have at least 2 years of high school French, or one year of college French, or have lived in a French-speaking country for at least 6 months. The same background in another Romance Language (Spanish, Italian, Portuguese) can also qualify you.

Previous experience working with community, school or church agricultural projects is highly desirable.

Project Assignment Description or Summary (Feasibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is predominantly agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target regions. At the request of the Malian Government, these teams of 3 volunteers will work directly with villagers in gardening, soil conservation, small-forestry and water supply activities.

JOB: As a Gardening Volunteer, you will be assigned to (1) Operation Rice-Ségou (ORS) or Operation Upper Valley (OHV) (both are government organizations responsible for integrated development activities in specific geographical areas) or to a government agency in the area. You will work with your counterpart villagers to increase the horticultural production of the area. This could involve working anywhere along the spectrum of production and marketing on your placement site, with a variety of types and scales of production, from household garden plots to intensive pump irrigated perimeters.

Your first task you will have once you have settled into your village will be to produce a survey of the overall horticultural situation in your village, together with a more focused survey on areas of particular interest. These areas of interest will be chosen after consultation with your Malian counterpart and the villagers. Possible areas of emphasis could include: site selection and farm layout, site preparation, terracing, water management, spacing/planting techniques, improvements in irrigation techniques, spacing/cultivation, pest and disease control, improvements in fertilizer/manure use, seed selection and storage, marketing, produce storage and conservation, overall planning and management, etc.

You will find that your theoretical knowledge of gardening is useful only to the extent that it allows you to suggest practical solutions to the constraints to vegetable production in the area. Many of the limiting factors will be beyond your control and you will also find that many of the practices you initially perceived as "wrong" are due to extraneous limiting

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PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Case Name
MALI SUMMER OMNIBUS 1986

Project Title/Assignment Title
MALI FOOD SYSTEMS: ALL 3 REGIONS
GARDENING

factors which become apparent as you grow to know the system better. You will be frustrated by your inability to effect massive changes but you will learn to concentrate on solving one or two of the major impediments to production, in close conjunction with your counterpart and your host farmers. One very important aspect of being a Peace Corps Volunteer is the transfer of skills to your counterparts and to the communities in which you will be working.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as soil conservation/forestry and water supply, within a short motorcycle drive from your village. These Volunteers may request your assistance in helping the villagers in their area with horticulture and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in general overview of Malian agriculture; Malian climate, soils, crops, farming practices; small scale irrigation systems; crop protection; fruit and vegetable species and varieties; cultural techniques; storage and conservation; extension methods, communication; community organizing; tropical soils and fertilizer use; farm management; enterprise budgeting; marketing.

Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in one Malian language; community development techniques; technical sessions in specific areas, depending on your site, and expanding on your Stateside training; cultural adaptation; personal health orientation; motorcycle riding, maintenance and repair.

During this time you will also begin to acquire skills in team-building with other potential Volunteers and with Malian counterparts. Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps or the agency you are working for.

LIVING AND WORKING CONDITIONS: You will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region, the area around Bamako, or the Diré area. You will be at least one day's travel from the capital city and the Peace Corps office. You will not have running water or electricity; your diet will most likely be the same as that of your Malian neighbors, sauce served on millet or rice. You will be expected to learn to ride and maintain a small motorcycle to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards.

Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralized bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities. Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciative of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

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TASK ANALYSIS: GARDENING VOLUNTEERS
SEGOU, UPPER NIGER VALLEY.

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TASK	MEASURES	DUTIES
To identify the governmental, donor and private organizations working in your area.	Has contacted and developed links with all relevant organizations.	<p>A. To make a list of all active organizations in your area, governmental, donors and private, working in the areas of extension, input supply credit, training, marketing, with their mandates and actual activities.</p> <p>B. To make contact with the above organizations/individuals and identify potential resources, support or collaborative roles.</p>
To do a reconnaissance survey of the area.	Survey report.	<p>A. To develop a topical outline after discussions with all interested parties.</p> <p>B. To survey the area in a general way with your homologue.</p> <p>C. To discuss the results with all interested parties.</p> <p>D. To focus on specific areas and resurvey.</p>

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To formulate hypotheses on the attributes and constraints of the existing horticultural systems in the area, identify the major types of production, define and prioritize problems and identify areas of interest and deficiencies of knowledge and/or resources.

Problem, constraints and opportunities listed and prioritized.

To plan and implement a strategy to address the major needs of the area.

Intervention underway.

E. Hold group meetings, household visits, field visits and discussions with all interested parties, survey the literature.

A. To describe the types of horticultural production in the area.

B. To list the major problems by type of production after discussions with villagers, GRM officials, homologues and other interested parties.

C. To outline a potential strategy to address the major problems/opportunities.

A. To search out knowledge, skills, resources available in the area.

B. Discuss strategy with all interested parties.

C. In conjunction with all interested parties, plan strategy, including roles, needs, timing, linkages res-

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Review and evaluation the 1st year's activities. Define and plan second year's activities.

Report produced and discussed with all interested parties.

- D. Implement strategy on a number of sites.
- E. Keep records, discuss progress and describe impact.
- F. Identify areas of future need, training, inputs, support, techniques.
- G. Summarize and report to all interested parties.

To implement 2nd yr. strategy.

Intervention underway.

- A. To refine strategy and discuss with all interested parties.
- B. To plan 2nd yr interventions with all interested parties. Define needs, partition roles and responsibilities.
- A. Implement new or improved strategy.
- B. Keep records, discuss.
- C. Evaluate.

MB
/st

To train counterparts in improved techniques, in the testing and evaluation of improved techniques and in their dissemination.

Maliens continuing ongoing farm testing and development of improved techniques.

Provide input to Peace Corps Malis' PCT and help with program refinement.

Assists APCD/CRM in site selection and reviews training materials/methods.

- D. Summarize and report to all interested parties.
- E. Suggest improvements and potential activities/Sites for new Volunteers.
- A. Work closely with Malian counterpart in selection, designing planning and implementing strategies.
- B. Evaluate and refine strategies in conjunction with Malian counterpart.
- C. Include Malian counterpart in IST.
- A. To produce a summary report on activities.
- B. To suggest areas for program development.
- C. To list skill requirements for new Volunteers.
- D. To define areas of technical information required for job success.

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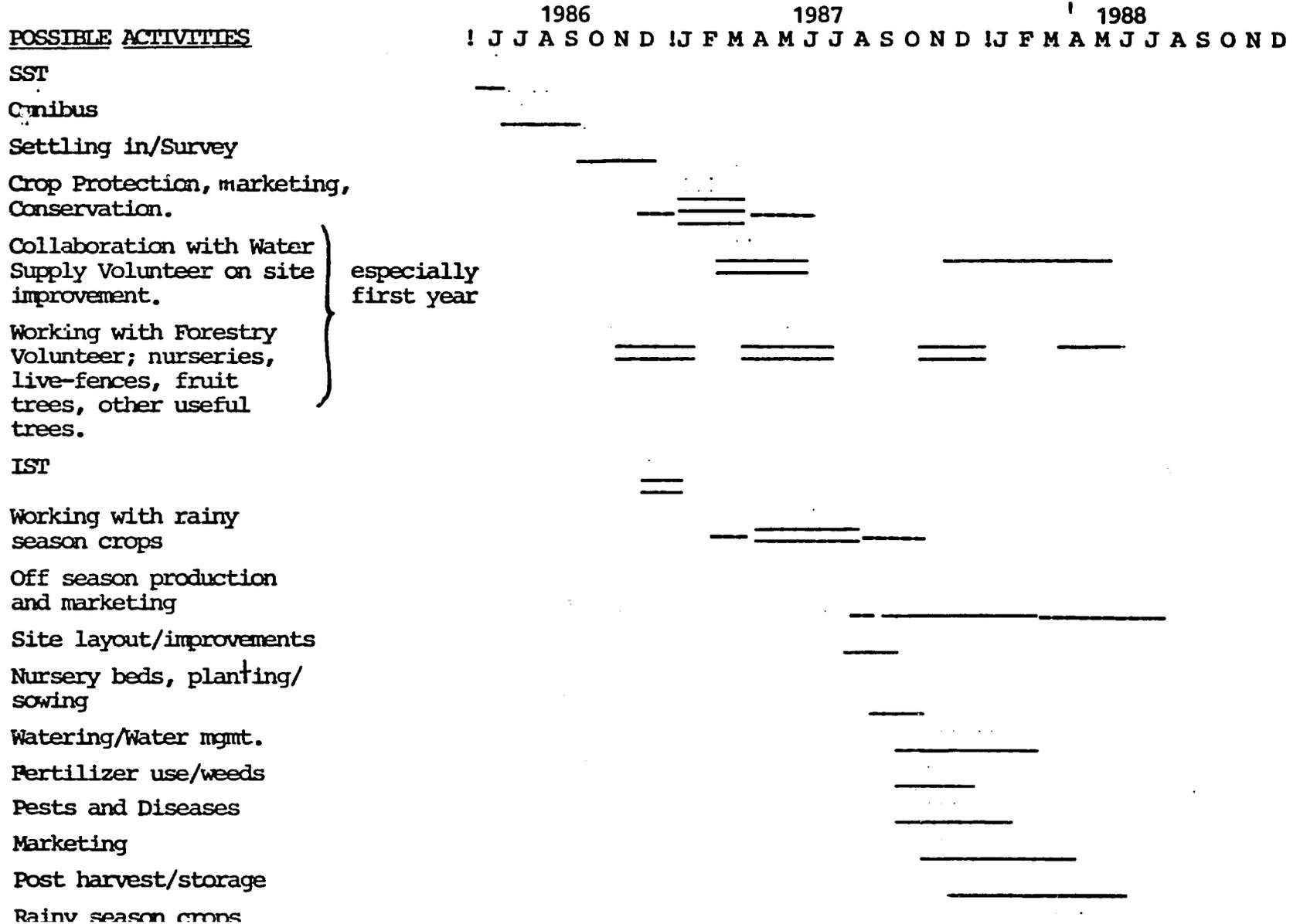
To collaborate with other PCVs
in improving food systems in
the area.

Collaborative projects set up

- A. Discuss survey report and strategies with other PCVs.
- B. Work with forestry/soil conservation Volunteers in establishing live-fences, fruit trees and other projects.
- C. Work with water supply Volunteers in improving water supply and irrigation systems to gardens.

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 1987

TIME FRAME: GARDENING
 DIRÉ, SEGOU, UPPER NIGER VALLEY.



especially
 first year

TASK ANALYSIS: ORS COORDINATOR
SEGOU.

ORS
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TASK

To assist Peace Corps/Mali,
in the development of the
ORS project.

MEASURES

Quarterly reports to PC/Mali.

DUTIES

To monitor the onjoning activities
in the ORS project

To identify areas of mutual interest
for possible Peace Corps/Mali, ORS
collaboration.

To identify in conjunction with Peace
Corps/Mali, ORS and ORS project Volun-
teers, future project developments

Placement site list produced.

To help ORS understand Peace Corps cri-
teria for site selection and to work w/
the APCD responsible for ORS on produ-
cing a list of potential placement
sites.

Detailed list of potential
activities in
-Water Supply
-horticulture

To work with PC/Mali, PSCs and ORS to
elaborate and plan possible Volunteer
activities in the Ségou region.

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-Soil Conservation/Forestry produced.
Input to PST, IST plans.

To work with PC/Mali, PSCs and ORS on curriculum technical handouts and training plans for ORS project Volunteers and counterparts.

Introduction presented to Volunteers.

To develop in conjunction with ORS and Peace Corps/Mali, an introduction to ORS, the Ségou region and Peace Corps/Mali's philosophy, approaches and goals.

To integrate Peace Corps/Mali's activities in the Ségou region with ORS activities. To help ORS understand PCs Program in Mali and to understand Peace Corps objectives, attitudes, limitations and strengths.

Summary of project and strategy prepared, presented and discussed.
Field visits to ORS staff and discussion held.

To develop in conjunction with the APCD and PC/Mali an introduction to the Ségou project and Peace Corps strategy, for presentation to the ORS headquarters and field staff.

Summary prepared, presented and discussed.

To develop in conjunction with ORS, an introduction to and a summary of ORS activities, for presentation to Peace Corps/Mali.

To help PC/Mali understand ORS's program, objectives attitudes, limitations and strengths.

Discussions with ORS, Peace Corps/Mali.

To identify possible areas of conflict or opportunity between Peace Corps/Mali and ORS, and to discuss them with all interested parties.

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To serve as a liaison between PC/Mali and ORS.

Drafts circulated and discussed.

To aid PC/Mali and ORS in the development of a working agreement.

To serve as an on-site resource of ORS.

To engage in initial conflict resolution between ORS and PCVs.

To refer major disagreements to the PCD.

To facilitate communication all parties involved in the project.

Improved relations between ORS, PC/Mali and PCVs.

To be responsible for communication and subsequent clarification between PC/Mali, ORS and PCVs.

To assist ORS PCVs in their tasks.

To help PCVs with their initial installation and site survey.

To provide moral support to PCVs during their initial adjustment.

To suggest experienced language trainers for new Volunteers.

To provide logistical support where necessary for new PCVs, and to direct them towards potential sources of required information and resources.

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To help integrate PCVs with ORS.

To train new PCVs in conjunction with ORS administrative procedures, to increase PCVs' awareness of protocol requirements.

To coordinate ORS Volunteer activities.

To provide technical support where possible and to increase awareness among PCVs of potential areas of collaboration, skill sharing.

To coordinate Volunteer's activities with ORS activities.

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SECTION 5: PROJECT RESOURCES

A. Peace Corps Volunteers

1. Assignment Title	: 2. Vs on Board as of June 85	: 3. Trainee request a) Current FY 85	: b) Projected			
			FY 86	FY 87	FY 88	FY 89
Woodstoves	4	2	2	2	2	0
Gardening	-	-	6	6	10	10
Water Supply	-	3	6	6	6	6
Soil Conservation / Forestry	-	-	3	4	4	6
Marketing/Small Enterprise Dev.	1	1	-	1	-	1
Agriculture Extension	-	-	-	-	3	3

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1985

B. Other Resources

1. Personnel

APCD or PSC/Programming

: 2. Responsible party

PC/Mali, PC/W

: 3. Date needed

August, 1985

APCD or PSC/Horticulture

PC/Mali, PC/W

October, 1985

3rd year ORS Volunteer as a
liaison person

PC/Mali, ORS

December, 1985

PSCs to design PST technical training
component for both SST and ICI for the
following assignments:

PC/W, PC/Mali

December, 1985

- a. Soil Conservation/Forestry
- b. Gardening
- c. Water Supply

Training Items (PST, IST)

Completed PST training design for
SST and ICT, including technical,
language and cross-cultural
components.

PC/Mali, PC/W, Contractor

April, 1986

Technical literature on gardening
soil conservation, forestry, wells.

: PC/W

: August, 1986

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Feb

Materials and supplies for hands-on IST in gardening, soil conservation, forestry, wells. : PC/Mali, PC/W : November, 1986

Budget and design for IST, including field trip to Burkina Faso for soil conservation/Forestry Volunteers. PC/W, PC/Mali November, 1986

Program Items

2 Toyota Land Cruisers for Programming and Horticulture APCDs. PC/W, PC/Mali August, 1985

Program refined (See Section 7). PC/Mali (APCD or PSC Programming) November, 1985

List of potential placements. ORS December, 1985

Initial site selection visits. PC/Mali, ORS January, 1986

12, 125 cc. motorbikes for 1986 PCVS. PC/W, PC/Mali June, 1986

Technical information on village surveys PC/Mali, PC/W or PSC July, 1986

a. Gardening

b. Wells

c. Soil conservation/Forestry

:

:

Funding for wells and other types of projects. : S.P.A.F, local contributions, : October, 1986
Self-Help fund, Africare, and on-going.
UNICEF, local government
contributions, Harriet Gaines
Memorial Fund.

Village survey reports Project PCVs December, 1986

13, 125 cc. motorbikes for 1987 PCVs : PC/W, PC/Mali : June, 1987

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SECTION 6: PROJECT MANAGEMENT

A. Monitoring Arrangements

1. Procedures

If appropriate, evaluation of SST at end of training.

Testing in language, cross-cultural, technical skills, and awareness of Peace Corps Mali overall philosophy, and its long term strategy and approaches to community development.

Initial survey of site completed for
- horticultural
- soil conservation/forestry
- or water situation
by Volunteer.

Project planned for 1st year's activities in

- horticulture
- soil conservation/forestry
- or water supply

: 2. Events/Timing

SST: June, 1986

End of PST: Oct., 1986

Survey reports completed:
Dec., 1986

Project plan submitted
Jan., 1986; reviewed and
approved by APCD

: 3. Participants

Volunteers,
trainers

Volunteer, PC/Mali,
trainers

Relevant Volunteers,
APCD

Relevant Volunteers,
APCD, ORS.

: :
:

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Visit Volunteer site and hold formal and informal meetings with PCVs, PCVs' supervisors, counterparts, villagers etc. using CPR-M manual.

:

Site visits/4 times a year for 1st year of service and at least twice during 2nd year of service.

: APCD, Volunteers, ORS, villagers.

Read and submit written comment on PCVs' quarterly reports.

Review PCVs' quarterly reports as soon as possible after receiving.

APCD, ORS supervisors

Training for PCVs and their counterparts in their relevant technical area, followed by formal review of program, training, PC/Mali etc., using CPR-M PCVQ as a guide.

IST during the first six months of service.

PCVs in similar programs throughout Mali, APCDs, PSCs.

Review of PC/Mali Program and ORS program in particular, using CPR-M PCVQ and Programming Quality forms and PCV evaluation forms as guides.

All Volunteer conference: approximately one year after PCVs arrive in Mali.

PCVs from all project in Mali, PC/Mali staff

Review of ORS program using CPR-M PCVQ and programming quality forms and PCV evaluation

:

COS conference: during last four months of PCVs service.

: All PCVs completing their tours of duty.

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B. EVALUATION PLANS

Most programs are evaluated about three years after the start-up date; however, since AFSI is a pilot initiative with possibilities for Peace Corps - wide applicability, the ORS project should be evaluated during the tour of the first group of Volunteers.

The ideal time for the evaluation to take place is approximately 18 months after start-up date. However, given Peace Corps' programming deadlines, the evaluation should be completed before TACs are due for the second group of PCVs.

Consultants, preferably with former Peace Corps experience, will work with PC/Washington and PC/Mali to design and carry out the evaluation.

SECTION 7: STEPS TO BE TAKEN TO FINALIZE THE PROJECT PLAN

<u>Task</u>	<u>To be Completed By</u>
Meet with current ORS Volunteers to revise if needed, the Task Analyses and TACs.	July, 1985
Determine to what extent FED (the European Development Fund) will continue to provide financial and technical assistance to ORS. If the level of assistance is reduced, determine the impact on Peace Corps' effectiveness in ORS.	August, 1985
Negotiate job descriptions, numbers, resource and support issues with ORS. - Assure that the Agreement between PC/Mali and ORS is signed (Protocol d'Accord).	September, 1985
Determine probable length of PC involvement in the Project (Note: Goals and Objectives in this draft are set for the first two years only). - Expand Goals and Objectives accordingly and refine the Project Plan where needed.	November, 1985
Refine the Task Analyses and TACs - Do additional representative site surveys for potential PCV placements - Develop language and cross-cultural objectives.	November, 1985

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Decide if SAVS are acceptable

- Begin to explore possible placements for them (to be completed before trainees arrive in June, 1986).

November, 1985

Develop Preliminary TACs for the following potential assignments :

- a. Agriculture Extension/
Community Development
- b. Crop Protection/Storage
- c. Agricultural Marketing

April, 1986

Assure that Resource Requirements listed on pp. are met by the established deadlines.

See pp.

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PROJECT PLAN

Project Title: MALI FOOD SYSTEMS/DIRE

Project Code: _____ Sector: AGRICULTURE

Start Date: OCTOBER, 1986

Date Original Plan Prepared: JUNE, 1985

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SECTION 1: PROJECT RELATIONSHIPS

A. Host Agency

Ministry of Agriculture

B. Sponsoring Unit

To be determined : The Agricultural Research Station in Diré may sponsor one or more of the Volunteers. The Rural Development Section is another potential sponsoring unit. Both are part of the Ministry of Agriculture.

C. Primary Function of Sponsoring Unit

To be determined

D. Address of Sponsoring Unit

To be determined

E. Title of official in Sponsoring Unit responsible for project supervision.

To be determined

F. Collaborating Agencies

- Farmers' Activities Project/Africare
- UNICEF
- USAID
- Doctors Without Borders (Médecins Sans Frontières)

G. Description of the lines of authority or relationships in this project.

To be determined

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SECTION 2: PROBLEM ANALYSIS

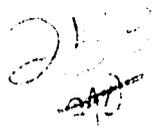
A. State the problem which the project treats.

The major problem is the adaptation of traditionally nomadic and agricultural populations in the Diré circle of the Sixth Region to the ecological changes caused by the drought. These populations include approximately 80,000 Songhai agriculturalists and 40,000 Tamachek (Tuareg and Bella). This problem is manifest in the current lack of adequate water resources and appropriate irrigation technologies. In addition, much of the population has only a relatively limited knowledge of how to improve agricultural, gardening, soil conservation and forestry practices in order to combat these ecological changes and increase food production. The resolution of this problem in this part of the Sixth Region has been declared a national priority by President Moussa Traoré; local and regional government representatives and members of the target population confirmed the urgency and seriousness of the problem.

B. State the major factors or causes contributing to the problem.

The continued drought has resulted in less river flooding, a decline in forage production and a lowering of the water table throughout the area. The low level of flooding precludes rice and wheat cultivation on a large scale unless assisted by the use of motor pumps. Likewise, the decrease in rainfall has severely affected rain-fed crops such as millet and sorghum; it has also had a negative impact on the availability of domestic water supply, exacerbating the health and sanitation problems. These adverse ecological conditions have also manifested themselves in increased soil erosion and deforestation.

Concomitantly, the lack of water resources and decline in forage production has led to a high mortality rate among the livestock, the primary source of income for the nomadic groups and an important source of revenue for sedentary populations. This has forced pastoral



groups either into relying upon inadequate relief efforts or having to shift to agriculture and other occupations in order to survive. Consequently, both the agricultural and nomadic populations are experiencing traumatic changes in their economic, social and cultural systems.

C. Describe the consequences of this problem for people.

The necessity of having to shift from traditional nomadic economic systems requires training in virtually all areas of agricultural production. For the agriculturalists no longer able to rely on river flooding for rice cultivation and wheat production, farmers require appropriate water-lifting technologies and improved systems of irrigation. Since the motor pumps now in use serve a relatively small proportion of farmers, there is a strong necessity to improve present water resource management and to develop more cost-effective methods of water extraction.

In addition to the water management problems of the area, the increasing deforestation and some inappropriate cultivation practices lead to soil erosion, making large portions of land unsuitable for continued agricultural production.

Unless these problems are resolved, there will be continued migration out of the north into the southern part of the country; this migration strains rapidly dwindling resources in the more fertile south and contributes to a host of socio-economic and political problems. The remaining population in the areas such as Diré will become increasingly dependent on short-term relief efforts such as food aid.

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D. Describe the information sources consulted when defining this problem.

The AFSI design team spent one week in Diré visiting villages, camps and development projects. The seven member team interviewed local and national leaders in Diré and Tombouctou, farmers and nomads, and development workers from several countries.

People contacted included:

1. The Commandant of Diré Circle;
2. The Diré Development Committee: chiefs of technical services, the Third Vice President of the National Assembly, (influential representatives from the Tamachek community);
3. Farmers in 9 villages;
4. Nomads in several temporary settlements;
5. Africare: National Director, Activités Paysannes staff in Diré and Bourem;
6. AID/Mali: Project Manager for Activités Paysannes, Deputy Director, Agricultural Development Officer and his staff;
7. UNICEF/Mali: Coordinator for Diré activities, representatives from the Bamako UNICEF office

Useful documents were:

1. Pré-Diagnostic Régional Pour la Région de Tombouctou, January, 1984;
2. AID/Mali reports on Action Blé Diré and Interim Evaluation of the Activités Paysannes Project (February, 1985);
3. Africare documents on the Activités Paysannes Project: Extension Proposal (February, 1984); First Quarterly Report (Second Quarterly Report (January, 1985); Third Quarterly Report (April, 1985);
4. Notes Sur La Nouvelle Station de la Recherche Agronomique de Diré;
5. "Forestry Interventions for the Diré Irrigation Project";
6. "Rapport de Mission Interministérielle d'Identification, d'Evaluation et Programmation en Sixième et Septième Régions" (December, 1983).

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page

E. Describe existing efforts to treat the problem.

In 1978 USAID/Mali provided financial support to the Diré area by sponsoring an irrigation program in Action Blé Diré (Doc. 688-0213). This was an effort to aid approximately 2,400 wheat farmers by establishing new methods for irrigation using small motor pumps. Action Blé established a credit program to finance farmer repayment of their loans and to pay for various agricultural machinery and inputs. In addition, an extension program was created that included support for a local extension agency.

In 1981 USAID conducted an audit (Doc. 688-81-139) which was followed by an Economic Analysis Update in May, 1982 (Doc. 688-0231). These reports revealed serious mismanagement problems within Action Blé and determined that if a cost-benefit analysis was used, the project was actually costing the farmers money. At this point USAID decided to phase out of the project.

At AID's request, Peace Corps/Mali intervened with a short-term emergency pump repair project in November, 1982. For two months a team of Peace Corps mechanics from several African countries worked to repair over one hundred pumps. This timely intervention is still commented on by people in the area.

The administration of the project was removed from Action Blé and assigned to another program called Farmers' Activities (Activités Paysannes); a USAID contractor managed the project. Under Farmers' Activities there was a significant increase in wheat production and the project became cost-effective. However, the project administrator experienced some difficulties with local leaders and left the project. At that time USAID reinstated its phase-out program and contracted with Africare to accomplish the task.

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Over the past ten months Africare has been quite successful in its efforts to train mechanics, maintain and repair pumps, and design to implement an effective agricultural program. According to Africare's findings, farmers in the projects are now benefiting both financially and in terms of significantly increased yields. USAID is seriously considering a three-year extension of the project and Africare itself is committed to assuring that activities are expanded over the next few years.

In addition to USAID and Africare, there are several other donor agencies providing both technical and relief support to the area in an attempt to reverse some of the ecological changes caused by the drought. UNICEF is involved in a variety of activities such as wells construction, emergency feeding centers, maternal and child health projects and small-scale agriculture. To coordinate their activities, they maintain an office in Diré; they have expressed interest in working with Peace Corps Volunteers.

Doctors Without Borders (Médecins Sans Frontières) has a variety of health and agricultural interventions in the Diré area: anti-cholera campaign, malaria prevention, tuberculosis control, wells, and small agricultural improvements such as dykes.

However welcome, much of the assistance being provided is short-term, emergency relief. There is a significant role to be played by an organization such as Peace Corps which can develop and implement a long-term strategy by working at the village level.

The local level political and administrative structure of the Diré Circle is most supportive of self-help development efforts currently being tried in the area. A Development Committee composed of chiefs of service and local leaders reviews and coordinates

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project proposals, and strongly encourages efforts to increase food production and to improve water resource management. For example, in the Bourem area, five villages have joined together in an effort to construct canal system by hand in an attempt to bring water from the Niger River to their fields. In a nearby Tuareg encampment where the families lost over 600 cattle last year, they have turned to gardening and a fisheries project in an attempt to adapt to the changing economic conditions.

Such courageous efforts and willingness to try new systems of food production as an alternative to food aid demonstrate that Diré can provide a challenging environment for long-term Peace Corps intervention.

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SECTION 3: GOALS AND OBJECTIVES FOR PROJECT COMPONENTS

The goals and objectives outlined on the following pages state what the initial group of PCVs in each of the four components of the project will accomplish during their two-year tour. Once Peace Corps/Mali determines the length of their involvement in the Diré project, long-term overall goals and objectives will be established.

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SECTION 3: IRRIGATION TECHNOLOGY (DIRE)

GOALS AND OBJECTIVES (PERIOD COVERED: OCT. 1986 TO OCT. 1988)

10/1/88

A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goal</u>		
To implement alternatives to motor-pump water lifting technology by October, 1988.	Installation of selected water lifting devices at research stations.	Survey report on irrigation systems in area.
	On-farm testing of water lifting devices on sixteen farms, making modifications of devices as required.	Report on water lifting devices installed at research station; report on water lifting devices from on-farm testing projects.
To improve water use on existing irrigation systems and wells by October, 1988.	On-farm testing of irrigation frequency and application methods developed by research station on at least three farms. Improvements on at least eight existing irrigation systems.	Report to supervisor at research station; PCV reports and PC staff site visits.
To set standards for future water resource Volunteers by October, 1988.		

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Capacity Goal

To improve the management and production capabilities in irrigated farms by October, 1988.

Changes noted in water resources use at twenty locations.

Supervisor reports; PCV reports; site visits by PC staff; where possible, farmer production figures.

To develop capabilities for extension services of research station by October, 1988.

Capacity of research station for extension services in water resources developed and procedures prepared for future water resource Volunteers.

Report to supervisor and APCD.

OBJECTIVES

To install a variety of water lifting devices on selected farms with differing water requirements by April, 1987.

Installing and testing of selected water lifting devices at research station; survey completed of types of irrigation systems used in area, hectares irrigated, crops grown and locations appropriate for water lifting technologies. Completed installation of four water lift devices on farms.

Survey report; report on installation and modifications made regarding water lifting devices at research station; report on measures of output of water and hectares covered at research station and farms; site visits by IER and Peace Corps staff.

To improve the irrigation system at two sites by January, 1987.

Improved water use as measured by improved crop yields, more hectares irrigated per unit of input, or decrease of required inputs.

PCV report; supervisor's report; site visits by PC staff and discussions with farmers.

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To improve and make modifications on existing water lifting devices by July, 1987.

Improved water use as measured by improved crops yields, more hectares irrigated per unit of input, or decrease of required inputs.

PCV report; supervisor's report; site visits by PC staff and discussions with farmers.

To improve and make modifications on existing water lifting devices by July, 1987.

Increased output of water per unit of input.

PCV reports; site visits by PCV staff and discussions with farmers.

To install at least six additional water lifting devices by October, 1987.

Water lifting devices installed and functioning.

Same as above.

To have tested on selected farms in five villages irrigation frequency and application methods as developed at research station, by January, 1988.

All trials completed and data analyzed.

Report to supervisor at research station.

To install four water lifting devices at sites selected by water supply/PCVs, by August, 1988.

Water lifting devices installed and functioning.

PCVs and water supply/PCV reports; and site visits.

To improve four irrigation systems at sites selected by Gardening/Forestry PCVs, by February, 1988.

Systems improved and functioning.

PCV and Gardening/Forestry PCV reports; site visits.

To select possible sites and
make recommendations for
future water resource Volunteers,
by October, 1988.

Possible sites selected in conjunc-
tion with APCD and supervisor.

Written report and COS
conference.

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SECTION 3: WATER SUPPLY (DIRE)

GOALS AND OBJECTIVES (PERIOD COVERED: OCT. 1986 TO OCT. 1988)

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A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
To survey the water supply situation and select 4 initial well sites and 4 more potential sites by December, 1986.	Survey report made, village meetings held, well sites chosen in consultation with villagers.	Survey report; Volunteer quarterly report; site visit by APCD.
To select 5 sites for improvements to existing wells by February, 1987.	Village meetings held, potential improvements discussed. Sites and nature of improvement decided on in consultation with villagers.	Volunteer quarterly report; APCD site visit.
To make improvements on 8 existing irrigation systems by October, 1988.	Village meeting held, potential improvements discussed. Sites and nature of improvements decided on in consultation with villagers, counterparts and Irrigation Technology PCVs.	Volunteer quarterly reports; APCD site visits; interviews with villagers.

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A. GOALS

To share 16 wells dug using appropriate techniques and 16 wells sites improved by October, 1988, eg. deepened, lining improved, aprons, head walls or animal watering troughs constructed.

Surveys completed, plans made, funding proposals submitted, necessary materials acquired, villagers mobilized, and construction work completed.

Volunteer reports; site visits; APCD's report.

To work in conjunction with irrigation technology Volunteers to select four sites for construction of an appropriate water-lifting device.

Meetings held with all Water Supply Volunteers and their counterparts for site surveys and selections. Selections made in conjunction with villagers to benefit from projects.

PCVs' reports; APCD site visits.

To construct four water lifting devices at selected sites.

Materials obtained, village labor recruited and devices installed.

PCV reports; APCD site visit.

Survey made of other locations for installation of water lift devices for future Volunteers.

Survey completed and report written.

PCV report; COS report.

1/28/89

2/10/89

A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Capacity Goals</u>		
To train 8 teams in well construction, i.e., site selection, planning, organization of resources and technical skills.	Villages organized around water needs produce new wells and improve existing wells. 8 well-digging teams functioning effectively by July, 1988.	Site visits by APCD; Volunteer's COS report.
To transfer skills to 4 counterparts in well construction and improvement.	4 counterparts surveying water resources, submitting funding proposals, organizing new well digging/improvement teams and constructing/improving wells by April, 1989.	Site visit by APCD.
To develop the capacity for installation of appropriate new water-lifting devices.	Pilot project completed by the installation of four water lifting devices at selected sites.	PCVs' reports; APCD site visits.
To develop a survey of possible locations for water-lifting device installation by future Volunteers, and to train counterparts in installation techniques.	Survey completed and report written.	PCV report and COS report.

B. OBJECTIVES

To complete survey of the water supply situation around the Volunteer's work site.

Survey completed satisfactorily within 3 months of PCV's arrival on site.

APCD and GRM review of survey report.

To select potential well sites in conjunction with villagers.

Sites selected, preliminary planning of first year activities completed.

APCD site visit; Volunteer quarterly report.

To work with a village group to develop a plan and commence well digging.

Village meeting held, plans made.

Same as above.

To write a proposal and organize funding for the well digging.

Funding acquired.

Donor approval.

To organize a village group to acquire materials and to dig or improve well.

Materials collected, villagers mobilized and trained. Well dug or improved.

Volunteer quarterly report; PC/Mali site visits.

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B. OBJECTIVES

Select four sites in collaboration with irrigation technology Volunteers for construction of devices by May, 1988.

Sites selected in conjunction with fellow water supply and irrigation technology Volunteers, and in collaboration with counterparts and villages.

PCV reports; site visits.

Construction completed on four sites by August, 1988.

Construction completed at four sites.

Same as above.

Survey area for possible locations of water lift devices at other sites for future Volunteers by October, 1988.

Survey completed and report written.

PCV reports; COS report; APCD site visit.

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SECTION 3: AGRICULTURAL EDUCATION (DIRE)

GOALS AND OBJECTIVES (PERIOD COVERED: OCT. 1986 TO OCT. 1988)

A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goal</u>		
To increase the agricultural production at 10 schools in the Diré Circle by October, 1988.	Increased area under cultivation by Diré Circle schools, new activities underway.	Pre-and post placement survey; Volunteer quarterly reports; APCD site visits and reports; IER reports.
To train teachers at 5 schools in the Diré Circle in appropriate gardening techniques by October, 1988.	Expanded and improved gardens at 5 schools.	Same as above.
To establish small-scale animal raising projects at 3 schools in the Diré Circle by October, 1988.	Successful animal raising projects in progress, implemented by teacher trainees.	Same as above.
To design and produce appropriate training materials for agriculture.	Technical leaflets developed, tested revised and circulated.	APCD reports; technical leaflets.

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Capacity Goal

To design, in conjunction with IEF, an improved curriculum for agricultural education; to introduce new teaching methods and to produce teaching materials.

Curriculum designated, new methods adopted, teaching materials produced.

IEF reports; Volunteer quarterly reports; site visits by APCD.

To teach teachers the use of the new teaching methods and materials and to utilize the new curriculum effectively.

5 local teachers using materials and methods in their teaching programs. Courses taught, projects set up.

Same as above.

To train a counterpart at IEF in curriculum development, the production of technical materials, and the teaching of improved agriculture.

Production of new technical material continuing. Agriculture being taught at 10 local schools.

IEF reports; site visits by APCD; Pre-and post placement survey.

B. OBJECTIVES

To survey existing materials and curriculum for agriculture, skill levels of instructors and local conditions in conjunction with IER and the Agricultural Research Station staff.

Survey completed March, 1987.

PCV quarterly reports; survey report; IEF staff reports.

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To devise a plan to produce a curriculum and teaching materials adapted to local conditions, in conjunction with IEF and local teachers.

Plan and report completed by June, 1987.

Plan; APCD visits and reports; PCV quarterly reports.

To train local teachers to set up appropriate demonstrations and small livestock projects.

Curriculum and teaching materials developed by October, 1987.

Curriculum; APCD visits and reports; IEF staff reports.

To research appropriate activities for school agriculture in conjunction with IER, IEF and local school teachers.

Classes held, demonstrations set up, projects established.

PCV quarterly reports, IEF reports; APCD site visits and reports.

Small trials set up, alternative methods tested by January, 1987.

Site visits by APCD; Volunteer's quarterly reports.

To summarize technical information and produce technical leaflets on small-scale animal and horticultural projects.

Technical leaflets produced by May, 1987.

Technical leaflets; IEF reports; APCD reports.

To revise the technical leaflets, working with IEF, the Agriculture Research Station and local school teachers.

To work with other Volunteers in the Diré area on gardening activities.

To produce a manual on procedures for use by local teachers.

New revised technical leaflets produced by August, 1987.

Collaborative projects set-up during two year service.

Manual produced by October, 1988.

Revised technical leaflets; Volunteer reports; IEF and APCD reports.

Volunteer's quarterly reports; APCD site visits.

Manual.

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2/20

SECTION 3: GARDENING/FORESTRY (DIRE)

GOALS AND OBJECTIVES (PERIOD COVERED: OCT. 1986 TO OCT. 1988)

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A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Production Goals</u>		
To increase the total horticultural output at 6 sites in the Diré region by October, 1988.	Expansion of existing horticultural activities in the Diré region at 6 sites.	Pre-and post placement surveys by Volunteer; Volunteers quarterly reports; site visits by APCD.
- To improve the standards of horticultural production techniques at 3 more sites in the Diré region by October, 1988.	Increase horticultural output/unit of input at 3 sites.	All of the above plus fields visits and discussions with farmers by APCD.
- To expand out of season horticultural production at these 3 sites by October, 1988.	Extension of the production season at 5 sites.	Volunteers' quarterly reports; farmer interviews; site visits by APCD.
To encourage mini-nurseries at 6 sites in the Diré region by October, 1988.	6 mini-nurseries established.	Volunteer, APCD's reports; site visits by APCD.
To increase tree planting activities in 18 villages by October, 1988.	Trees being planted and protected in 18 villages.	Site visits, reports by Volunteer, APCD; pre-and

To work in conjunction with Irrigation Technology Volunteers to select four sites for construction of an appropriate water-lifting device relevant to irrigation systems.

To construct four water lifting devices at selected sites.

Survey made of other locations for installation of water lifting devices for future Volunteers.

Meetings held with all Gardening/ Forestry Volunteers and their counterparts for site surveys and selections. Selections made in conjunction with villagers to benefit from projects.

Materials obtained; village labor recruited and devices installed.

Survey completed and report written.

PCVs' reports; APCD site visits.

PCV reports; APCD site visits.

PCV report; COS report.

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A. GOALS	MEASURES OF ACHIEVEMENT	SOURCES OF INFORMATION
<u>Capacity Goals</u>		
To improve the planning and management capabilities of horticultural producers at 3 or more locations in the Diré region.	Changes observed in farm planning and management activities at 3 or more locations.	Volunteer reports and program evaluation.
To encourage, expand and improve existing production organizations in the Diré region.	An awareness of the requirements for planning and implementing successful cooperating structures in 3 villages.	Pre-and post-placement Volunteer survey; site visits and discussions by APCD with cooperating groups.
To transfer the technical skills required for improved horticultural production to 12 or more farmers in the Diré region.	Use of existing and new inputs in the recommended manner by at least 12 producers or producer groups.	Volunteer quarterly reports; site visits and discussion by APCD; APCD's reports.
To transfer the technical skills and organizational ability required for developing horticultural production in the Diré region to 3 Volunteers' counterparts.	Instigation and development of new horticultural interventions in the Diré region by Volunteers' counterparts.	Site visits by APCD; APCD's reports.

To train 6 Malians in the principles, practice and rationale for mini-nurseries by October, 1988.

To train villagers in 18 villages in the concept and practice of tree planting and maintenance.

To develop the capacity for installation of appropriate new water-lifting devices for irrigation projects.

To develop a survey of possible locations for water-lifting device installation by future Volunteers, and to train counterparts in installation techniques.

Training sessions held and 6 Malians successfully establishing and maintaining new mini-nurseries.

Village meetings held and 18 villages planting and protecting trees.

Pilot project completed by the installation of four water lifting devices at selected sites.

Survey completed and report written.

Site visits; Volunteer, APCD's reports.

Same as above.

PCVs' reports; APCD site visit.

PCV report and COS report.

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B. OBJECTIVES

Initial survey of horticultural activities around the Volunteer's work site.

Survey completed satisfactorily within 3 months of PCV's arrival on site.

APCD review of survey report.

Selection of an area of concentration for 1st year activities.

Sites selected, preliminary planning of 1st year activities completed by January, 1987.

Work plan submitted by Volunteer; in-service training request made.

To work with 6 farmers/ farmers groups in developing and implementing the 1st year work plan.

6 farmers or farmers groups completed training program; techniques understood and being utilized correctly by end of 1st year.

Site visit by PC/Mali; Volunteer's quarterly reports.

To improve the supply and utilization of horticultural inputs to 3 locations by the end of year 2.

Increased access to inputs and their utilization by 12 or more farmers/ farmers' groups.

Volunteer pre-and post placement survey; APCD reports.

To discover, document and disseminate appropriate existing local responses to horticultural problems and opportunities.

Appropriate local responses eg. new crops, varieties and techniques, introduced and adopted in 3 new locations by the end of the 2nd year.

Volunteer quarterly reports; site visits by PC/Mali; APCD's reports.

To start the definition of the major categories/types of horticultural activities in the Diré region.

Complete survey of soil erosion problems in ten villages by January, 1987.

Complete survey of villagers' interest in reforestation, why past forestry activities failed, agroforestry activities currently practiced, possible nursery sites, etc. in at least ten villages by January, 1987.

At least three mini-nurseries established and maintained by July, 1987.

Description of the major recommendation domains for futures Volunteers; report on file with PC/Mali.

Survey completed and report written within three months of PCV's arrival.

Survey completed, and report and plan of action submitted within three months of PCV's arrival.

3 mini-nurseries established and maintained. Seedlings are at the correct age to be outplanted during the month of July.

Volunteer, APCDs reports; report on horticulture in the area.

PCV's reports to PC/Mali; reviewed by APCD by February, 1987.

Same as above.

Nursery records; PCVs' reports; site visits by PC/Mali and supervisor.

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To increase villagers' interest in reforestation activities in at least nine villages by October, 1987.

A total of at least 18 village meetings held concerning reforestation activities in nine villages. Demand for seedling produced in nurseries is expressed by villagers. Trees planted and well maintained.

At least 75% of the trees are living. PCV reports; site visits by PC/Mali staff.

Six mini, village-level nurseries established and maintained by July, 1988.

At least 36 hands-on nursery establishment, tree maintenance and grafting training sessions attended by school officials, WFS agents, and/or villagers. Nurseries are functioning without major PCV involvement.

Nursery records; PCV reports; seedling quality; site visits by PC/Mali staff.

Increased villager interest in reforestation activities in at least 18 locations by October, 1988.

Trees planted and maintained, naturally regenerated seedlings, protected, or live-fences established from cuttings, etc. in at least 18 locations.

Nursery records; survival rate records; PCV reports; site visits by PC/Mali staff.

Survival rates of seedlings planted at least 75%. High demand for trees produced in nurseries.

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Decrease water erosion and increase water infiltration and storage capacities in gullies and/or small seasonal streams in at least two sites.

Select four sites in collaboration with Irrigation Technology Volunteers for construction of devices at four irrigation sites by May, 1988.

Construction completed on four sites by August, 1988.

Survey area for possible locations of water lift devices at other irrigation sites for future Volunteers by October, 1988.

Water available for longer periods of time and a temporary rise in the watertable.

Sites selected in conjunction with fellow Gardening/Forestry and Irrigation Technology Volunteers, and in collaboration with counterparts and villages.

Construction completed at four sites.

Survey completed and report written.

Watertable records; PCV reports; site visits by PC/Mali staff.

PCV reports; site visits.

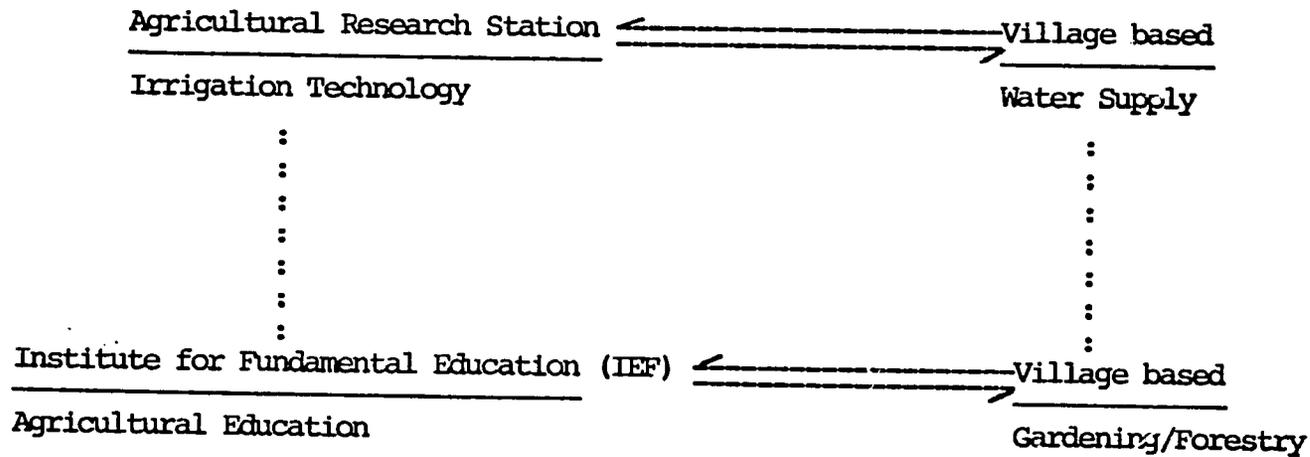
Same as above.

PCV reports; COS report; APCD site visit.

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SECTION 4: VOLUNTEER ASSIGNMENTS

The first group of PCVs in the Diré project will be assigned both in the field (Water Supply, Gardening/Forestry) and in the town of Diré (Irrigation Technology and Agricultural Education). The following diagram shows links which will be developed among the components: back up provided by the town-based PCVs to the field, data and experiment results shared by the field-based PCVs with each other and with the two institutions, collaboration among Water Supply PCVs and Gardening/Forestry PCVs in the field.



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Trainee Assignment Criteria Preliminary Final

1. Training Class Name MMER OMNIBUS 1986		2. Project Name and Assignment Title MALI FOOD SYSTEMS: ALL 3 REGIONS GARDENING		3. Project Code
-31-				
5. Trainees Requested		6. Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give numbers and restrictions in Item 17.)		
Information: Comp ___ Med/Admin ___ Other ___ Dates: ___ To ___				
7. I.D.		9. Assignment No.	10. CDI	11. Nominee
___ Generic ___ IP ___ UNV ___		13. NRD	14. Allocation: AT ___ NY ___ CH ___ DA ___ SF ___	
(primary code first)		15. Placement Contr./W/Code		

Notes/Restrictions (Education and Experience, list in order of preference; other skills, languages, marital restrictions)

BA/BS or AS in Agronomy or Horticulture and one years' experience in vegetable production, extension or marketing OR
 BA/BS in Agricultural Education with one years' experience in vegetable production, extension or marketing OR
 Three years' work experience in vegetable production, extension or marketing.

must have at least 2 years of high school French, or one year of college French, have lived in a French-speaking country for at least 6 months. The same background another Romance Language (Spanish, Italian, Portuguese) can also qualify you.

Previous experience working with community, school or church agricultural projects is highly desirable.

Assignment Description or Summary (Flexibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is primarily agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target regions. At the request of the Malian Government, these teams of volunteers will work directly with villagers in gardening, soil conservation, small-irrigation, forestry and water supply activities.

As a Gardening Volunteer, you will be assigned to (1) Operation Rice-Ségou (ORS) in the Upper Valley (OHV) (both are government organizations responsible for integrated development activities in specific geographical areas) or to a government agency in the area. You will work with your counterpart villagers to increase the horticultural production in the area. This could involve working anywhere along the spectrum of production and consumption on your placement site, with a variety of types and scales of production, from household plots to intensive pump irrigated perimeters.

The first task you will have once you have settled into your village will be to produce a survey of the overall horticultural situation in your village, together with a more focused survey of areas of particular interest. These areas of interest will be chosen after consultation with your Malian counterpart and the villagers. Possible areas of emphasis could include site selection and farm layout, site preparation, terracing, water management, planting techniques, improvements in irrigation techniques, spacing/cultivation, pest control, improvements in fertilizer/manure use, seed selection and storage, marketing, produce storage and conservation, overall planning and management, etc.

Remember that your theoretical knowledge of gardening is useful only to the extent that you can suggest practical solutions to the constraints to vegetable production in the area. Many of the limiting factors will be beyond your control and you will also find that some of the practices you initially perceived as "wrong" are due to extraneous limiting factors.

PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name
MALI SUMMER OMNIBUS 1986

Project Title/Assignment Title
MALI FOOD SYSTEMS: ALL 3 REGIONS
GARDENING

factors which become apparent as you grow to know the system better. You will be frustrated by your inability to effect massive changes but you will learn to concentrate on solving one or two of the major impediments to production, in close conjunction with your counterpart and your host farmers. One very important aspect of being a Peace Corps Volunteer is the transfer of skills to your counterparts and to the communities in which you will be working.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as soil conservation/forestry and water supply, within a short motorcycle drive from your village. These Volunteers may request your assistance in helping the villagers in their area with horticulture and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in general overview of Malian agriculture; Malian climate, soils, crops, farming practices; small scale irrigation systems; crop protection; fruit and vegetable species and varieties; cultural techniques; storage and conservation; extension methods, communication; community organizing; tropical soils and fertilizer use; farm management; enterprise budgeting; marketing.

Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in one Malian language; community development techniques; technical sessions in specific areas, depending on your site, and expanding on your Stateside training; cultural adaptation; personal health orientation; motorcycle riding, maintenance and repair.

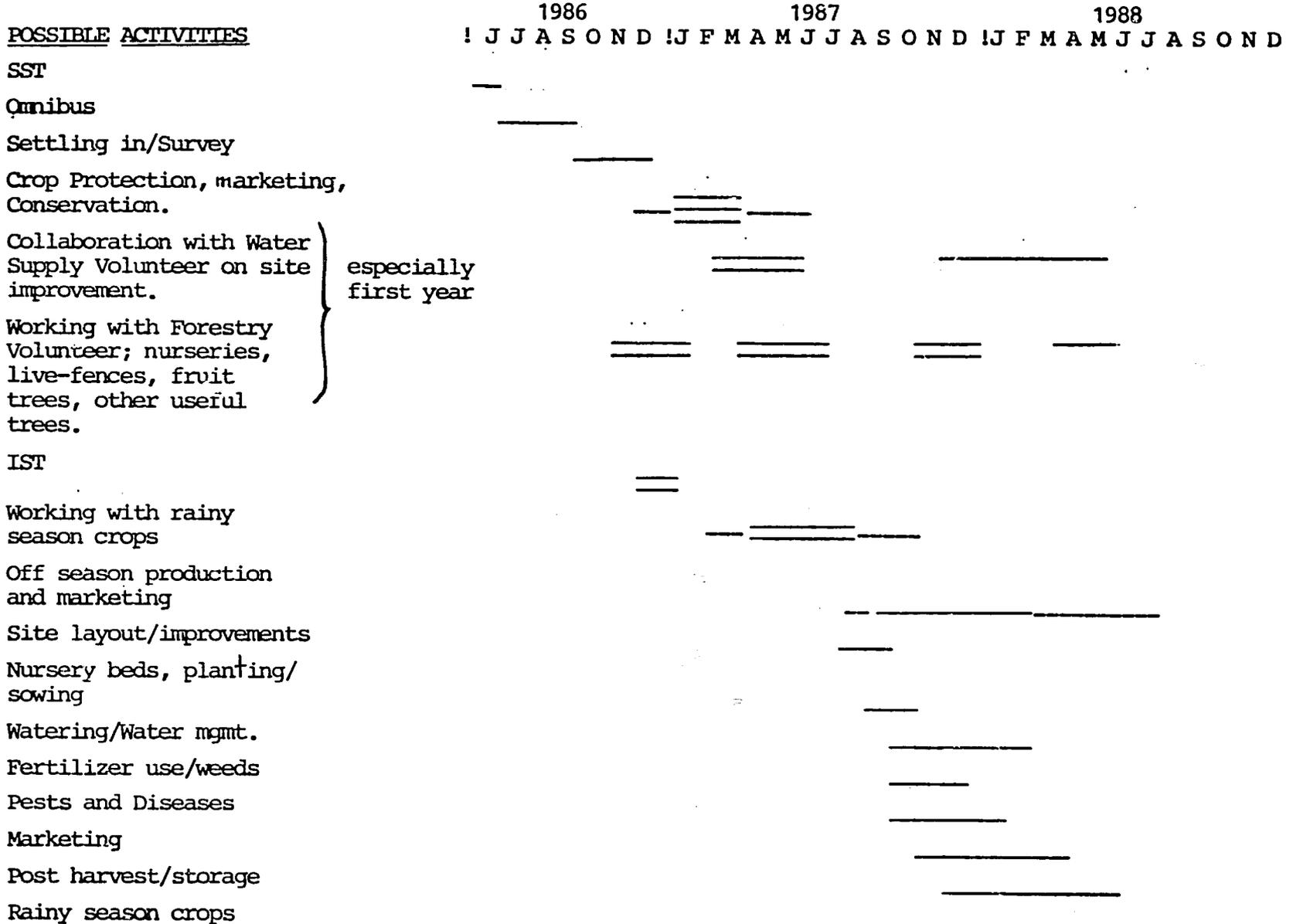
During this time you will also begin to acquire skills in team-building with other potential Volunteers and with Malian counterparts. Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps or the agency you are working for.

LIVING AND WORKING CONDITIONS: You will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region, the area around Bamako, or the Diré area. You will be at least one day's travel from the capital city and the Peace Corps office. You will not have running water or electricity; your diet will most likely be the same as that of your Malian neighbors, sauce served on millet or rice. You will be expected to learn to ride and maintain a small motorcycle to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards.

Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralized bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities. Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciative of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

TIME FRAME: GARDENING
DIRÉ, SEGOU, UPPER NIGER VALLEY.

1/26



especially
first year

TASK ANALYSIS: GARDENING VOLUNTEERS
SEGOU, UPPER NIGER VALLEY, DIRÉ

APR 84

TASK	MEASURES	DUTIES
To identify the governmental, donor and private organizations working in your area.	Has contacted and developed links with all relevant organizations.	<p>A. To make a list of all active organizations in your area, governmental, donors and private, working in the areas of extension, input supply credit, training, marketing, with their mandates and actual activities.</p> <p>B. To make contact with the above organizations/individuals and identify potential resources, support or collaborative roles.</p>
To do a reconnaissance survey of the area.	Survey report.	<p>A. To develop a topical outline after discussions with all interested parties.</p> <p>B. To survey the area in a general way with your homologue.</p> <p>C. To discuss the results with all interested parties.</p> <p>D. To focus on specific areas and</p>

To formulate hypotheses on the attributes and constraints of the existing horticultural systems in the area, identify the major types of production, define and prioritize problems and identify areas of interest and deficiencies of knowledge and/or resources.

To plan and implement a strategy to address the major needs of the area.

Problem, constraints and opportunities listed and prioritized.

Intervention underway.

E. Hold group meetings, household visits, field visits and discussions with all interested parties, survey the literature.

A. To describe the types of horticultural production in the area.

B. To list the major problems by type of production after discussions with villagers, GRM officials, homologues and other interested parties.

C. To outline a potential strategy to address the major problems/opportunities.

A. To search out knowledge, skills, resources available in the area.

B. Discuss strategy with all interested parties.

C. In conjunction with all interested parties, plan strategy, including roles, needs, timing, linkages res-

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Review and evaluation the 1st year's activities. Define and plan second year's activities.

Report produced and discussed with all interested parties.

- D. Implement strategy on a number of sites.
- E. Keep records, discuss progress and describe impact.
- F. Identify areas of future need, training, inputs, support, techniques.
- G. Summarize and report to all interested parties.

To implement 2nd yr. strategy.

Intervention underway.

- A. To refine strategy and discuss with all interested parties.
- B. To plan 2nd yr interventions with all interested parties. Define needs, partition roles and responsibilities.
- A. Implement new or improved strategy.
- B. Keep records, discuss.
- C. Evaluate.

gfr
3/5/4

To train counterparts in improved techniques, in the testing and evaluation of improved techniques and in their dissemination.

Maliens continuing ongoing farm testing and development of improved techniques.

- D. Summarize and report to all interested parties.
- E. Suggest improvements and potential activities/Sites for new Volunteers.

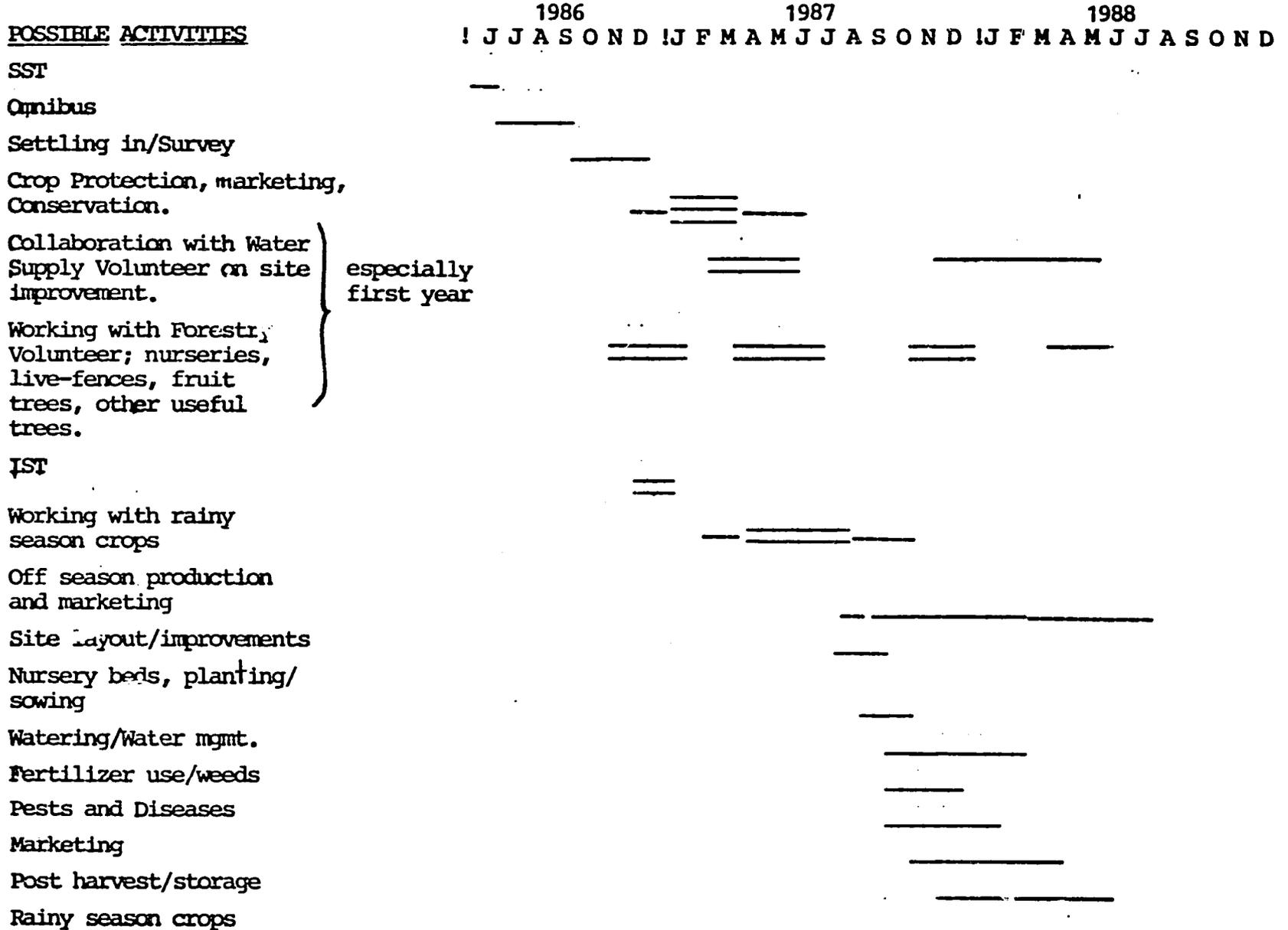
Provide input to Peace Corps Mali's PCT and help with program refinement.

Assists APCD/GRM in site selection and reviews training materials/methods.

- A. Work closely with Malian counterpart in selection, designing planning and implementing strategies.
- B. Evaluate and refine strategies in conjunction with Malian counterpart.
- C. Include Malian counterpart in IST.
- A. To produce a summary report on activities.
- B. To suggest areas for program development.
- C. To list skill requirements for new Volunteers.
- D. To define areas of technical infor-

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TIME FRAME: GARDENING
DIRÉ, SEGOU, UPPER NIGER VALLEY.



especially first year

Trainee Assignment Criteria Preliminary Final

1. Training Class Name SUMMER OMNIBUS 1986 -40-		2. Project Name and Assignment Title MALI FOOD SYSTEMS/DIRE IRRIGATION TECHNOLOGY.		3. Project Code
Date	5. Trainees Requested	6. Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give numbers and restrictions in item 17.)		
7. Background Information: Comp _____ Med/Admin _____ Other _____ Dates: _____ To _____				
8. Class I.D.		9. Assignment No.	10. COI	11. Nominee
_____ Generic _____ IP _____ UNV _____		13. NRD	14. Allocation: AT _____ NY _____ CH _____ DA _____ SF _____	
12. (primary code first)		16. Placement Contact/Code		

Requirements/Restrictions (Education and Experience, list in order of preference; other skills, languages, marital restrictions)

Applicant must have either

- B/BA in Industrial Arts or Vocational Education OR
- AA/AS in Industrial Arts or Vocational Education with one year's related work experience OR
- Technical Diploma/Certificate in Industrial Arts or Vocational Education with 2 years work experience OR
- Two years' work experience in mechanics, carpentry, welding, metal working, plumbing or general construction.

Previous French is highly desirable (2 years of high school French or equivalent) as previous experience working with community, church or youth groups.

Assignment Description or Summary (Feasibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is predominantly agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of volunteers in three target areas. These teams of 2-3 Volunteers will work in agriculture, conservation, small-scale forestry and water supply activities. One of these target areas is the Diré Circle which the President of Mali has designated a priority area for agricultural production.

JOB: As an Irrigation Technology Volunteer in the Food Systems Project you and a second Irrigation Technology PCV will be assigned to the Agricultural Research Station (IER) in the town of Diré. The Station is responsible for agricultural research of millet, sorghum, rice and wheat. Almost all agriculture in the Diré area must rely on irrigation for at least part of the growing season. Motorized pumps are expensive to purchase and to maintain, and therefore are far beyond the means of the majority of the farmers. One of your primary tasks will be to collaborate with the IER staff and the other PCV in installing, testing and modifying alternative water lifting devices at the station. When the devices have been improved and adapted to local conditions you will implement on-farm tests of these devices and continue to modify them as needed.

You will also survey several farms in the surrounding villages to analyse the types of irrigation systems used, hectares irrigated, crops grown and how the production differs from traditional to modern system. You will work with the farmers to modify the structures to increase output per unit of input. On-farm tests of irrigation frequency, timing and application methods will be one of your tasks. You will also work with water supply and gardening/forestry Volunteers, their counterparts and villagers on the implementation of alternate water lifting technologies and irrigation system improvement where appropriate.

PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name
ALI SUMMER OMNIBUS 1986

Project Title/Assignment Title
MALI FOOD SYSTEMS/DIRÉ
IRRIGATION TECHNOLOGY

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in water resource management including the use of water lifting devices and basic principles of irrigation. The training will continue in Mali, with components in: French language instruction; elementary training in one Malian language; community development techniques and skills transfer; technical sessions in irrigation technology; cultural adaptation; personal health orientation; motorcycle riding, maintenance and repair.

During this time you will also begin to acquire skills in team building with other potential Volunteers and with Malian counterparts. Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps of the agency you are working for.

LIVING AND WORKING CONDITIONS: Diré is located in the inland delta of the Niger River, 100 miles SW of Timbuctou. The capital city and Peace Corps office are at least 2 days away via the overland route. The climate is hot and dry, the rainy season is short and dust storms are common during the dry season. You will live in an adobe brick house and will probably have neither running water nor electricity. Your diet will most likely be the same as that of your Malian neighbors, sauce served on millet or rice.

You will be expected to learn to ride and maintain a small motorcycle, to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards.

Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralized bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities. Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciative of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

Peace Corps and the Malian Government invite you to participate in this high priority program. Your tour of service will be two of the most interesting and we hope rewarding years of your life.

TASK ANALYSIS: IRRIGATION TECHNOLOGY VOLUNTEERS
DIRE.

TASK	MEASURES	DUTIES
- Provide demonstration projects of alternative water lifting devices to be introduced in the region.	A sample of each device recommended by PSC installed at research station.	To work with supervisor at research station and counterpart to locate areas for installation of sample devices.
Survey the area to determine types of irrigation and water lifting systems to be installed, locations for projects and install different types of devices on selected farms.	Survey report completed, containing information on types of irrigation systems in area, hectares irrigated, crops grown and locations for installation of devices.	With counterpart assemble and install a sample of each device at station.
		With counterpart conduct survey of area regarding topics in measures, and work in concert with supervisor and villagers in selecting the sites for the installation of devices.
		Meet with interested farmers desiring devices, determine sites to install in order of priority, recruit labor, obtain materials, and install devices.

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Test all devices and make necessary modifications and improvements, and modify devices to be installed where appropriate.

With counterpart and village representatives select irrigation sites needing improvement and/or to be constructed.

Organize labor and assist in making improvements by providing materials and other resources as needed.

Conduct a survey of effects of improvements, including introduction of water lifting devices, by measuring variables discussed in measures.

Improve irrigation with sites identified by other Volunteers assigned to area.

Choose three farms for testing in concert with counterpart, research station supervisor and villagers.

Improve irrigation systems being constructed and/or already constructed in the area.

Have improved water use as measured by improved crop yields, more hectares irrigated per unit or input, or decrease of required inputs.

Test on selected farms irrigation frequency and timing application methods, and make appropriate recommendations.

All trials completed & data analyzed.

Site selection for future water resource Volunteers assigned to the Diré area.

Possible sites selected.

Conduct measures as appropriate, analyze data and write report.

Conduct a survey of areas for installation of other water lifting devices and types to be installed.

Write a report on findings, and actively participate in OOS conference.

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Trainee Assignment Criteria

Preliminary

Final

1 Training Class Name SUMMER OMNIBUS 1986		2 Project Name and Assignment Title MALI FOOD SYSTEMS: ALL 3 REGIONS. WATER SUPPLY		3 Project Code
4 Date		5 Trainees Requested	6 Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give numbers and restrictions in item 17.)	
7 Information: Comp _____ Med/Admin _____ Other _____ Dates: _____ To _____				
8 Class I.D.		9 Assignment No.	10 CDI	11 Nominee
12 Generic _____ IP _____ UNV _____		13 NRD	14 Allocation: AT _____ NY _____ CH _____ SA _____ SF _____	
15 (Primary code first)		16 Placement Contact/Code		

Requirements/Restrictions (Education and Experience, list in order of preference; other skills, languages, marital restrictions)

You must have either
 ✓ BS in Geology or Water/Soil Conservation OR
 two years' work experience in masonry, construction, carpentry, mechanics, or farming.
 You must have at least 2 years of high school French or 1 year of college French or have lived for 6 months in a French-speaking country. The same background in Spanish, Italian or Portuguese can also qualify you.
 Previous experience working with community, youth or church groups is highly desirable.

Assignment Description or Summary (flexibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is primarily agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the villagers themselves.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of 3-4 volunteers in three target regions. At the request of the Malian Government, these teams of 3-4 volunteers will work directly with villagers in gardening, soil conservation, small-scale agriculture, and water supply activities. The chronic shortage of water for agriculture and daily use is a serious problem for the millions of rural Malians living in villages throughout the country. Many village wells dry up each year and Malian farmer's ability to meet their daily needs for human and animal consumption are severely hampered.

Duties: As a Water Supply Volunteer, you will be assigned to either Operation Rice Ségou or Operation Upper Valley (OHV) or to a Government organization in Diré. These Government organizations are responsible for integrated rural development activities in specific geographical areas. You will be responsible for constructing wells for both domestic/drinking and agricultural uses, and for improving existing wells in your area of assignment.

Tasks: Your first task you will have once you have settled into your village will be to produce a report on the existing water supply situation and select sites for the construction of new wells and for improvement of existing wells. These areas will be chosen after consultation with your Malian counterpart and the villagers. You will also work to improve the sanitation of all well sites by constructing aprons, head walls and animal watering troughs. In addition, you will, where appropriate, install various types of water lifting devices, such as hand pumps, foot pumps, etc.

Other: Your work will be involved in organizing villagers, obtain funding and materials, and training workers at your projects. An on-going activity in all of your work will be to transfer your skills to counterparts in well construction and improvement, as well as the educational aspects of the work.

PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Country/Training Class Name MALI SUMMER OMNIBUS 1986	Project Title/Assignment Title MALI FOOD SYSTEMS: ALL 3 REGIONS WATER SUPPLY
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You will find your theoretical knowledge of water resources is useful only to the extent that it allows you to suggest practical solutions to construction problems. Many of the limiting factors will initially be beyond your control and you will find that some of the practices you initially perceived as "wrong" are due to extraneous factors which become apparent as you grow to know the system better. You may be frustrated by your inability to effect massive changes, but you will learn to concentrate on the specific challenges of each construction in providing a water system appropriate to the particular needs of the project at hand.

In addition to working with your counterparts, there will be Volunteers with other areas of expertise, such as soil conservation/forestry and gardening, within a short motorcycle drive from your village. These Volunteers may request your assistance in helping the villagers in their area with wells construction or improvement, and you may ask them to assist your village with projects in their specialities.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in how to assess water supply in an area, geology with a water resource focus, water resource management, irrigation systems, wells construction and improvement design, and community organization. Once in Mali, your training will continue in a rural area. Components will include: French language instruction; elementary training in a Malian language; community development techniques; technical sessions in wells construction, with an emphasis on the types of problems to be encountered in your area of assignment, irrigation and water resource management; cultural adaptation; motorcycle riding, maintenance and repair. During this time you will also begin to acquire skills in team-building with other potential Volunteers and with Malian counterparts.

Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps or the agency you are working for.

LIVING AND WORKING CONDITIONS: You will live and work in a village or small town of perhaps 500-2,000 people, in either the Ségou region, the area around Bamako, or the Diré area. You will be at least one day's travel from the capital city and the Peace Corps Office. You will not have running water or electricity; your diet will most likely be the same as that of your neighbors, sauce served on millet or rice. You will be expected to learn to ride and maintain a small motorcycle, to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards.

Working in Mali can be frustrating, given the lack of basic infrastructure, poor roads and communication networks, over-centralised bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities. Despite these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciate of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working toward common goals as well as to profit from their sense of humanity and hospitality.

Peace Corps and the Malian Government invite you to participate in this high priority

program. Your tour of service will be two of the most interesting and we hope rewarding years of your life. 91.234

TASK ANALYSIS: WATER SUPPLY
DIRE, UPPER NIGER VALLEY, SEGOU.

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TASK

Determine the needs of the village in water supply and sanitation.

MEASURES

A survey report showing choice of locations and a work plan designed in consultation with villagers and counterpart.

DUTIES

Survey the village and different sections of villages, farms and gardens to determine current facilities for water supply and sanitation, inadequacies and possible solutions.

Consider different options available such as deepening existing wells, use of hand pumps, need for new wells with concrete linings, head walls, aprons and animal watering troughs.

Discuss the solutions, costs, labor and timetable with your counterparts, village leaders, development committees and community groups.

Select four or five possible projects. Arrange them in order of priority based on the urgency of needs and

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enthusiam of people to participate through labor contributions, equipment and other requirements.

Prepare a plan in conjunction with counterparts and village representatives for the selected projects.

Discuss your project with technical agencies in your area, such as Malian Government officials and donor agencies such as UNDP, CARE, UNICEF, etc.

Prepare proposals for external funding where needed.

Work with village associations to obtain when possible contributions in cash and kind.

Purchase and arrange for equipment and materials to be delivered to site in conjunction with counterparts, villagers and local merchants.

Assist villages in preparing for the selected projects.

Funding received, labor organized, and materials and equipment acquired.

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Organize labor, supervise work and complete tasks.

Mobilization at site work completed.

Enlist Volunteers from village and organize them into work crews. Brief them on the work to be done and the role each will play. Make a local person responsible for the crew as foreman.

Complete construction. Check for adequacy in terms of structural safety and sanitation.

Hand over the completed facility to armer representatives and instruct in how to maintain it. Occasionally inspect the work to make sure it is being properly maintained.

Repeat steps above on other sites in order of determined priority.

Train counterpart and other villagers in procedures used.

At least two crews trained to help other farmers.

During course of the above steps train interested villagers in methods of surveying, organizing, construction, etc.

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Train your GRM counterpart in cost analysis, how to approach different donor agencies and proposal preparation.

Provide water lifting devices where appropriate.

Install hand, foot or other type of pump and/or water lifting device as appropriate to needs of site.

Meet with Volunteers and/or APCD with water resources expertise to determine best device to use on selected site.

Obtain necessary funding, coordinate project and install appropriate device.

Assist other members of your team of PCVs

At least two farms on which joint assistance is provided.

Meet with other team members and apprise them of needs of farmers in community.

Arrange meetings between PCVs and farmer representatives to plan appropriate projects relevant to the tasks of your team members.

Develop project plan and obtain funding as necessary.

Advise PC/Mali on usefulness
of continuing program.

Final comprehensive report
and recommendations.

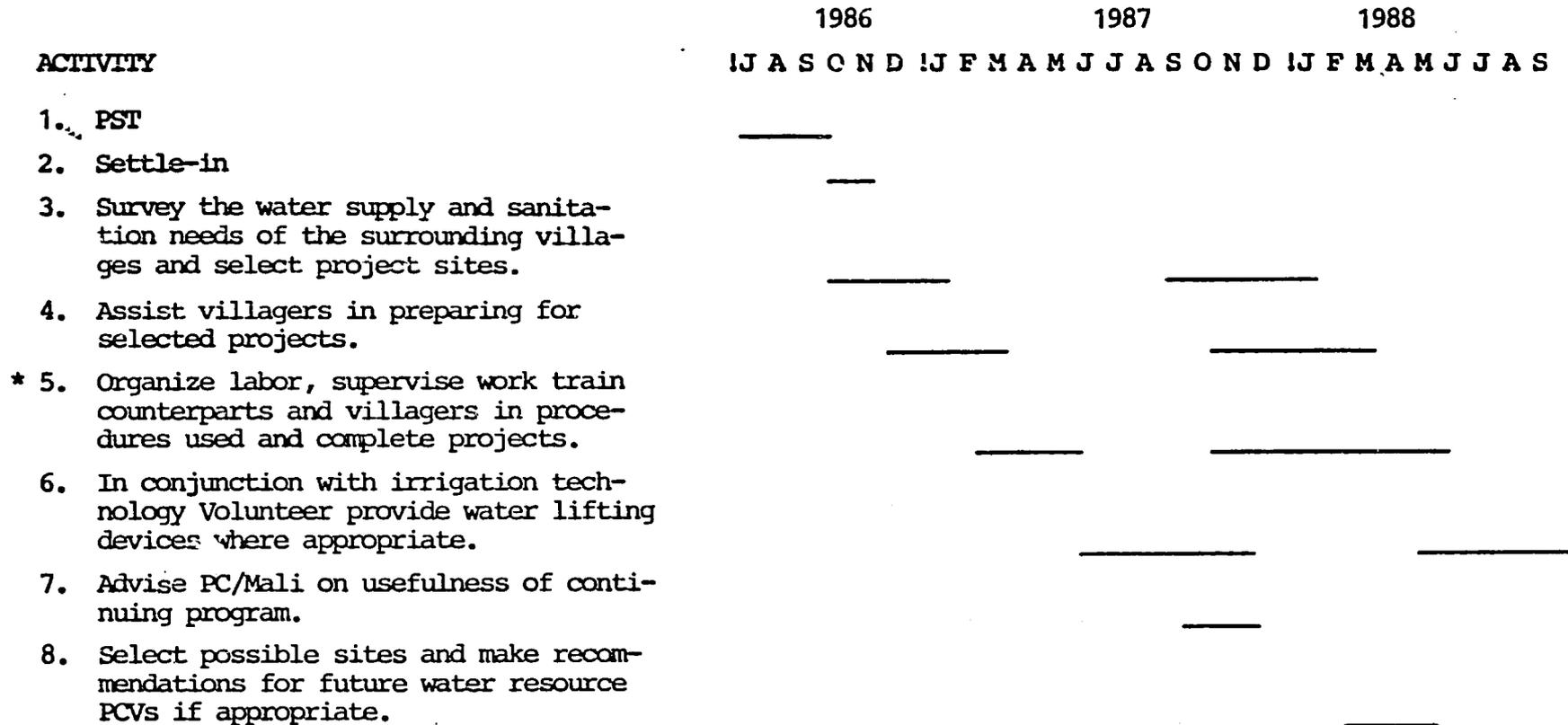
Assist fellow PCVs in project and
supervise all work done at site.

Prepare comprehensive report and
actively participate in OOS confe-
rence.

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TIME FRAME: WATER/SANITATION VOLUNTEER
(DIRÉ)

647
2



* During year two work schedule is flexible.

Trainee Assignment Criteria

Preliminary

Final

1. Training Class Name MMER OMNIBUS 1986		2. Project Name and Assignment Title MALI FOOD SYSTEMS/DIRE AGRICULTURE EDUCATION		3. Project Code
4. Trainee Requested		5. Married Couples? <input type="checkbox"/> Yes <input type="checkbox"/> No (If yes, give numbers and restrictions on item 17.)		
6. Information: Comp _____ Med/Admin _____ Other _____ Dates: _____ To _____				
7. I.D.	8. Assignment No.	9. COI	10. Nominee	
11. Generic	12. UNV	13. NRD	14. Allocation: AT _____ NY _____ CH _____ DA _____ SF _____	
15. (primary code first)		16. Placement Contact/Code		

17. Restrictions (Education and Experience, list in order of preference; other skills, languages, marital restrictions)

A/BS degree in Agronomy, Horticulture or Agricultural Education and farm experience, preferably in vegetable gardening and/or small animal husbandry.

Previous experience in agricultural extension and/or working with school or community agricultural projects is highly desirable.

You must have at least 2 years colleg-level French or the equivalent.

17. Assignment Description or Summary (Feasibility, commitment, project goals, objectives, duties, working/living conditions, training)

BACKGROUND: The Republic of Mali is a resource-poor West African country struggling with a variety of development problems that need long-term solutions. Although the economy is predominantly agricultural, one of the most serious problems facing Mali is declining food production, a result of several inter-related factors, not the least of which is the disastrous drought of the past few years. Increasing per capita food production and moving toward self-sufficiency is the highest priority of the Malian Government and of the Malians themselves.

In an effort to increase availability of and access to food, Peace Corps/Mali will place teams of 2-3 Volunteers in three target areas. These teams of 2-3 Volunteers will work in agriculture, soil conservation, small-scale forestry and water supply activities. One of these target areas is Diré Circle which the President of Mali has designated a priority area for agricultural development.

B: As an Agricultural Education Volunteer in the Food Systems Project you will be assigned to the Center for Fundamental Education in the town of Diré. The Center is responsible for the supervision of the 15 primary and junior high schools in the area. Since agriculture is a major part of the curriculum, teachers are expected to teach it both in the classroom and in demonstration projects. However, the teachers themselves are often not trained in agriculture and technical teaching materials are rarely available.

You will help the Inspector of Fundamental Education to revise the curriculum and to design courses in agriculture to be taught in primary schools. You will also be assisting with demonstration gardens, forestry projects and small animal raising activities. In conjunction with the Inspector and local teachers, you will produce teaching aids such as technical leaflets in French suitable for the local conditions. Your immediate Malian supervisor will be the Inspector, but you will work closely with members of his staff and with local teachers in the area whom you will visit regularly. An important part of your job will be to transfer your knowledge to your colleagues so that the project continues after you leave.

In addition to revising curriculum and developing teaching aids, you will also serve as a local resource person for the other 10-12 Volunteers in your area. These Volunteers will be working (1) at the village level in gardening; soil conservation, small-scale forestry and water supply and (2) in the Diré Agricultural Research Station, experimenting with irrigation.

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PEACE CORPS TRAINEE ASSIGNMENT CRITERIA
(Continuation Sheet)

Entry/Training Cam Name
MALI SUMMER OMNIBUS 1986

Project Title/Assignment Title
MALI FOOD SYSTEMS/DIRE
AGRICULTURAL EDUCATION

technology. Your assignment will require a high degree of creativity, self-motivation and the ability to work without a great deal of supervision as you may be the only person in your office qualified in agriculture. You will, of course, have access to other Government agents working in the agriculture sector.

TRAINING: You will participate in an intensive 12-week program to prepare you for this assignment. The first three weeks will be at a Stateside training center, with theoretical and practical courses in Sahelian agriculture. Once in Mali, your training will include: French language instruction; elementary training in one Malian language; community development techniques and skills transfer; technical sessions in Mali's agricultural systems, including field trips to representative projects; cultural adaptation; personal health orientation; motorcycle riding, maintenance and repair.

Depending on your previous education and background, you may request training in specific topics such as small animal husbandry, community forestry or extension techniques. During this time you will also begin to acquire skills in team-building with other potential Volunteers and with Malian counterparts. Once you have successfully met the standards set for the different components of the program, you will be assigned to your post. Training will continue throughout your two years as a Volunteer through workshops and conferences organized by Peace Corps or the agency you are working for.

LIVING AND WORKING CONDITIONS: Dire is located in the inland delta of the Niger river, 100 miles SE of Timbuctou; the capital city and Peace Corps office are at least 2 days away via the overland route. The climate is hot and dry, the rainy season is short and dust storms are common during the dry season. You will live in an adobe brick house and will probably have neither running water nor electricity. Your diet will most likely be the same as that of your Malian neighbors, sauce served on millet or rice.

You will be expected to learn to ride and maintain a small motorcycle, to communicate in French and a Malian language on a daily basis with your colleagues and friends, and to maintain your health in an environment that presents many potential health hazards. Working in Mali can be frustrating, given the lack of basic infrastructure, no roads and communication networks, over-centralized bureaucracy, low literacy and education levels, multilingual demands for communication and great distances between cities.

In spite of these realities, the harsh climate and limited resources, Mali is a rewarding place to serve as a Peace Corps Volunteer. Malians are self-reliant people proud of their ancient cultural heritage. They are warm and generous and will be deeply appreciative of your efforts on their behalf. You will have the opportunity to share their struggles and aspirations by working towards common goals as well as to profit from their sense of humanity and hospitality.

Peace Corps and the Malian Government invite you to participate in this high priority program. Your tour of service will be two of the most interesting and rewarding years of your life.

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TASK ANALYSIS: AGRICULTURAL EDUCATION
DIRE

206

TASK

To develop a curriculum for IEF,
together with teaching materials.

MEASURES

Curriculum written. Teaching
materials produced.

DUTIES

To survey existing materials, examine the agriculture curriculum, visit local instructors and survey local agricultural conditions in conjunction with instructors, IEF, and IER staff.

To produce a preliminary plan for a new curriculum and appropriate teaching materials adapted to local conditions. To revise that plan in conjunction with IEF, IER staff and instructors.

To produce a curriculum with a technical outline of topics, together with teaching materials and suggested teaching methods.

To summarize all the available and produce technical leaflets in French on small scale animal and horticultural projects.

Technical leaflets produced and revised by COS.

Arrange for trials to be made in conjunction with interested instructors and PCVs. 7
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Assist in the establishment of trials.

Evaluate results

Select promising ideas for further testing

Do a second cycle of trials in conjunction with instructors and PCVs.

To collect technical information.

To discuss needs with IEF staff and staff and instructors.

To produce draft technical leaflets.

To circulate leaflets to all interested parties.

To revise leaflets in light of comments and feed back.

To work with local teachers in developing agricultural teaching methods.

Classes held for local teachers.
Demonstrations made.
Teaching projects established.
Manual developed.

To survey the existing teaching methods, review ongoing and failed Projects, discuss alternative demonstration techniques with teachers and IEF staff. Visit school gardens, collective fields, small livestock projects, village forestry projects.

To work with IEF staff, instructors and gardening/forestry PCVs and Water Supply PCVs to plan appropriate techniques.

In conjunction with the instructors and IEF staff arrange for necessary materials for projects/demonstrations

Hold classes with instructors on the suggested projects/demonstrations.

Assist instructors in setting up demonstrations and projects.

Evaluate with IEF staff and instructors the impact of the demonstrations, the successes and failures and the

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in terms of costs in time and materials, the ease with which they could be duplicated elsewhere and their usefulness in the future to the pupils.

In conjunction with the IEF staff and instructors produce a manual for setting up demonstrations and small animal projects.

Circulate the manual among all interested parties for field testing and comments.

Revise the Manual.

In conjunction with IEF and IER staff and local instructors, to suggest new areas for school projects, new techniques and methods.

Work with IEF staff, instructors and PCVs to plan trials of new techniques.

To test new techniques for school agriculture in the area.

Trials and experiments set up.
Promising new techniques chosen.

2/7
3/10

To produce and field test revised leaflets.

To further revise the first group of leaflets and to develop new leaflets for expressed areas of interest.

To visit PCVs' work sites and discuss problems and needs.

To work with PCVs in developing training projects.

To circulate materials for comments and revision to all PCVs in the area.

To share information among PCVs

To help PCVs access technical information.

To include your Malian counterpart(s) in all other tasks.

To explain rationale behind your decisions.

To serve as a technical resource in the area for other PCVs and to integrate your tasks with activities.

Collaborative projects established.

To train a Malian counterpart in curriculum development, teaching methods, teaching methods, extension methods and technical leaflet and manual production.

Counterpart continuing curriculum development, manual and leaflet production, trials and classes in teaching methods.

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113

To discuss the work and include your Malian counterpart in the decision making at all times.

To remain aware of the necessity for skill transfer, to both counterparts and instructors throughout your tour.

TIME FRAME: AGRICULTURAL EDUCATION
(DIRE)

off
312

ACTIVITY	1985				1986				1987					
	I	O	N	D	J	F	M	A	M	J	J	A	S	O
Survey.	_____													
Planning.	_____													
a) Curriculum and materials developed.	_____													
Curriculum and materials tested.	_____ <u>Testing</u> _____													
Revision of curriculum and materials.	_____ <u>Revision</u> _____													
b) Demonstration and small animal projects.	<u>Planning</u> _____ <u>Planning</u> _____													
Establishment	_____ <u>Set up</u> _____ <u>Set up</u> _____													
c) Trials	<u>Planned</u> _____ <u>Set up</u> _____ <u>Evaluated</u> _____													
d) Manual produced	_____ <u>Draft Revision</u> _____													
e) Technical leaflets	<u>Drafts</u> _____ <u>Revised</u> _____													

SECTION 5: PROJECT RESOURCES

A. Peace Corps Volunteers

1. Assignment Title	2. Projected Trainee Request	FY 86	FY 87	FY 88	FY 89
Irrigation Technology		3	0	2	0
Water Supply		7	4	7	7
Gardening/Forestry		7	4	7	7
Agricultural Educ.		2	0	3	0
Agriculture Extension		0	0	3	3
Irrigation Extension		0	3	3	4

313 350

SECTION 5: PROJECT RESOURCES

B. Other Resources

1. Personnel

APCD/Program Management (to be based in Diré)

PSC to design PST technical training component for both SST and ICT for following assignments:

- a. Irrigation Technology
- b. Gardening/Forestry
- c. Water Supply

PSC to do preliminary study of small-scale irrigation systems in the Diré Circle.

PSC to develop Sonrai language and cross-cultural materials.

Training Items (PST, IST)

Complete PST training design for SST and ICT, including technical, language and cross-cultural components.

Technical literature on gardening, forestry, irrigated agriculture, and alternative water-lifting technologies.

2. Responsible Party

PC/Mali, PC/W

PC/W, PC/Mali

PC/Mali, PC/W, USAID

PC/W, PC/Mali

PC/Mali, PC/W, Contractor

PC/W

3. Date Needed

September, 1985

December, 1985

January, 1986

February, 1986

April, 1986

August, 1986

159
h/s

Materials and supplies for hands-on IST, for all PCV assignments.

Budget and design for IST.

Program Items:

4-wheel drive vehicle for Diré-based APCD

Operating budget for Diré Office, including funds to hire an Administrative Assistant.

Program design completed

List of potential placements for PCVs

Initial site selection visits

125 cc. motorbikes for 1986 PCVs.

Funding for wells, irrigation and small-scale forestry projects.

125 cc. motorbikes for 1987 PCVs.

PC/W, PC/Mali USAID

November, 1986

PC/W, PC/Mali

November, 1986

PC/W, PC/Mali

September, 1985

PC/W, PC/Mali

September, 1985

PC/Mali with Ministry of Agriculture

October, 1985

Ministry of Agriculture

November, 1985

PC/Mali, Ministry of Agriculture

January, 1986

PC/Mali, PC/W, USAID

June, 1986

Self-Help Funds, Africare, SPAF, local contributions (Government, beneficiaries), UNICEF.

October, 1986 and on-going

PC/Mali, PC/W, USAID

June, 1987

358
315

SECTION 6: PROJECT MANAGEMENT

A. Monitoring Arrangements

1. Procedures

If appropriate, evaluation of SST at end of training.

Testing in language, cross-cultural, technical skills, and for awareness of Peace Corps/Mali overall philosophy and its long term strategy, approaches to community development.

Initial survey of site completed for

- horticultural
- forestry
- or water situation

by Volunteer

Project planned for 1st year's activities in

- horticulture
- forestry
- or water supply

2. Events/Timing

SST May/June 1986

End of PST October 1986

Survey report completed
December, 1986

Project plan submitted
January, 1986, reviewed
and approved by APCD

3. Participants

Volunteers, trainers

Volunteers, PC/Mali
trainers

Relevant Volunteers,
APCD

Relevant Volunteers,
APCD, Ministry of
Agriculture

3/6 7/8

Visit Volunteer site and hold formal and informal meetings with PCVs, supervisors, counterparts, villagers, etc. using CPR-M Site Visit Appraisal Form.

Read and submit written comments on PCVs' quarterly reports.

Training for PCVs and their counterparts in their relevant technical area, followed by formal review of program, training, PC/Mali etc. using CPR-M PCVQ as a guide.

Review of PC/Mali program and Diré program in particular, using CPR-M PCVQ, Programming Quality forms, and PCV evaluation forms as guides.

Review of Diré program using CPR-M PCVQ, Programming Quality Forms and PCV evaluation forms as a guide.

Site visits/4 times a year for 1st year of service and at least twice during 2nd year of service

Review PCVs' quarterly reports

IST during the first six months of service.

All Volunteer Conference approximately one year after PCVs arrive in Mali.

COS conference; during last four months of PCVs service.

APCD; Volunteers; villagers.

APCD; Ministry Supervisors

PCVs in similar program throughout Mali; APCDs; PSCs.

PCVs from all projects in Mali; PC/Mali staff.

All PCVs completing their tours of duty.

3/17
PSC

B. EVALUATION PLANS:

Most programs are evaluated about three years after the start-up date; however, since AFSI is a pilot initiative with possibilities for Peace Corps-wide applicability, the Diré project should be evaluated during the tour of the first group of Volunteers.

The ideal time for the evaluation to take place is approximately 18 months after start-up date. However, given Peace Corps' programming deadlines, the evaluation should be completed before TACs are due for the second group of PCVs.

Consultants, preferably with former Peace Corps experience, will work with PC/Washington and PC/Mali to design and carry out the evaluation.

3/8 255

SECTION 7: STEPS TO BE TAKEN TO FINALIZE THE PROJECT PLAN

Since Peace Corps/Mali has no Volunteers in the Diré Circle, there is a great deal of work to be done in the immediate future. This will require full-time programmer stationed in Diré.

<u>Task</u>	<u>To be Completed By</u>
Ascertain to what extent USAID will continue to fund the Farmers' Activities Project. (Africare) and the Agricultural Research Station; determine impact on PC involvement.	August, 1985
Assign an APCD/Regional Development to Diré.	September, 1985
Identify a GRM service (or services) to sponsor PCVs; begin to develop links.	October, 1985
Establish programmatic links with Africare and define lines of authority for PCVs.	November, 1985
Explore possibilities for collaboration with other organizations working in the Diré Circle.	November, 1985 and on-going
Negotiate job descriptions, numbers, resource and support issues with appropriate GRM services.	November, 1985
-Assure that an agreement between PC/Mali and the services is signed (Protocol d'Accord)	

319 256

Refine the Task Analyses and TACs

-Do additional representative site surveys for potential PCV placements.

November, 1985

-Develop language and cross-cultural objectives.

Decide if SAVS are acceptable

-Begin to explore possible placements for them (to be completed before trainees arrive in June, 1986).

November, 1985

Determine probable length of PC involvement in the Project (Note: Goals and Objectives in this draft are set for the first two years only).

April, 1985

-Expand Goals and Objectives accordingly and refine the Project Plan where needed.

Develop Preliminary TACs for the following assignments:

April, 1985

- a. Agriculture Extension
- b. Irrigation Extension
- c. Agricultural Education
- d. Public Health
- e. Post-harvest Activities

Assure that Resource Requirements listed on pp. are met by the established deadlines.

See pp.

DEBRIEFINGS IN MALI

Before leaving Mali, members of the Team and Peace Corps/Mali staff met with several groups to present the proposed strategy. The overall response, especially on the part of the GRM, was enthusiastic. Summaries of those debriefings are included at the end of this section; in Annex C is a briefing paper in French that was distributed at meetings with GRM officials and copies of follow-up letters.

These debriefings were very helpful, raising new issues and themes, which need to be considered if the food systems initiative is to be successful in Mali. It is therefore recommended that Peace Corps/Mali consider the following:

1. Maintaining the cohesiveness of the present Peace Corps program and avoiding a split into AFSI Volunteers and non-AFSI.
2. Assuring quality support for all PCVs from:
 - a. Sponsoring host country agencies
 - b. Peace Corps; assuring there is sufficient staff for both the administrative and the programming/training sections.
3. Possibility of increasing the PCVs in the Upper Niger Valley project by:
 - a. Adding one or two community development specialists assigned to work with a limited number of village associations in coop management, basic numeracy and functional literacy. This would be an experiment for both the OHV and PC/Mali, to test the effectiveness of PCV involvement in this type of activity. The PCVs would also provide backup support to other PCVs.
 - b. Replacing Katrin Stinson, the PCV working in computer training at OHV headquarters.
4. How the Peace Corps Director can efficiently supervise the increased staff, especially the seven APCDs. One option would be to name an APCD Deputy Director; the APCD for Programming, Monitoring and Evaluation would be a logical choice.

5. How animal husbandry, including pisciculture, can best be incorporated into AFSI.
6. How the various APCDs (Water, Agriculture, Forestry) will work together to coordinate activities in each region.

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Date: June 15, 1985 Place: Governor's Office in Segou

Participants: Mr. Moulaye Mohamed Haidara, Governor of the Fourth Region; Mr. Sidibe, the Governor's development adviser; Mr. Felipe Tejada, APCD Ag/RD; Dague Clark, AFSI Team.

The AFSI design team recommendations for Volunteer placement with Operation Riz-Segou were discussed. The Governor said that he thought the positions were excellent choices and that they covered the priorities which he discussed with the AFSI design team a few weeks earlier. He said the team approach to development is a good idea.

Mr. Haidara said he was very pleased that Peace Corps came back so quickly with their recommendations. He said that they receive many delegations in the Region but they rarely receive a follow-up visit and he thanked us for the debriefing.

Mr. Haidara said that if Peace Corps has any problems in implementing the program that they should feel free to contact him or Mr. Sidibe.

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Date: June 15, 1985

Place: Operation Riz-Ségou

Participants: Mr. Dotianga DIAMOUTENE, Directeur Général d'Opération Riz-Ségou; Mr. Ousmane GUINDO, Chef de Section Développement Communautaire d'Opération Riz-Ségou; and Mr. Felipe TENDJA; Dague CLARK.

The AFSI design team recommendations for Volunteer placement with Opération Riz were discussed. Mr. Diamouténé said he was happy to see that the number of PCVs working with Operation-Riz would be increased and also that the activities that the Volunteers will be implementing will be diversified. He went on to say that he thought the team concept is a very good idea. Mr. Diamouténé said that the ORS-agents in the field are supposed to be implementing activities such as the ones the AFSI design team proposed but they do not have the technical knowledge to effectively carry out these program. Therefore, he hopes that the PCVs will work closely with the field agents to transfer the technical knowledge.

The one area that Mr. Diamouténé would like to see future Peace Corps involvement is elevage. We discussed past problems with chicken raising projects, but Mr. Diamouténé still was very interested in elevage. We suggested that the new PC/Mali staff study elevage in more detail and continue discussion with the ORS staff.

(DC)

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USAID Meeting of June 15, 1985

The AFSI team and the Director of Peace Corps/Mali met with the Director, Agricultural Officer, Program Officer, OHV Project Manager and Peace Corps Liaison Officer of USAID to discuss the recommendations of the team in a debriefing session. The chief of Party described the Team's work during their tenure in the country and called on various Team members to explain parts of the program. There was much discussion regarding the Team's proposal for PCV activities during the first generation of Volunteers in AFSI. In sum, the following areas were debated:

1. The Agricultural Program Officer expressed concern that Volunteers in the Diré program were not working directly with Africare in their Activités Paysannes (Farmer Activities) project of providing motor pumps to farmers under an ongoing credit system. The Peace Corps Liaison Officer also expressed concern that Volunteers were not working with agricultural extension with Action Blé.

The Team responded that by developing alternative water lifting technologies using non-motorized systems, the majority of wheat and rice farmers would be served, rather than working with only the five percent of farmers presently owning motorpumps. The Team explained that Africare was most supportive of this effort and considered it a direct extension of their work with pumps. Africare has promised to collaborate with the alternative water lifting device experiments and assist in implementing them as part of the Farmer Activities program. The Team also pointed out that they did not feel it appropriate to assign Volunteers to Action Blé given the administrative problems of that agency. They reminded those present that USAID had ceased all funding to Action Blé of those problems, and determined that at present it could not support its extension programs. The Team stressed that should Action Blé improve its performance during the next few years it could be an agency for PCV assignments.

The Team also pointed out that their programmatic emphasis on irrigation and water technologies would directly benefit both cereals production and gardening activities in the Region. In addition, the Team stressed that a focus on gardening activities would provide directs to foods systems for all cultural groups in the area.

2. The OHV Project Manager expressed concern that the AFSI program did not emphasize rural works, i.e., repairing small scale irrigation systems. The Program Manager and the Peace Corps Liaison Officer also expressed concern about Volunteers not being assigned to the ton (community associations) in the OHV Zone.

The Team pointed out problems of PCVs have in obtaining large amounts of funding for irrigation systems projects; this usually precluded their involvement in them. The OHV Officer said that USAID was making some funds available for such work, but needed communities to be organized around such activities. The Team discussed how USAID funding for projects in the \$5000 to \$10000 range would take a great deal of time to obtain, and that should villagers express an improving irrigation systems, individual Wtare Resources Volunteers could take on such projects. However, the Team stressed that it was not Peace Corps' mission to initiate such projects, especially since such improvements contained a large risk required technical expertise, and a declared interest on the part of the population to rehabilitate them successful and would take a great deal of time to complete.

The Team pointed out that in order to achieve PCV job satisfaction it is necessary for most Volunteers to undertake project in which some progress can be measured during their tour. However, they also stated that should such projects

arise, and they are technically feasible for Volunteers to participate in that rural works could become part of the program. Such projects would be more appropriate to second and third generation Volunteers, rather than for those initiating the AFSI programs in the Region.

In regard to PCV involvement in the ton villageois the team reminded those present that those associations are organized for providing inputs and obtaining credit for cotton and not food crops production. In addition the ton are exclusively male organizations, and Peace Coeps being assigned directly to them would most probably preclude their working with other community organizations (groupement villageois), especially those organized by women. The Team pointed out how one of the mandates of the AFSI initiative was to be concerned with the issues involved with women in development. Thus, the programs developed were designed for interventions in both mens' and women's groups and activities.

The Director of the USAID Mission asked his associate if they felt there was anything seriously wrong or unworkable with the programs discussed. All present felt the programs were viable, but they would have desired PCV involvement more directly in activities USAID was funding.

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Debriefing Summary

Date: June, 16, 1985

Place: Peace Corps Office

Participants: Approximately thirty PCVs attending all Volunteers conference representing all regions and project in the country.

Summary: After the AFSI Design Team gave a brief summary of its recommendations the Volunteers made several observations and requested clarification of some points. The following is a list of Volunteer comments and questions:

1. What was the methodology the Design Team used with the Malian agencies, how was the collaboration and what was their response?
2. How did the Design Team arrive at the numbers of PCVs per project, per activity and total number of PCVs?
3. Why was there no mention of working with herders?
4. Why did we not recommend placing PCVs in dryland agricultural extension?
5. Why were only the three regions visited and how did we select these three areas? Two areas the Volunteers felt should receive attention in future studies are soil conservation activities in the Mopti Region and marketing activities in the Sikasso area.
6. What will the host country agency be in the Diré area?
7. What are the future plans of several of the current PC/Mali programs?
8. The many schools in Bamako should also be included in any agricultural/gardening education programs.
9. Why did we decide to divide agriculture and forestry/soil conservation activities when many projects are moving towards agroforestry?
10. How much time will the APCDs have to devote to Volunteer support?
11. What will the ramifications be of having more than one APCD work with the different Ministries and Malian agencies?

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12. How will the new Country Director be able to supervise the increase in APCDs?
13. Will the Malian support staff be increased proportionately with the increase in APCDs and PCVs?
14. Why are we proposing that only the AFSI PCVs attend the intensive SST? Will the training and tasks we have proposed develop a set of technocrats?
15. Are we suggesting that PC/Mali PCVs be divided into AFSI and non-AFSI Volunteers, and if not how do we propose that the AFSI Volunteers intergrate into the current PC/Mali program?

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Date: June 17 Place: OHV Headquarters, Bamako

Participants: Mr. TOGOLA Yaya, Directeur Général, Mr. Issa DJIRE, Director of extension; Mme Kango, Director of Integrated Activities; Mr. Fafaran KEITA, APCD; Kathy TILFORD, Team Leader.

The Team Leader gave a resumé of the Team's activities and then presented recommendations for the OHZ zone. She stated that

- the Team saw excellent possibilities for an evolution of the Volunteers' roles into other agricultural production activities
- at this time the Team did not have enough information to make a recommendation about OHV's request for 7 Volunteers to work directly at the Headquarters for the following reasons:

1. Almost the entire staff of PC/Mali is changing, including the Director. Since part of the decision about placement of PCVs at the Headquarters level is a policy decision, the new Director needs to be involved in the decision
2. It has not yet been determined how long or in what capacity the Louis Berger Consultants will be working at OHV. This needs to be decided, especially if the proposed Volunteers were to be working directly with the Louis Berger Team
3. The Team did not have enough information (due to lack of time) about the PCV assignments.

The Director General thanked the Team again for their work and commented very favorably on each of the proposed PC interventions, stating that these were exactly some of the areas where OHV wants to reinforce their presence. He was especially positive about PC's interest in Soil Conservation and Reforestation, calling it the priority of priorities.

He then stated that he would like PC to consider filling at least some of their requests, especially

1. a community development/cooperatives specialist. This person could be assigned in the field and would work with at least one or two tons in coop management. The Director General stated that if PC did not want to place a large number of Volunteers directly with tons, it would still be interesting to have a demonstration project. If that worked well, then perhaps more PCVs could be added later;
2. a computer specialist to replace Katrin Stinson who is training Malians to use the computers;
3. an agricultural credit specialist.

The Team Leader said that she would take his recommendation back to PC/Mali and to the new Director.

ANNEX: MANAGEMENT ISSUES

POSITION DESCRIPTION

ASSOCIATE PEACE DIRECTOR/PROGRAMMING, MONITORING AND EVALUATION.

The Associate Peace Corps Director for Programming, Monitoring and Evaluation is responsible under the authority of the Country Director for the translation of requests from GRM; coordinates the projects under his/her jurisdiction to ensure the appropriateness and high quality of Volunteer assistance. In so doing, she/he serves as liaison with the Malian Government ministries utilizing Peace Corps Volunteers and ensures that Volunteers are trained to adequately serve their needs.

MAJOR DUTIES AND RESPONSIBILITIES

Program Development (10%)

The APCD/Programming maintains close and regular contact with counterparts in Malian Government ministries by visits, phone, meetings, correspondence and reports; and in close collaboration with the appropriate APCDs and others:

1. explores new areas of Peace Corps involvement based on Malian Government needs and development goals;
2. reviews and evaluates requests for Volunteers based on Peace Corps programming criteria;
3. assures that programming is developed with long-term goals and objectives;
4. evaluates the technical viability of proposed projects and/or Volunteer assignments, calling upon expert assistance when needed;
5. recommends acceptance or decline of request to Director;
6. writes Project Plans, when appropriate, and writes Volunteer Position Descriptions;
7. selects appropriate skill profile and writes Trainee Assignment Criteria sheets to request recruitment of Volunteers;
8. identifies the skills and skill levels necessary for the performance of the Volunteer Assignment and collaborates with the Training Officer to design and plan training and establish training objectives to ensure attainment of adequate levels in all skills;
9. identifies potential area of Peace Corps/USAID collaboration and advises and assists USAID Program Officers in Planning for Peace Corps inputs to projects;

10. identifies potential areas of collaboration with FVOs and other donors for long and short-term inputs into projects;
11. assures that appropriate job descriptions and plans of action have been developed and agree upon by PC/Mali and the GRM sponsoring agency;
12. develops the team concept for AFSI and other PCVs and assures that the team concept is stressed during training and throughout the PCV's tours of duty; and
13. assures that AFSI PCVs integrate well into the on-going PC/Mali program.

PROGRAM MANAGEMENT (30%)

The APCD/PME coordinates the projects in his/her sector and supervises the Volunteers assigned to these projects. The APCD/PME:

1. maintains close relationship with counterparts in Malian ministries and projects-funding agencies to coordinate arrival of Volunteer with the availability of project personnel, funding, materials and services;
2. in collaboration with Malian counterparts, conducts site surveys and selects sites. Makes regular site visits to observe Volunteer performance, consult with Volunteer's Malian supervisor and client population and help to resolve problems;

N.B.: For first year PCVs, at least 3 site visits will be made.
For second year, no fewer than two.

3. provides technical advice and/or suggests technical resources in the program areas to Volunteers and their counterparts;
4. researches and writes sections of the Peace Corps/Mali annual Country Management Plan including sector development review, annual plan for each project in sector, and other sections as assigned by the Director. Assembles and provides statistics and data for preparation of budget plans, such as Volunteer numbers, pre-service training and conferences planned, planned site visits, support needs such as motorcycles and basic tools and materials, etc;
5. Plans and conducts annual in-service technical and language training for Volunteers in each project. Requests individual language tutoring services as needed;
6. counsels Volunteers on personal and adaptation problems and refers Volunteers to other counselors if needed;
7. revises Volunteer assignment description and Training Assignment Criteria sheet based upon observation and discussion of actual tasks performed by Volunteer. Revises training objectives and modifies training design and plan to reflect changes in position description and skills necessary;

8. with the Director and appropriate Malian Government officials, reviews projects and formulates policies governing them; and
9. Maintains project records including Malian Government and Volunteer reports, related technical and administrative reports; reports of site visits, etc. and writes and distributes regular project report to all participating or interested parties;

EVALUATION AND MONITORING (45%)

In close collaboration with appropriate APCDs and GRM officials:

1. organizes and participates in periodic project evaluations to determine if project goals and objectives are being met;
2. modifies project goals and objectives as appropriate; and
3. assures the maintenance of overall quality programming.

OTHER DUTIES (15%)

The APCD/PME is responsible for:

1. collection of data and developing the institutional memory of previous Volunteer efforts;
2. serving as a resource and information specialist, collecting, synthesizing and making accessible relevant information for programming, training and technical backstopping of all the PC/Mali programs;
3. developing survey methodologies so that PCVs correctly gather, analyse and disseminate information; and
4. possibly being Acting Peace Corps Director in the absence of the Country Director.

DESIRED QUALIFICATIONS

A. Education

The APCD/PME should have at least four years of university-level education or its equivalent in any discipline.

B. Prior Work Experience

The APCD/PME must have at least two years' practical experience in the field of Management and at least 2 years' practical experience in the field of programming, monitoring and education.

C. Post Entry Training

The APCD/PME will participate in at least one-month staff training in Peace Corps/Washington and in in-service training workshops as available such as training of Trainers, Training Management, and APCD programming workshops.

D. Language Proficiency

The APCD/PME must be a fluent speaker of English and French, and must have good reading and writing ability in both languages.

E. Knowledges

The APCD must have a good knowledge of:

1. Malian Five Year Development Plan
2. Community Development and Community Organization
3. outreach and education techniques and methodologies
4. the economic development needs of Mali as they relate to program sectors;
5. the political system and climate of Mali;
6. Malian and American cultures, and processes and problems of cultural adaptation.

F. Abilities and skills

The APCD/PME must be able to:

1. give technical advice;
2. plan and organize;
3. conduct individual or group practice teaching sessions;
4. converse and socialize with both educated and illiterate Malian citizens with equal ease, and gain the respect and confidence of the people for self, Volunteer, and Peace Corps; and
5. discern technical and human problems;
6. counsel Volunteers and communicate effectively writing and speaking;
7. manage people;
8. develop the team concept; and
9. gather, analyse and disseminate information.

POSITION ELEMENTS

A. Supervision Received

The APCD works with all Peace Corps Volunteers under general supervision of the Country Director and in close collaboration with other APCDs.

B. Available Guidelines

The APCD performs assignments in accordance with regulations as expressed in the Peace Corps Manual, and with training policy guidelines and directives from Peace Corps/Washington and the

Peace Corps Director/Mali. In addition, the monitoring/evaluation sections of the annual Country Management Plan, and the various Project Plans serve as ongoing reference points and guidelines for the APCD.

C. Exercise of Judgment

The APCD Programming, Monitoring and Evaluation must exercise goal judgment in all of his/her duties. Particular good judgment is required in evaluating all PC/Mali projects and the long-term goals of the PC/Mali program, and its continuing integration with GRM priorities.

POSITION DESCRIPTION

ASSOCIATE PEACE CORPS DIRECTOR/AGRICULTURE

BASIC FUNCTION OF POSITION

The Associate Peace Corps Director/Agriculture is responsible under the authority of the Country Director for the translation of requests from the Government of Mali in viable projects in the Agriculture sector and related sectors such as Community Development. He/She supervises and coordinates the projects under his/her jurisdiction to ensure the appropriateness and high quality of Volunteer assistance. In so doing, he/she serves as liaison with the Malian Government ministries using Peace Corps Volunteers and ensures that Volunteers are trained to adequately serve their needs.

MAJOR DUTIES AND RESPONSIBILITIES

The Associate Peace Corps Director/Agriculture (APCD/Ag) manages the Gardening/Agriculture projects, and supervises an average of 30 Peace Corps Volunteers assigned to at least four departments or agencies in two ministries.

A. Program Development (30%)

The APCD/Agriculture in collaboration with the APCD/Programming, Monitoring and Evaluation maintains close and regular contact with counterpart in Malian government ministries by visits, phone, meetings, and correspondence and reports and;

1. explores new areas of Peace Corps involvement based on Malian government needs and development goals;
2. reviews and evaluates requests for Volunteers based on Peace Corps programming criteria;
3. evaluates the technical viability of proposed projects and/or Volunteer assignments calling upon expert assistance when needed;
4. recommends acceptance or decline of request to Director;
5. writes Project Plans, when appropriate, and writes Volunteer Position Descriptions;
6. selects appropriate skill profile and writes Trainee Assignment Criteria sheets to request recruitment of Volunteers; and

7. identifies the skills and skill levels necessary for the performance of the Volunteer Assignments and collaborates with the Training Officer to design and plan training and establish training objectives to ensure attainment adequate levels in all skills.

B. Program Management (60%)

The APCD/Agriculture coordinates the projects in his/her sector and supervises the Volunteers assigned to these projects. The APCD/Agriculture:

1. maintains close relationship with counterparts in Malian ministries and project funding agencies to coordinate arrival of Volunteer with the availability of project personnel, funding, materials, and services;
2. in collaboration with Malian counterparts, conducts site surveys and selects sites. Makes regular site visits to observe Volunteer performance, and consult with Volunteer's Malian supervisor and client population and help to resolve problems;

N.B.: For first year PCVs, at least 3 site visits will be made.
For second year, no fewer than two.

3. provides technical advice and/or suggests technical resources in the area of Agriculture to Volunteers and their counterparts;
4. researches and writes sections of the Peace Corps/Mali annual Country Management Plan including agriculture sector development review, annual plan for each project in sector, and other sections as assigned by the Director. Assembles and provides statistics and data for preparation of budget plans, such as Volunteer numbers, pre-service and in-service training and conferences planned, planned site visits, support needs such as motorcycles and basic tools and materials, etc.
5. plans and conducts annual in-service technical and language training for Volunteers in each project. Requests individual language tutoring services as needed;
6. revises Volunteer assignment descriptions and Trainee Assignment Criteria sheets based upon observation and discussion of actual tasks performed by Volunteer. Revises training objectives and modifies training design and plan. to reflect changes in position description and skills necessary;
7. counsels Volunteers on personal and adaptation problems and refers Volunteers to other counselors if needed;
8. with the Director and appropriate Malian Government officials, reviews projects and formulates policies governing them;

9. maintains project records including Malian government and Volunteer reports, related technical and administrative reports, reports of site visits, etc. and writes and distributes regular project reports to all participating or interested parties; and
10. organizes and participates in periodic evaluations to determine if project goals and objectives are being met.

C. Other Duties (10%)

The APCD/Agriculture performs other duties as assigned by the Director.

DESIRED QUALIFICATIONS

A. Education

The APCD/Agriculture should have at least four years of university level education in agriculture or its equivalent in any related discipline. Successful completion of short courses and/or training programs in areas directly related to the horticulture sector is highly desirable.

B. Prior Work Experience

The APCD/Agriculture must have at least two years practical experience in the field of agriculture. This experience may be as a farmer and/or gardner, and as a raiser of small animals. The experience may also be as a rural extension worker.

C. Post Entry Training

The APCD/Agriculture will participate in in-service training workshops as available such as Training of Trainers, Training Management, and APCD Programming Workshops.

D. Language Proficiency

The APCD/Agriculture must be a fluent speaker of English and French, and must have good reading and writing ability in both languages.

E. Knowledges

The APCD/Agriculture must have a good knowledge of:

1. Malian Five Year Development Plan;
2. crop rotation, crop diseases, and the use of fertilizers and pesticides;
3. animal traction and basic animal husbandry, including diseases nutrition, handling, and the basics of veterinary care, rabbits, and cattle;

4. traditional Malian agricultural practices and their social, economic, and political implications;
5. cultural methods for Malian crop species;
6. marketing of agricultural produce;
7. appropriate technology devices such as simple solar dryers, alternative storage systems;
8. community development and community organization;
9. the economic development needs of Mali as they relate to agriculture and related sectors;
10. the political system and climate of Mali; and
11. training.

F. Abilities and Skills

The APCD/Agriculture must be able to:

1. give technical advice;
2. plan and organize;
3. conduct individual or group practice teaching sessions;
4. converse and socialize with both educated and illiterate Malian citizens with equal ease, and gain the respect and confidence for the people for self, Volunteer, and Peace Corps; and
5. discern technical and human problems; and
6. counsel Volunteers, and communicate effectively writing and speaking.

POSITION ELEMENTS

A. Supervision Received

The APCD/Agriculture works under the general supervision of and in close collaboration with the Director. Assignments are performed with a minimum of guidance and supervision. Guidance is available upon request in relation to highly complex problems.

B. Available Guidelines

The APCD/Agriculture performs duties within the guidelines of Peace Corps regulations, procedures and policies, as expressed primarily by the Peace Corps Manual, the Peace Corps Programming System Handbook, and agency and office policy statements.

C. Exercise of Judgement

The APCD/Agriculture must exercise good judgement in all duties of the position. Particular good judgement is required, however, in the performance of those duties which involve negotiations with the Malian government for the provision of Volunteers and associated services, or the provision of support to Peace Corps Volunteers such as housing.

POSITION DESCRIPTION

ASSOCIATE PEACE CORPS DIRECTOR/FORESTRY AND SOIL CONSERVATION

BASIC FUNCTION OF POSITION

The Associate Peace Corps Director/Forestry and Soil Conservation is responsible under the authority of the Country Director for the translation of requests from the Government of Mali into viable projects in the Forestry sector and related areas such as Soil Conservation and Improved Woodstoves. He/She supervises and coordinates the projects under his/her jurisdiction to ensure the appropriateness and high quality of Volunteer assistance. In so doing, he/she serves as liaison with the Malian Government ministries using Peace Corps Volunteers and ensures that Volunteers are trained to adequately serve their needs.

MAJOR DUTIES AND RESPONSIBILITIES

The Associate Peace Corps Director/Forestry and Soil Conservation manages the Forestry, Improved Woodstoves, and Soil Conservation projects, and supervises Peace Corps Volunteers assigned to at least four departments or agencies in two ministries.

A. Program Development (30%)

The APCD/Forestry and Soil Conservation, in collaboration with the APCD/Programming, maintains close and regular contact with counterparts in Malian government ministries by visits, phone, meetings, correspondence and reports; and

1. explores new areas of Peace Corps involvement based on Malian government needs and development goals;
2. reviews and evaluates requests for Volunteers based on Peace Corps programming criteria;
3. evaluates the technical viability of proposed projects and/or Volunteer assignments calling upon expert assistance when needed;
4. recommends acceptance or decline of request to Director;
5. writes Project Plan, when appropriate, and writes Volunteer Position Descriptions;
6. selects appropriate skill profile and writes Trainee Assignment Criteria sheet to request recruitment of Volunteer;

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7. identifies the skills and skill levels necessary for the performance of the Volunteer Assignment and collaborates with the Training Officer to design and plan training and establish training objectives to ensure attainment adequate levels in all skills; and
8. identifies potential areas of Peace Corps/USAID collaboration and advises and assists USAID Program Officers in planning for Peace Corps inputs to projects.

B. Program Management (60%)

The APCD/Forestry and Soil Conservation coordinates the projects in his/her sector and supervises the Volunteers assigned to these projects. He/She

1. maintains close relationship with counterparts in Malian ministries and project funding agencies to coordinate arrival of Volunteer with the availability of project personnel, funding, materials, and services;
2. in collaboration with Malian counterparts, conducts site surveys and selects sites. Makes regular site visits to observe Volunteer performance, and consult with Volunteer's Malian supervisor and client population and help to resolve problems;

N.B.: For first year PCVs, at least 3 site visits will be made.
For second year, no fewer than two.

3. provides technical advice and/or suggests technical resources in the areas of Forestry, Improved Woodstoves and Soil Conservation to Volunteers and their counterparts;
4. researches and writes sections of the Peace Corps Mali annual Country Management Plan including forestry sector development review, annual plan for each project in sector, and other sections as assigned by the Director. Assembles and provides statistics and data for preparation of budget plans, such as Volunteer numbers, pre-service and in-service training and conferences planned, planned site visits, support needs such as motorcycles and basic tools and materials, etc.
5. plans and conducts annual in-service technical and language training for Volunteers in each project. Requests individual language tutoring services as needed;
6. revises Volunteer assignment description and Trainee Assignment Criteria sheet based upon observation and discussion of actual tasks performed by Volunteer. Revises training objectives and modifies training design and plan to reflect changes in position description and skills necessary;
7. counsels Volunteers on personal and adaptation problems and refers Volunteers to other counselors if needed;

8. with the Director and appropriate Malian Government officials, reviews projects and formulates policies governing them;
9. maintains project records including Malian government and Volunteer reports, related technical and administrative reports, reports of site visits, etc. and writes and distributes regular project reports to all participating or interested parties;
10. organizes and participates in periodic project evaluations to determine if project goals and objectives are being met; and
11. supervises Peace Corps participation in USAID-funded projects.

C. Other Duties (10%)

The APCD/Forestry and Soil Conservation performs other duties as assigned by the Director. In the absence of the Director, the APCD/Forestry and Soil Conservation may be designated Acting Peace Corps Director.

DESIRED QUALIFICATIONS

A. Education

The APCD/Forestry and Soil Conservation should have at least four years of university level education or its equivalent in forestry or any related discipline. Successful completion of short courses and/or training programs in areas directly related to the forestry sector is highly desirable.

B. Prior Work Experience

The APCD/Forestry and Soil Conservation must have at least two years practical experience in the field of forestry or soil conservation. The experience may be as a rural extension worker.

C. Post Entry Training

The APCD/Forestry and Soil Conservation will participate in at least one-month staff training in Peace Corps/Washington and in-service training workshops as available such as Training of Trainers, Training Management, and APCD Programming Workshops.

D. Language Proficiency

The APCD/Forestry and Soil Conservation must be a fluent speaker of English and French, and must have good reading and writing ability in both languages.

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E. Knowledges

The APCD/Forestry and Soil Conservation must have a good knowledge of:

1. Malian Five Year Development Plan;
2. traditional Malian agroforestry practices and their social, economic and political implications;
3. silvicultural requirements for indigenous and exotic tree and shrub species found in Mali;
4. soil conservation techniques including: windbreaks, establishment of berms on contour lines, terracing, etc.
5. simple appropriate technology devices such as improved charcoal and wood stoves, etc.;
6. community development and community organization;
7. the economic development needs of Mali as they relate to forestry and related sectors;
8. the political system and climate of Mali;
9. training.

F. Abilities and Skills

The APCD/Forestry and Soil Conservation must be able to:

1. give technical advice;
2. plan and organize;
3. conduct individual or group practice teaching sessions;
4. converse and socialize with both educated and illiterate Malian citizens with equal ease, and gain the respect and confidence for the people for self, Volunteer, and Peace Corps; and
5. discern technical and human problems; and
6. counsel Volunteers, and communicate effectively writing and speaking.

POSITION ELEMENTS

A. Supervision Received

The APCD/Forestry and Soil Conservation works under the general supervision of and in close collaboration with the Director. Assignments are performed with a minimum of guidance and supervision. Guidance is available upon request in relation to highly complex problems.

B. Available Guidelines

The APCD/Forestry and Soil Conservation performs duties within the guidelines of Peace Corps regulations, procedures and policies, as expressed primarily by the Peace Corps Manual, the Peace Corps Programming System Handbook, and agency and office policy statements.

C. Exercise of Judgement

The PACD/Forestry and Soil Conservation must exercise good judgement in all duties of the position. Particular good judgement is required, however, in the performance of those duties which involve negotiations with the Malian government for the provision of Volunteers and associated services, or the provision of support to Peace Corps Volunteers such as housing.

POSITION DESCRIPTION

ASSOCIATE PEACE CORPS DIRECTOR/WATER RESOURCE MANAGEMENT

BASIC FUNCTION OF POSITION

The Associate Peace Corps Director/Water Resource Management is responsible under the authority of the Country Director for the translation of requests from the Government of Mali in viable projects in the Water Resource sector. He/She supervises and coordinates the projects under his/her jurisdiction to ensure the appropriateness and high quality of Volunteer assistance. In so doing, he/she serves as liaison with the Malian Government ministries using Peace Corps Volunteers and ensures that Volunteers are trained to adequately serve their needs.

MAJOR DUTIES AND RESPONSIBILITIES

The Associate Peace Corps Director/Water Resource Management (APCD/WRM) manages the Water Resource Management projects, and supervises an average of twenty-five Peace Corps Volunteers assigned to at least six departments or agencies.

A. Program Development (30%)

The APCD/Water Resource Management in collaboration with the APCD Programming maintains close and regular contact with counterparts in Malian government ministries by visits, phone, meetings, and correspondence and reports, and

1. explores new areas of Peace Corps involvement based on Malian government needs and development goals;
2. reviews and evaluates requests for Volunteers based on Peace Corps programming criteria;
3. evaluates the technical viability of proposed projects and/or Volunteer assignments calling upon expert assistance when needed;
4. recommends acceptance or decline of request to Director;
5. writes Project Plans, when appropriate, and writes Volunteer Position Descriptions;
6. selects appropriate skill profile and writes Trainee Assignment Criteria sheets to requests recruitment of Volunteers; and

7. identifies the skills and skill levels necessary for the performance of the Volunteer Assignment and collaborates with the Training Officer to design and plan training and establish training objectives to ensure attainment adequate levels in all skills.

B. Program Management (60%)

The APCD/Water Resource Management coordinates the projects in his/her sector and supervises the Volunteers assigned to these projects.
The APCD/Water Resource Management :

1. maintains close relationship with counterparts in Malian ministries and project funding agencies to coordinate arrival of Volunteer with the availability of project personnel funding, materials, and services;
2. in collaboration with Malian counterparts, conducts site surveys and selects sites. Makes regular site visits to observe Volunteer performance, and consult with Volunteer's Malian supervisor and client population and help to resolve problems;

N.B.: For first year PCVs, at least 3 site visits will be made.
For second year, no fewer than two.

3. provides technical advice and/or suggests technical resources in the area of Water Resources to Volunteers and their counterparts;
4. researches and writes sections of the Peace Corps Mali annual Country Management Plan including Water Resource sector development review, annual plan for each project in sector, and other sections as assigned by the Director. Assembles and provides statistics and data for preparation of budget plans, such as Volunteer numbers, pre-service and in-service training and conferences planned, planned site visits, support needs such as motorcycles and basic tools and materials, etc.
5. plans and conducts annual in-service technical and language training for Volunteers in each project. Requests individual language tutoring services as needed;
6. revises Volunteer assignment descriptions and Trainee Assignment Criteria sheets based upon observation and discussion of actual tasks performed by Volunteer. Revises training objectives and modifies training designs and plan to reflect changes in position description and skills necessary;
7. counsels Volunteers on personal and adaptation problems and refers Volunteers to other counselors if needed;

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8. with the Director and appropriate Malian Government officials, reviews projects and formulates policies governing them;
9. maintains project records including Malian government and Volunteer reports, related technical and administrative reports, reports of site visits, etc. and writes and distributes regular project reports to all participating or interested parties; and
10. organizes and participates in periodic evaluations to determine if project goals and objectives are being met.

C. Other Duties (10%)

The APCD/Water Resource Management performs other duties as assigned by the Director. In the absence of the Director, the APCD/WRM may be designated Acting Peace Corps Director.

DESIRED QUALIFICATIONS

A. Education

The APCD should have at least four years of university level education or its equivalent in

1. Water Resources Development
2. Hydrology
3. Civil or Agricultural Engineering

or its equivalent in any discipline. Experience in carpentry, masonry, mechanics and/or appropriate technology is highly desirable.

B. Prior Work Experience

The APCD/Water Resource Management must have at least two years practical experience in the field of water resources.

C. Post Entry Training

The APCD/Water Resource Management will participate in at least one-month staff training in Peace Corps/Washington and in-service training workshops as available such as Training of Trainers, Training Management, and APCD Programming Workshops.

D. Language Proficiency

The APCD/Water Resource Management must be fluent speaker of English and French, and must have good reading and writing ability in both languages.

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E. Knowledges

The APCD/Water Resource Management must have a good knowledge of:

1. Malian Five Year Development Plan;
2. traditional Malian agricultural practices and their social, economic, and political implications;
3. irrigation requirements of local crops;
4. irrigation system design and management;
5. wells construction, improvement and maintenance;
6. rural works development, improvement and maintenance
7. water use and sanitation;
8. simple appropriate technology devices such as improved water lifting devices, pumps, etc.
9. community development and community organization;
10. the economic development needs of Mali as they relate to agriculture and related sectors;
11. the political system and climate of Mali; and
12. training.

F. Abilities and Skills

The APCD/Water Resource Management must be able to:

1. give technical advice;
2. plan and organize;
3. conduct individual or group practice teaching sessions;
4. converse and socialize with both educated and illiterate Malian citizens with equal ease, and gain the respect and confidence for the people for self, Volunteer, and Peace Corps; and
5. discern technical and human problems; and
6. counsel Volunteers, and communicate effectively writing and speaking.

POSITION ELEMENTS

A. Supervision Received

The APCD/Water Resource Management works under the general supervision of and in close collaboration with the Director. Assignments are performed with a minimum of guidance and supervision. Guidance is available upon request in relation to highly complex problems.

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B. Available Guidelines

The APCD/Water Resource Management performs duties within the guidelines of Peace Corps regulations, procedures and policies, as expressed primarily by the Peace Corps Manual, the Peace Corps Programming System Handbook, and agency and office policy statements.

C. Exercise of Judgement

The APCD/Water Resource Management must exercise good judgement in all duties of the position. Particular good judgement is required, however, in the performance of those duties which involve negotiations with the Malian government for the provision of Volunteers and associated services, or the provision of support to Peace Corps Volunteers such as housing.

POSITION DESCRIPTION

ASSOCIATE PEACE CORPS DIRECTOR/TRAINING

The Associate Peace Corps Director for Training is responsible under the authority of the Country Director for the organization and direction of all Peace Corps Mali training including pre-service and in-service training and conferences and workshops. In so doing, she/he serves as liaison with the Malian Government ministries utilizing Peace Corps Volunteer and ensures that Volunteers are trained to adequately serve their needs and to fulfil their tasks.

MAJOR DUTIES AND RESPONSIBILITIES

A. Training Preparation (60%)

The APCD/Training :

1. collaborates with sector APCDs in the scheduling and the design of all training relating to their programs;
2. collaborates with the sector APCDs in the elaboration of detailed training plans, training budgets, and needs assessments for support and materials;
3. maintains a calendar and flow chart of all Peace Corps Mali training events;
4. with PC staff, selects and arranges for rental of training sites and for the necessary on-site logistical support (housing, classroom, other work areas, kitchen, dining area, water supply, sanitation facilities, cooking, washing, and janitorial services, etc.
5. conducts pre-training site visits;
6. arranges for prior and on-going inspection of training site by the Peace Corps Medical officer and is responsible for ensuring the implementation of all recommendations;
7. develop and modify training materials for PSTs and ISTs in language, cross-cultural and technical areas;
8. maintains up-to-date files of all Peace Corps Mali training designs, plans, and reports, evaluations, and other documents;
9. ensures that all cables and correspondence relating to training are answered in a timely fashion (two working days); and
10. ensures integration of in-service training with SST and/or ICT.

B. Training Management (30%)

The APCD/Training supervises, monitors, and evaluates all Peace Corps Mali training. The APCD/Training:

1. visits each training site at least once every week, conferring with the Project Director and Coordinators;
2. monitors ongoing logistical operations for smooth operation, especially quality and cleanliness of food preparation and sanitary facilities, and resolves any personnel problems;
3. observes language classes, technical training sessions, and cross-cultural sessions, consults with sector coordinators, and orders any modifications/adjustments that are warranted;
4. monitors vehicle use and condition to ensure regular repair and maintenance in safe operating condition;
5. counsels staff as needed;
6. interviews each trainee at least once and counsels on an as-needed basis;
7. when possible participates in and/or facilitates staff meetings and trainees evaluation sessions;
8. evaluates performance of each training staff member, and
9. organizes and participates in evaluation of training program by Peace Corps Mali staff, training staff, trainees, and when possible outside observers, including all major aspects of the training, i.e., design and plan, site, staff, food, housing, etc., and
10. monitors selection and performance of trainers.
11. is responsible for arranging for training of trainers.

C. Liaison (5%)

1. maintains regular contact with the Regional Training Resource Office, the Regional Training Officer, the agency programming and training coordination office, and other training support offices;
2. makes recommendations as to the use of pre-arrival training such as CAST or CREST for Peace Corps Mali trainees, and recommends input into them and adjustments to in-country training in order to harmonize their activities, avoid duplications and oversights, and insure continuity from CAST/CREST to SST and/or ICT; and
3. requests consultant assistance as required.

D. Other Duties (5%)

1. advises the Director and APCDs on policy issues and problems relating to Peace Corps Mali training in general;
2. participates in the preparation of the annual Country Management Plan and budget by providing information and data on planned training and estimated costs, and drafting narrative sections expressing Peace Corps/Mali's training philosophy; and
3. The APCD/Training performs other duties as assigned by the Country Director.

DESIRED QUALIFICATIONS

A. Education

The APCD/Training should have at least four years of university-level education or its equivalent in any discipline.

B. Prior Work Experience

The APCD/Training must have at least two years practical experience in the field of training.

C. Post Entry Training

The APCD/Training will participate in in-service training workshops as available such as Training of Trainers and Training Management.

D. Language Proficiency

The APCD/Training must be a fluent speaker of English and French , and must have good reading and writing ability in both languages.

E. Knowledges

The APCD/Training must have a good knowledge of :

- 1) Malian Five Year Development Plan
- 2) Community Development and Community Organization
- 3) Tropical diseases sanitation, and hygiene
- 4) outreach and education techniques and methodologies
- 5) the political system and climate of Mali
- 6) practical and theoretical understanding of the adult learning process as distinguished from child learning
- 7) have thorough knowledge of Malian and American cultures and processes and problems of cultural adaptation.

F. Abilities and Skills

The APCD/Training must be able to :

1. give technical advice;
2. plan and organize ;
3. conduct individual or group practice teaching sessions;
4. converse and socialize with both educated and illiterate Malian citizens with equal ease, and gain the respect and confidence for the people for self, Volunteer, and Peace Corps.
5. discern technical and human problems;
6. counsel Volunteers, and communicate effectively writing and speaking; and
7. manage people.

POSITION ELEMENTS

A. Available Guidelines

The APCD/Training performs assignments in accordance with regulations as expressed in the Peace Corps Manual, and with training policy guidelines and directives from Peace Corps/Washington and the Peace Corps Director/Mali. In addition, the training sections of the annual Country Management Plan, and the various training Designs and Plans serves as ongoing reference points and guidelines for the APCD/Training.

B. Exercise of Judgment

Training is a vital, primary element of Peace Corps Mali's activities and the success of training efforts hinges to a great extent on the exercise of good judgment by the APCD/Training. Errors in judgment in the selection and preparation of sites of personnel, and of support or lack of prompt and decisive management decisions in regard in any one of these elements or a part of one, could be sufficient to determine the success of what was otherwise a well-prepared and well-run program.

C. Authority to Make Commitments

The Peace Corps Director delegates to the APCD/Training the authority to select and contract both sites and professional and non-professional personnel for Peace Corps Mali training programs. (The total number of personnel may reach forty persons per site).

D. Nature, Level, and Purpose of Contacts

In preparing for and managing Peace Corps training program, the APCD/ Training has contacts with officers of various Malian government ministries and their staffs, with merchants, suppliers, and service contractors, and with department level officials of ministry offices in Mali.

E. Supervision Exercised

The APCD/Training supervises as many as thirty to forty training staff members per site, including both Peace Corps Volunteers and contract staff in both professional and non-professional positions.

POSITION DESCRIPTION

ASSOCIATE PEACE CORPS DIRECTOR/REGIONAL DEVELOPMENT

The Associate Peace Corps Director for Regional Development is responsible under the authority of the Country Director for the organization and direction of all Peace Corps/Mali Programming in the Diré area including pré-service and in-service training. She/he is responsible for the translation of requests from the Government of Mali in viable projects in the Diré Circle and coordinates the projects under his/her jurisdiction to ensure the appropriateness and high quality of Volunteer assistance. In so doing, she/he serves as liaison with the Malian Government ministries utilizing Peace Corps Volunteers and ensures that Volunteers are trained to adequately served their needs.

MAJOR DUTIES AND RESPONSIBILITIES

- A. Establishment of the AFSI program in the Diré Circle
(Timbuctou Region) (100% for first 6 months, then 50%).

The APCD/Regional Development will

1. refine the project plan proposed by the AFSI design team;
2. identify suitable Malian agencies for the placement of the Volunteers, revise their job descriptions in conjunction with the Malian agencies and define the Volunteer tasks and suitable numbers of Volunteers for C Y 86;
3. initiate and develop links with the governor, the ministries and services in the region, the local authorities and administration including the Development Committee, PVOs such as Africare and other development agencies working in the region;
4. arrange for protocol agreements with the government agencies selected for initial Volunteer placement, defining roles and responsibilities of PC/Mali and the agencies with respect to lines of authority and supervision, job descriptions, support provided and reporting requirements;
5. in collaboration with Malian counterparts, conduct site surveys and select suitable sites for Volunteer placement;
6. in conjunction with the PSC for alternative water lifting devices and the staff of the agriculture research station and Africare, refine the tasks for the two irrigation technology Volunteers based at the Agriculture research station and the field based water supply Volunteers;
7. in conjunction with the APCD/Water Resource Management and the PSC for alternative water lifting devices, budget and arrange for the procurement of a number of lift devices for testing at the Agriculture Research Station and in the field;

8. budget for and arrange for program support in Diré, including establishment of necessary office space, transportation for both Volunteers and Diré staff, medical support, communication system, technical resources, and financial requirements of Volunteers and staff;
 9. collaborate with the PSC language coordinator in developing language and cross-cultural training materials; and
 10. in connection with the APCD/training establish the Diré portion of the ICT.
- B. Expand PC/Mali's intervention in the Diré Circle and the Region of Timbuctou (50%) and program management of Diré program (50%)
1. establish and assist in ICT portion of Diré Volunteers;
 2. assist with the installation of the PCVs in the Diré Circle;
 3. provide logistical, technical and moral support for Volunteers;
 4. identify and develop funding sources in the area for small projects and collaborate projects with other agencies in the area; and
 5. develop programs in related sectors such as education and health;
 6. explore the possibility for expanding the Peace Corps Program into other Circles in the regions;
 7. monitor and evaluate the Diré program in conjunction with APCDs and PSCs, to determine future directions and requirements;
 8. maintain close relationship with counterparts in Malian ministries and project funding agencies;
 9. conduct regular site visits to observe Volunteer performance, and consult with Volunteers' Malian supervisors and client populations and help to resolve problems;

N.B.: For first year PCVs, at least 8 site visits will be made, for second year PCVs, no fewer than four

10. counsels Volunteers on personal and adaptation problems and refers Volunteers to other counselors if needed; and
11. researches and writes sections of the Peace Corps/Mali annual Country Management Plan. Assembles and provides statistics and data for preparation of budget plans, such as Volunteer numbers, pre-service and in-service training and conferences planned, planned site visits, support needs such as motorcycles and basic tools and materials, etc.

C. Other Duties

The APCD Regional Development performs other duties as assigned by the Director.

DESIRED QUALIFICATIONS

A. Education

The APCD/Regional Development should have at least four years of university-level education or its equivalent in any discipline.

B. Prior Work Experience

The APCD/Regional Development must have at least two years practical experience in the Sahel and at least 2 years practical experience in the field Program development/management. PC experience is highly desirable, a 2nd tour APCD would be preferred.

C. Post Entry Training

The APCD/Regional Development will participate in at least one-month staff training in Peace Corps/Washington and in in-service training workshops as available such as Training or Trainers, Training Management, and APCD Programming Workshops.

D. Language Proficiency

The APCD/Regional Development must be a fluent speaker of English and French, and must have good reading and writing ability in both languages. At least FSI 3.

E. Knowledges

The APCD/Regional Development must have a good knowledge of:

1. Malian Five Year Development Plan
2. Community Development and Community Organization
3. tropical diseases sanitation, and hygiene
4. outreach and education techniques and methodologies
5. the economic development needs of Mali as they relate to agriculture and related sectors, and
6. the political system and climate of Mali
7. practical and theoretical understanding of the adult learning process as distinguished from child learning.
8. have thorough knowledge of Malian and American cultures and processes and problems of cultural adaptation.

F. Abilities and skills

The APCD/Regional Development must be able to:

1. give technical advice;
2. plan and organize;
3. conduct individual or group practice teaching sessions;
4. converse and socialize with both education and illiterate Malian citizens with equal ease, and gain the respect and confidence for the people for self, Volunteer, and Peace Corps; and

5. discern technical + human problems; and
6. counsel Volunteers and communicate effectively writing and speaking;
7. manage people, budget and allocate scarce resources effectively;
8. good inter-personal skills ;
9. proven ability to function in a harsh remote posting.

PERSONAL SERVICE CONTRACTOR POSITION DESCRIPTION

Alternative Water Lifting Systems

The alternative water lifting systems (AWLS) personal service contractor is under the authority of the Country Director for recommending AWLS to be tested by Peace Corps Volunteers assigned in the Circle of Dire, Timbouctu Region in Mali. The PSC will also design trials to be implemented by Peace Corps Volunteers and their Malian counterparts to test the efficiencies of AWLS in the Dire Circle. He/She will also work with the APCDs for Training, Water Resource Management and Regional Development to design a training program to skill-train PCVs in the installation, experimentation, maintenance and testing of AWLS.

The PSC will assist in the procurement and testing of AWLS, where feasible given the time frame of his/her contract. He/She will prepare a manual on the features and uses of the recommended equipment that can be easily translated into French and local languages.

Major Duties and Responsibilities

The contractor should be recruited and expected to begin work by November 1, 1985. The expected length of the contract is three months. The PSC will work in close collaboration and under the direction of the Dire-based APCD, using office and support facilities provided by the latter. The contractor will also work in collaboration with the APCDs for Training and Water Resource Management in preparing manuals and developing the training programs. All manuals and other related materials are to be delivered by the end of contract, January 31, 1987.

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Qualifications

A. Education:

The PSC should have at least a B.S. and preferably an advanced degree in civil, agricultural or mechanical engineering. Equivalent experience beyond the B.S. level is acceptable. A French-speaking person is preferred.

B. Prior work experience:

The PSC must have had at least two years' experience in irrigation and water resource management at the field level, preferably in the use of manual and animal traction for water lifting.

The PSC should be familiar with locations where manual and animal lifts are used for irrigation purposes and locations where the above mentioned equipment is manufactured.

Knowledge of Peace Corps and Volunteers' work in Agricultural and Rural Development projects in Africa is highly desirable. Knowledge of Mali and/or other Sahelian countries, particularly having similar problems with irrigation and types of crops grown, is also desired.

PERSONAL SERVICE CONTRACTOR POSITION DESCRIPTION
CROSS-CULTURAL AND LANGUAGE

The cross-cultural and language personal service contractor is under the authority of the Country Director for the preparation of ethnographic and linguistic materials to be used for in-country training of new Volunteers to be assigned to the Circle of Dire, Timbouctou Region in Mali. He/She is responsible for conducting all necessary research on the cultures, forms of social organizations and languages of two major groups in the region: the Songhai and Tamachek. In addition, the contractor will write manuals to be used for training new volunteers about the respective cultures, and linguistic materials for a twelve week in-country language program to prepare Volunteers in basic communicative skills when they enter their assigned village posts.

Most Volunteers will require stronger abilities in Songhai than Tamachek, but some capacity with the latter language will be required. Thus, the major language materials to be developed will be in Songhai, with supplementary lessons in Tamachek. It is to be anticipated that once Volunteers are assigned to the area they will be able to use the Tamachek lessons in concert with language informants in the area when appropriate.

The language materials will include a grammar and lexicon, including the preparation of language audio-tapes for instruction and review purposes. The contractor will emphasize vocabularies appropriate to the types of work volunteers will be conducting in the region, viz., technical vocabularies relevant to irrigation systems and well construction, agriculture and gardening, and forestry/soil conservation.

The in-country language manuals and supportive materials are to be designed for a twelve-week program. Volunteers will

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work with native speakers who have been trained at least minimally as language informants/instructors. The latter are school teachers in the local area, who participate in Peace Corps training programs during their vacation period. Language lesson materials are to be developed for sessions with these informants, and additional supplementary lessons are to be prepared for Volunteers to use with other language informants recruited by them at their village sites.

Major Duties and Responsibilities

The contractor should be recruited and be expected to begin work by November 1, 1985. Because the contractor is expected to conduct ethnographic and linguistic work in two cultures, this will be a three to four month assignment. The contractor will work in close collaboration and under the direction of the Dire-based Associate Peace Corps Director, using office and support facilities provided by the latter. As Songhai is the primary language to be used by Volunteers in the area, the contractor is expected to prepare those materials by the third month of assignment. Work on the Tamachek can begin during the third month and be completed by the end of the fourth. All manuals, audio-tapes and supportive materials are to be completed and ready for Peace Corps/Washington duplication by May 1, 1986.

Qualifications

A. Education

The PSC should have at least a M.A. and preferably a Ph.D. in linguistics or a linguistic-related discipline, such as anthropological linguistics, and experience working at least one African language. Equivalent experience beyond the bachelorate level is acceptable.

B. Prior Work Experience

The PSC must have conducted anthropological and linguistic

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research, preferably in an African context. The contractor must also have designed a language instruction program, and preferably have knowledge of Peace Corps type of training.

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ANNEX: RECOMMENDATIONS FOR TRAINING

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STATEMENT OF WORK

In-Country Technical Training Coordinators

Three types of technical coordinators are required for the pre-service food systems training: Forestry/Soil Conservation, Gardening, and Water Supply. Their basic duties and tasks follow; each coordinator will work closely with the APCD Training and the APCD in his/her technical area.

As one of Peace Corps Mali's 1986 pre-service technical coordinator from June—October 1986, the Coordinator will be responsible for the design, implementation and evaluation of a technical training component. The Coordinator will integrate his technical area into the overall training design, working closely with the cross-cultural, language, community development and other technical coordinators. The coordinator will be responsible to the Project Director. Pre-service training begins o/a July 8th and end o/a Sept. 30, 1986.

SPECIFIC DUTIES AND TASKS.

A. Administrative Management.

1. Design, develop and provide the Project Director with a budget plan of expenditures deemed appropriate for a technical training program (prior to the start of training).
2. Direct planning, delivery and evaluation of one of Peace Corps Mali's technical training programs, collaborating closely with all other technical coordinators and the APCD training, and integrating one component with another based on the overall objectives of the training program.

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B. Training Design, Delivery and Evaluation.

1. Revise and implement a relevant technical training curriculum following the training design format used by Peace Corps/Mali. This should be done in close concert with the other training coordinators; should follow up on SST; and should reflect the input of PCVs in the field, the Malian Services' regional and national level agents, Operation Rice Ségou staff, Operation Upper Niger personnel, USAID/Mali and other relevant parties.
2. Upgrade existing and develop new technical training materials with the above-mentioned parties, including texts, charts, handouts, visual aids and flow charts.
3. Arrange for guest speakers, field trips, demonstrations, and the region-specific training. For this the Coordinator will be expected to use PCVs, Malian Government agents, in-country technical assistants and villagers when applicable in collaboration with the Project Director and APCD for the specific technical area.
4. Meet regularly with the Project Director to evaluate the progress of training. This will include training strategies, evaluation tools, recommendations for improvement, trainee performance and morale. Attendance at all train-staff meetings is mandatory.
5. Monitor learning activities and provide feedback to each trainee at regularly scheduled intervals.
6. Provide documentation which supports a decision to recommend whether or not each trainee, depending upon overall adjustments and accomplishments, becomes a Peace Corps Volunteer.

7. Submit a final revised technical training curriculum with all attached handouts to the Project Director. Submit a mid-way and final evaluation report outlining specific recommendations for Peace Corps Mali to the Project Director.

ANNEX: DEBRIEFINGS

COMPTE RENDU DE LA MISSION DE L'EQUIPE DU CORPS DE LA PAIX

L'Equipe de Conception de l'Initiative de Systèmes Alimentaires pour l'Afrique (ISAA) en collaboration avec le Corps de la Paix/Mali propose en ce moment le placement d'environ 35 Volontaires supplémentaires dans les programmes en cours ou à venir au niveau de l'OHV, l'ORS et des régions de Diré. L'Equipe a tiré du rapport proposé par l'Equipe d'Evaluation de l'ISAA en Février reconnaissant les besoins de ces régions, et elle a visité chacune d'elles afin de déterminer la viabilité des recommandations de la première équipe et planifier de nouveaux programmes en fonction.

Nous avons interviewé les Commandants et d'autres autorités politiques y compris le Gouvernement de la Région de Ségou, et nous avons eu des rencontres avec les comités de développement, des directeurs et les représentants de services gouvernementaux et para-étatiques ainsi qu'avec les représentants de diverses agences internationales de donateurs travaillant dans chacune des trois régions. Nous avons aussi interrogé les Volontaires du Corps de la Paix à Bamako et dans chacune des régions, et rendu visite à plusieurs représentants de villages dans les zones où les futurs Volontaires seront affectés.

Dans les villages, nous avons interviewé les chefs, les conseillers et les représentants de "ton" et d'autres groupes villageois en vue d'évaluer les conditions locales et obtenir une compréhension de leur priorités. De plus, nous avons visité des champs utilisés pour la production de céréales et de cultures de rente, des jardins, des sites de puits et des projets d'irrigation pour évaluer les besoins et déterminer des stratégies d'intervention appropriées pour le Corps de la Paix. Dans la plupart des cas nous avons la chance d'avoir des représentants de services gouvernementaux travaillant dans la région avec nous dans les tournées.

Après avoir mené à terme notre investigation, nous avons discuté des résultats constatés avec ces services et suggéré des régions possibles en vue d'étendre les activités du Corps de la Paix. Ensuite nous avons préparé un rapport écrit de notre travail comprenant des plans de projet, les descriptions de tâches pour les Volontaires, des analyses de tâches, des recommandations de gestion, et un plan pour les programmes de formation de l'année prochaine.

Ségou

Notre première visite eut lieu dans la région de Ségou où l'équipe passa quatre jours sur le terrain visitant dix villages et divers projets d'irrigation et de jardinage. Dans notre évaluation des meilleurs sites pour les activités du Corps de la Paix, nous avons interviewé des autorités politiques locales, l'administration de l'Opération Riz-Ségou et de l'Office du Niger. Nous sommes tombés d'accord avec la première équipe que l'Opération Riz-Ségou (ORS) continue d'être un service approprié pour la collaboration du Corps de la Paix.

Nous avons déterminé que les possibilités les plus prometteuses pour les Volontaires étaient dans les zones qui complétaient le mandat de l'ORS pour accroître la culture de céréales et la production alimentaire dans la région. Un accent égal devra être mis sur les résidents traditionnels ainsi que sur ceux qui ont émigré d'autres endroits du Mali à cause des conditions causées par la sécheresse.

Nous avons reconnu un certain nombre de projets pour aider avec le reboisement de la région, évitant de ce fait une érosion du sol inutile. Nous avons aussi noté l'importance de la continuation des efforts du Corps de la Paix dans la construction de nouveaux puits et l'amélioration de ceux déjà existants.

Nous avons déterminé que pourvue en ressources hydrauliques adéquates, la région pourrait être assez productive à la fois en céréales et produits maraîchers pour satisfaire la plupart des besoins alimentaires de la région. Nous avons évalué les programmes actuels impliqués dans l'introduction et l'entretien des moto-pompes. Nous avons déterminé que le Corps de la Paix peut faire une contribution importante par le test et l'introduction de technologies appropriées alternatives pour puiser de l'eau dans la zone, qui peuvent être utilisées par des secteurs plus grands de la population. Nous avons aussi reconnu l'importance de fournir de l'assistance à la fois aux groupes Sonraï et Tammacheks dans leurs efforts de jardinage, qui incluent des efforts de reboisement et de conservation du sol. Enfin nous avons vu l'importance d'aider dans les efforts en vue d'améliorer la production céréalière par l'amélioration des systèmes d'irrigation et d'éducation agricole.

Ainsi nous recommandons les types suivants d'affectation de Volontaires: (1) des Volontaires en technologies hydrauliques pour expérimenter et introduire des systèmes alternatifs et appropriés pour puiser l'eau et des techniques améliorées d'irrigation, (2) des Volontaires en ressource en eau pour construire de nouveaux puits et améliorer les sites existants, aussi bien que pour améliorer le travail qui s'y fait en irrigation, (3) un Volontaire en éducation agricole pour travailler avec la formation des maîtres de l'IEF, qui aidera à développer un programme, instruire les maîtres dans les méthodes améliorées de culture, et mettra en place des champs et jardins de démonstrations, et (4) des Volontaires en jardinage/sylviculture qui aideront à développer les pépinières de village, à améliorer le reboisement et à introduire d'autres techniques pour éviter l'érosion du sol. Nous prévoyons dans les années futures que le Corps de la Paix sera impliqué dans le développement agricole à travers la région de Tombouctou.

Etant donné les problèmes actuels de l'infrastructure d'irrigation dans la région, nous estimons qu'à l'heure présente la zone la plus indiquée pour l'engagement du Corps de la Paix dans la production alimentaire reside dans l'assistance aux villageois dans les projets de jardinage. Vu que des améliorations sont faites dans les systèmes d'irrigations par le GRM et les donateurs, nous prévoyons que les Volontaires du Corps de la Paix seront en mesure d'aider plus tard dans les efforts de vulgarisation pour accroître la production céréalière.

Ainsi donc, nous recommandons trois catégories de Volontaires de l'ORS: (1) Sylviculture/Conservation du Sol, (2) approvisionnement en eau--construction et amélioration de puits et (3) jardinage. Ces derniers aideront aussi avec les activités de post-récolte comprenant le marketing et l'obtention des intrants nécessaires pour les prochaines cultures. En réponse à une demande spécifique de la direction de l'ORS, nous recommandons aussi qu'un Volontaire de troisième année soit affecté aux sièges *en tant* que Coordonnateur de ressources et liaison entre l'ORS et les trois types de Volontaires sur le terrain.

Diré:

Notre seconde visite sur le terrain était dans la région de Diré, où l'équipe resta huit jours. Nous avons visité neuf villages et plusieurs camps de Tammachek dans la zone, en plus de Diré et de Bourem. Nous avons travaillé en collaboration étroite avec Activités Paysannes et Africare, et rendu visite à des représentants de l'IER et de l'IEF aussi bien qu'aux comités de développement et principaux représentants politiques dans les Cercles de Diré et Bourem. Nous avons pris acte de l'importance de l'intervention du Corps de la Paix dans la région et de la signification des efforts du GRM dans cette zone centrées sur l'important emplacement des projets pilotes dans les activités du développement.

jardinage en cours et nous avons la conviction que les Volontaires peuvent contribuer de façon significative dans ces efforts ainsi qu'à l'agrandissement des activités de jardinage à travers la région.

Ainsi donc, nous recommandons les types suivants de Volontaires pour travailler sous la supervision de l'OHV et avec les organisations villageoises: (1) sylviculture/conservation du sol; (2) jardinage et (3) construction et amélioration de puits. Tout comme la zone de l'ORS, nous prévoyons dans un futur proche l'engagement du Corps de la Paix dans l'amélioration de la production céréalière. En attendant cela, nous recommandons que le Corps de la Paix renforce ses actions de jardinage et de conservation du sol/sylviculture en vue d'améliorer en même temps la production alimentaire et freiner l'érosion du sol.

Concept d'Equipe:

Dans chacune des régions où le Corps de la Paix placera des Volontaires nous recommandons qu'ils soient considérés comme membres d'une équipe. Chacune des zones d'intervention complète l'autre et dans beaucoup de cas elles sont mutuellement interdépendantes. Par exemple, les Volontaires en ressources hydrauliques travailleront en collaboration avec ceux du jardinage et de reboisement étant donné que l'eau constitue une variable commune pour la production accrue. De la même façon, des Volontaires de puits avec leurs homologues et les villageois peuvent évaluer les besoins en jardinage, sylviculture et actions de conservation du sol ayant trait aux affectations des autres Volontaires dans leur zone. Nous considérons aussi que les expérimentations de systèmes alternatifs pour puiser l'eau à mener à Diré sont relatifs à tous les Volontaires en ressources hydrauliques dans les autres régions.

A cause de ce concept d'équipe nous recommandons que les selections de sites soient faites de sorte que les Volontaires ayant des aptitudes complémentaires soient à des proximités relativement courte l'un de l'autre et que ces Volontaires se rencontrent sur une base régulière pour discuter des projets conjoints entre eux et leurs homologues

OHV:

Notre troisième visite sur le terrain fut dans la zone OHV, où l'Equipe visita douze villages, divers sites d'irrigation, de projets de démonstration de jardin, et elle a rencontré de nombreux agents administratifs et sur le terrain de l'OHV. Nous sommes tombés d'accord avec l'Equipe d'Evaluation que l'OHV est excellente organisation pour la collaboration continue du Corps de la Paix. Cependant, nous n'estimons pas qu'en ce moment qu'il est convenable pour les Volontaires d'être affectés aux sièges, étant donné qu'ils peuvent travailler plus efficacement sur le terrain. Nous croyons savoir que l'équipe de consultants de Louis Berger changera bientôt de personnel et il s'opérera une réorganisation administrative aux sièges. Lorsque cette réorganisation sera terminée et lorsque les nouveaux consultants seront en place et auront fait les changements de systèmes le Corps de la Paix/Mali devra explorer à fond la viabilité des affectations de Volontaires demandées par l'OHV. Nous sommes d'accord avec le mandat de financement de l'USAID pour améliorer les activités de production céréalière et alimentaire et nous croyons que des Volontaires devraient se concentrer sur de tels efforts plutôt que les cultures de rente. Ainsi, bien que nous ayons été très impressionnés par les organisations de ton villageois dans les communautés visitées, nous recommandons à ce que les Volontaires oeuvrent à compléter ces associations en utilisant des apports pour les activités de production alimentaire améliorée et de développement communautaire, mais de ne pas s'impliquer directement dans leur organisation ou structure interne.

Nous reconnaissons l'importance d'améliorer les ressources eau à travers la zone OHV, mais recommandons que les projets de puits suivent les sites recommandés comme déterminés par les études géophysiques en cours qui y sont menées. Nous sommes d'accord avec le but du GRM pour l'amélioration du reboisement et de la conservation du sol et nous trouvons que le Corps de la Paix peut être très efficace dans ce programme précis. Nous avons été très impressionnés par beaucoup de projets de

respectifs. De cette façon nous presageons que les stratégies que nous recommandons seront les plus efficaces, et que les Volontaires pourront activement participer dans l'évolution des programmes pour des interventions et affectations futures de Volontaires.

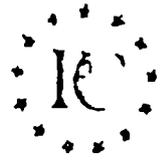
Suivi:

Dans notre rapport final, nous avons fait des recommandations détaillées pour la continuation de la programmation de cette Initiative de Systèmes Alimentaires. Le Corps de la Paix/Mali aura besoin de travailler étroitement avec l'OHV, et l'ORS, le Ministère de l'Agriculture, l'USAID, Africare et d'autres donateurs. Les domaines à voir avec chaque service gouvernemental superviant les Volontaires comprennent les descriptions de tâches, le nombre de Volontaires, les exigences de placement et de support.

Nous apprecions hautement tous les efforts fournis par l'OHV, l'ORS, l'USAID, Africare, etc. en vue de faciliter notre tâche. Qu'ils soient remerciés pour le temps, l'énergie et le soutien logistique qu'ils n'ont pas ménagés pour nous permettre de mener à bien notre travail.

14 Juin, 1985

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DES ETATS-UNIS D'AMERIQUE
EN REPUBLIQUE DU MALI

Mlle Kathleen TILFORD
Consultante auprès du
Corps de la Paix
Bamako

Bamako, le 14 Juin 1985

A Monsieur le CHEF DE VILLAGE DE BOUREM
VIA DIRE.

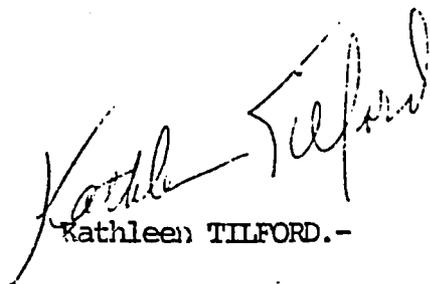
Objet: Remerciements

Monsieur le Chef de Village,

Je voudrais, au nom de l'équipe de Consultants du Corps de la Paix, vous remercier de votre hospitalité bien africaine et pour tout le temps précieux que vous nous avez consacré lors de notre séjour à Diré du 16 au 21 Août 1985.

Vous êtes ce que nous appelons en anglais un "role model", faute d'une traduction précise, il s'agit de quelqu'un qui, par ses idées et son comportement quotidien, constitue un modèle à suivre. Vous faites beaucoup pour le développement de votre zone, et nous sommes certains que votre support ne fera pas défaut aux Volontaires qui auront à travailler chez vous.

Trouvez ici l'expression renouvelée de toute notre gratitude ainsi que nos sentiments très distingués.-


Kathleen TILFORD.-

DES ETATS-UNIS D'AMERIQUE
EN REPUBLIQUE DU MALI

Mlle Kathleen TILFORD
Chef d'Equipe des
Consultants pour le
Corps de la Paix.

Bamako, le 14 Juin 1985

A Madame SY, CONSEILLER TECHNIQUE,
MINISTERE DE L'AGRICULTURE
BAMAKO.

Objet. Remerciements.

Madame Sy,

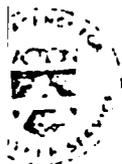
Je voudrais vous remercier de nous avoir accordé, de si bonne grâce, une audience malgré votre calendrier très chargé.

Dr. G.V.V. Rao et moi-même avons été impressionnés par la qualité des informations et documents que vous nous avez fournis.

Je voudrais, une fois de plus, réitérer ma reconnaissance pour le temps que vous nous avez consacré, et aussi l'espoir que votre précieux support sera acquis au Corps de la Paix/Mali.

Veuillez agréer, Madame, l'expression de ma très haute considération.-

Kathleen TILFORD.-

DES ETATS-UNIS D'AMERIQUE
EN REPUBLIQUE DU MALI

Mlle Kathleen TILFORD
Chef d'Equipe des
consultants pour le
Corps de la Paix.

Bamako, le 14 Juin 1985

A Monsieur le COMMANDANT DE CERCLE
DIRE.

Objet: Remerciements

Monsieur le Commandant de Cercle,

C'était un réel plaisir pour mes collègues consultants et moi-même, d'avoir eu à séjourner dans la zone pilote de Diré. L'hospitalité et l'assistance reçues ont dépassé nos prévisions. Soyez-en remerciés, vous-même et vos proches collaborateurs en matière d'administration et de développement.

Vos recommandations, qui ont été complétées grâce aux documents reçus de Mr. Doucouré, Conseiller au Développement (Ministère de l'Intérieur), seront sans doute prises en considération. C'est notre sentiment que le Corps de la Paix pourrait réalement s'associer à vos efforts de développement à long-terme.

Avec nos remerciements réitérés, je vous prie de croire, Monsieur le Commandant de Cercle, l'expression de mes meilleurs sentiments.-

Kathleen TILFORD.-/

~~H. b.~~

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PEACE CORPS



Bamako, le 17 Juin 1985

Madame Kathleen TILFORD
Chef d'Equipe des Consultants
Corps de la Paix
BAMAKO

à

MONSIEUR LE COMMANDANT DE CERCLE
DE MACINA
KE-MACINA

Objet: Remerciements.

Monsieur le Commandant de Cercle,

Au nom de l'équipe de consultants du Corps de la Paix, j'ai plaisir à vous exprimer nos remerciements pour le temps précieux que vous avez bien voulu nous consacrer lors de notre mission à Ké-Macina courant Mai, 1985.

Vous nous avez bien impressionnés et vos pertinentes recommandations ont permis de mieux appréhender vos problèmes de développement.

La mission quittera le Mali le 17 Juin et vous prie de trouver ici l'expression renouvelée de sa gratitude.

Veillez agréer, Monsieur le Commandant de Cercle, l'assurance de ma parfaite considération.

Kathleen TILFORD

A handwritten signature in cursive script that reads "Kathleen Telford".

PEACE CORPS



Bamako, le 17 Juin 1985

Madame Kathleen TILFORD
Chef d'Equipe des Consultants
Corps de la Paix
BAMAKO

à

MONSIEUR LE DIRECTEUR GENERAL
OPERATION RIZ
SEGOU

Objet: Remerciements.

Monsieur le Directeur Général,

Je voudrais, au nom de toute l'équipe de consultants du Corps de la Paix, vous exprimer notre reconnaissance pour tout ce que vous avez mis en oeuvre pour faciliter notre mission auprès de l'Opération Riz, Ségo.

Vous-même et vos proches collaborateurs, vous n'avez ménagé ni votre temps ni vos observations et recommandations; ce qui nous aura permis d'avoir une meilleure optique sur votre Opération et les problèmes de développement auxquels elle se trouve confrontée. Les sorties sur le terrain, planifiées et effectuées en compagnie de Mr. Guindo, TDC, ont plus particulièrement aidé dans ce sens. La rencontre avec votre Adjoint a présenté un intérêt certain tant en matière de développement que de gestion.

Compte tenu de sa parfaite connaissance des systèmes malien et américain, il nous semble qu'il pourrait jouer un rôle déterminant dans l'orientation des Volontaires.

Tout en vous réitérant mes sentiments de gratitude, à partager avec vos collaborateurs,

Je vous prie de croire, Monsieur le Directeur Général, à l'expression de ma considération distinguée.

Améliations

- Op. Riz, Ségo: DG/Adjoint;
- TDC
- Corps de la Paix

Kathleen TILFORD

PEACE CORPS



Bamako, le 17 Juin 1985

Madame Kathleen TILFORD
Chef d'Equipe des Consultants
Corps de la Paix
BAMAKO

à

MONSIEUR LE DIRECTEUR GENERAL
OPERATION HAUTE VALLEE
BAMAKO

Objet: Remerciements.

Monsieur le Directeur Général,

Je voudrais, par la présente, vous dire combien l'équipe de consultants du Corps de la Paix a apprécié l'assistance que vous lui avez apportée dans le cadre de sa mission auprès de votre Opération. En effet toutes les dispositions ont été prises pour nous faciliter réunions et sorties sur le terrain.

Nos remerciements vont aussi aux Chefs de Production, du Génie Rural, de la Vulgarisation et l'Adjoint à ce dernier, pour leur disponibilité totale et le temps passé avec nous sur le terrain.

Je regrette toutefois que le temps ne nous aura pas permis de repasser avec vous les recommandations; ce que le Corps de la Paix/Mali ne manquera pas de faire.

Avec mes remerciements réitérés,

Je vous prie de recevoir, Monsieur le Directeur Général, l'assurance de ma considération distinguée.

Kathleen TILFORD

Ampliatiions

- O.H.V: Chef de Production,
Chef du Génie Civil,
Chef de Vulgarisation
- Corps de la Paix: Directeur

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CORPS DE LA PAIX
DES ETATS-UNIS D'AMERIQUE
EN REPUBLIQUE DU MALI

Bamako, le 14 Juin 1985

Mlle Kathleen TILFORD
Chef d'équipe des
Consultants pour le
Corps de la Paix.

A Monsieur le GOUVERNEUR DE LA REGION
DE SEGOU.

Objet: Remerciements

Monsieur le Gouverneur,

Au moment où notre séjour en terre Malienne prend fin, je me fais l'agréable devoir de vous exprimer toute la gratitude de l'équipe de Consultants du Corps de la Paix, pour le temps que vous même et vos proches collaborateurs, vous nous avez consacré malgré vos multiples sollicitations, et pour la chaleureuse hospitalité dont nous avons été l'objet dans votre Région.

Vos efforts de développement sont fort louables, et les documents et suggestions que nous avons reçus nous aideront sans doute à mieux concevoir la participation du Corps de la Paix à ces tâches de développement.

Tout en vous souhaitant beaucoup de succès, je vous prie d'agréer, Monsieur le Gouverneur, l'assurance de ma considération distinguée.

AMPLIATIONS:

Gouvernorat

-Conseiller au Développement.

Kathleen TILFORD.

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