FINAL REPORT

ASSESSMENT OF THE AFGHANISTAN PRIVATE SECTOR AGRIBUSINESS COMPONENT OF THE AGRICULTURE SECTOR SUPPORT PROJECT

IQC Contract No. PDC-1406-I-15-0032-00
Delivery Order No. 15

Prepared By:

John De Boer (Agricultural Economist and PSA Assessment Leader)

Carl N. Hittle (Agricultural Specialist)

Michael E. Evnin (Agribusiness Specialist)

Prepared For:

U. S. Agency for International Development
Office of the Representative for
Afghan Affairs

WINROCK INTERNATIONAL INSTITUTE FOR AGRICULTURAL DEVELOPMENT
Rt 3, Petit Jean Mountain
Morrilton, Arkansas 72110, USA

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LIST OF ACRONYMS

AAM	Activity Assistance Memorandum
ACBAR	Agency Coordinating Body for Afghan Relief
ADT	Agriculture Development and Training Component of ASSP/Private Sector Agribusiness Project
ADC	Afghan Development Corporation
AFG	Afghan Fertilizer Group
AID	Agency for International Development
AIG	Afghan Interim Government
ARR	Agricultural Rural Rehabilitation Component of ASSP
ARS	Agriculture Rehabilitation Schemes
ASA	Agricultural Survey of Afghanistan
ASSP	Agriculture Sector Support Project
AZRI	Arid Zone Research Institute (Pakistan)
CARE	Cooperative for American Relief Everywhere
CAS	Commercial Agriculture Sales, Component of PSA Project
CCRI	Cereal Crops Research Institute
CIMMYT	International Maize and Wheat Improvement Center
COP	Chief of Party
DAI	Development Alternatives Inc.
DAP	Diammonium Phosphate (Fertilizer)
DMA	Defence Mapping Agency
ESC	Earth Satellite Corporation
FAO	Food and Agriculture Organization of the United Nations

GIS	Geographic Information Systems
GOP	Government of Pakistan
GPS	Geo-Positioning System
Ha	Hectares
HVH	High Value Horticulture
IU	Information Unit
IRC	International Rescue Committee
Kg	Kilogram
MARIS	Market Information System
MASL	Mean Altitude Above Sea Level
MCI	Mercy Corps International
MIT	Massachusetts Institute of Technology
MOU	Memorandum of Understanding
MR	Monitoring and Reporting Unit
MT	Metric Ton/s
NGO	Non-governmental Organization
NWFP	North-West Frontier Province
O/AID/Rep	Office of the USAID Representative for Afghan Affairs
PACD	Project Assistance Completion Date
PIMS	Pakistan Institute of Management Studies
PPA	Program, Planning and Analysis Component of ASSP/Private Sector Agribusiness Project
PSA	Private Sector Agribusiness Project
PVO	Private Voluntary Organization
RFP	Request For Proposals
SCA	Swedish Committee for Afghanistan

SWABAC	South West Afghanistan and Baluchistan Agency Coordination
UNDP	United Nations Development Program
UNHCR	United Nations High Commission for Refugees
UNOCA	Office for the Coordination of United Nations Humanitarian and Economic Assistance Programs Relating to Afghanistan
USDA	United States Department of Agriculture
USG	United States Government
VITA	Volunteers in Technical Assistance
WFP	World Food Program

LIST OF CONVERSION FACTORS AND SOME AGRICULTURAL TERMS USED IN AFGHANISTAN

1 Seer	=	7 Kg (approximately)
1 Jerib	=	0.2 Ha
1 bag of fertilizer	=	50 Kg

Abi	-	Irrigated lands
Karezes	-	A system of moving water using underground tunnels with vertical shafts used for maintenance.
Lalmi	-	Rainfed lands, non-irrigated lands
Mujahideen	-	Afghanistan freedom fighters
Shuras	-	Council or committee of local leaders

List of Exchange Rates

Quotations for Afghanistan's currency, the Afghani, is normally based on the Pakistani Rupee. Rates over the past six months have fluctuated wildly from a low of 100 Afghanis per Rupee to a high of 52 Afghanis per Rupee.

Current Rates are:

52 Afghanis	= One Pakistani Rupee
24.64 Pakistani Rupees	= U.S. $1.00 (official)
26/27 Pakistani Rupees	= U.S. $1.00 (bazaar rate)
1350 Afghanis	= U.S. $1.00 (bazaar rate)

EXECUTIVE SUMMARY

Assistance for rehabilitation of institutional and physical infrastructure to support agricultural production in Afghanistan is proving to be a complex and slow process. The demographics of rural Afghanistan have been drastically altered, rural infrastructure damaged and destroyed, and the support services traditionally provided by the government (development and supply of improved seed, marketing of fertilizer and other agricultural inputs, credit, agricultural research and extension systems, etc.) are not functioning in most rural areas. There is widespread concern about the overall food supply situation inside Afghanistan and the consequences on food balances once large-scale repatriation of refugees starts. Private sector trading links have been disrupted and traditional exports from Afghanistan were curtailed. This background provided the basis for a decision by O/AID/Rep in 1989 to expand their assistance to rural areas in the eastern and southern regions of Afghanistan through a project that would simultaneously address many of the main constraints to agricultural development thought to be operating at that time.

The Private Sector Agribusiness (PSA) project is a sub-project of the Agriculture Sector Support Project (ASSP), a project supported by O/AID/Rep in the amount of $60.0 million. ASSP also funds an Agricultural and Rural Rehabilitation sub-project executed by VITA. The main components of PSA were the Commercial Agricultural Sales (CAS) component, the Program, Planning and Analysis (PPA) component and the Agricultural Development and Training (ADT) component. These components were to work together to help satisfy the most immediate needs of the target areas in eastern and southern Afghanistan. To execute the PSA project, Development Alternatives Inc. was awarded a contract in August 1989. The current contract amount is $ 30.8 million budgeted as $6.3 million for technical assistance, $1.2 million for logistical support and $ 23.3 million for program costs. Current PACD is the end of 1992.

Implementation problems that we identified were the result of a complex mixture of DAI staffing problems, frequent personnel changes, disruptions caused by suspension of cross-border operations; evacuation of staff, shift of project location, termination of CAS activities and some contractor staff and termination of fertilizer imports, O/AID/Rep management, problems with procurement and distribution of inputs, changing circumstances inside Afghanistan and lack of a clearly articulated strategy for involving the private sector in both Pakistan as well as in Afghanistan. Some basic assumptions which were not fully met, and thus impacted upon the project, included (a) a reasonable number of refugees would return to Afghanistan

with enough assets to help them get resettled in agricultural areas, (b) the project would also target more favorable agricultural areas in the north where potential impact would be greater and civil strife less, (c) the GOP would facilitate cross-border trade for virtually all agricultural inputs, (d) neither O/AID/Rep nor contractor staff would be directly involved in the purchase, storage and import of goods and services to be distributed in Afghanistan, (e) commitments would be negotiated by the O/AID/Rep and the contractor with GOP for unrestricted purchase in Pakistan of agricultural inputs, and for cases where Pakistan is import dependent, special import and purchase licensing would be obtained, (f) the CAS component was terminated in September, 1991, and O/AID/Rep management terminated fertilizer imports.

Due to some of the issues noted above, the project has gradually taken on more and more activities that were not anticipated at time of contracting. This increased the administrative, auditing and monitoring load on DAI to the detriment of the original project objectives which were lost in the daily tasks needed to keep commodities moving into Afghanistan. The ability of the project to work cross-border has varied and some assumptions upon which the project were based have not been met. Contractor management has been unable to meet expenditure targets which were not practical in the initial stages of the project when many modalities of working cross-border, with GOP, and with the private sector were not fully worked out and CAS activities were not working smoothly. Expectations about the ability to monitor the movement of commodities inside of Afghanistan were not realistic. Priorities for work in Afghanistan are determined through long and complex negotiations with local commanders and *shuras* so that the proper reference to tribal and kinship interests is ensured. This aspect has also slowed efforts to achieve project targets. Project activities often received less than full support from local groups because of frequent "stop and go" signals from O/AID/Rep which often jeopardized the timely flow of inputs to farmers and traders and the fact that DAI was not engaged in construction work and thus was not pumping large amounts of funds and jobs into project areas.

Despite the problems noted above, the PSA project has made substantial progress towards setting in place the major structures, staffing, organization and resources needed for project implementation. The project is now poised to make rapid progress towards meeting most of the original project objectives and expectations. Excellent relationships have been established with the donor community working in Afghanistan, particularly since the project has shifted to Islamabad. A large cadre of well trained staff are in place and many activities are structured so that they should be capable of institutionalization inside of Afghanistan following peace. By the end of 1992, we estimate that the cumulative benefits over the 1989-1992 period

of reintroducing new wheat varieties plus fertilizer into Afghanistan will exceed the total cost of ASSP.

The CAS component, while perhaps the least successful in meeting initial expectations, was able to explore various mechanisms for expanding trade between Afghanistan, Pakistan and other free market economies. A considerable volume of materials were shipped to Afghanistan and are being used by farmers as well as by the ADT Demonstration Units. Pakistani suppliers and dealers are more aware of the Afghan market and its specific requirements. However, the security environment limiting cross-border activities plus the distractions caused by fertilizer procurement and distribution eventually led to termination of CAS activities. The lessons learned, however, proved useful to us in recommending that certain areas of this component, suitably modified, should be continued as key elements of the PSA.

The PPA component has been able to sharpen its focus to the point where it can better provide the guidance, direction and planning capabilities that were envisaged during project design. The information and publications units are now providing key project-wide support. If some understanding can soon be reached with Earth Satellite Corporation to redefine basic responsibilities, the GIS work should become more useful to a variety of clients. Survey work in Afghanistan should continue and be expanded if a strong advisor in agricultural economics/sample survey design can help manage the current analytical agenda. Capabilities being developed by this component should be key elements required by future bilateral programs in Afghanistan. PPA has a particularly well trained group of local staff that are now capable of taking over much of the Geographical Information Systems work. This component should also begin planning impact assessment studies which will eventually be required and which will be particularly difficult under current conditions in Afghanistan.

The ADT component is now making excellent progress, is providing the most direct assistance to farmers in Afghanistan, has a large, well managed program and stands the best chance of institutionalization inside of Afghanistan. The viability of ADT depends largely upon the ability of the PSA project to develop a better mechanism to supply fertilizer and assist in supplying more threshers and other inputs to ADT centers and to farmers. The seed program is now functioning well and is gradually expanding to other cereal crops, potatoes and vegetables. If our recommendations are implemented, ADT centers will have to assist with some of the farm machinery market development work and provide a liaison function between farmers and traders.

Some of the key issues that have interacted to retard project progress and accomplishments include (a) the adverse political and security environment, (b) numerous assumptions necessary to justify the project were not realized, (c) host

country facilitation was either lacking or not actively pursued, (d) DAI and subcontractor staffing was not always as strong as required for a project of this complexity, (e) relationships between O/AID/Rep and DAI suffered as the gap between reality and expectations widened, (f) staff evacuations, closure of cross-border operations and move of the project from Peshawar to Islamabad all were disruptive to the project and to their growing client base in Afghanistan and (g) a wide range of issues related to institutionalization, replicability and sustainability of PSA activities.

Recommendations following from this assessment include (a) focusing on a private sector approach to get fertilizer to Afghan farmers at a reasonable cost, (b) wheat should remain the focal crop for the immediate future, (c) assistance to exporters of traditional horticultural crops is still needed, (d) continuing and strengthening of PPA and ADT activities, (e) exploring a more active role for ADT centers in identifying agricultural machinery requirements and passing this information on to traders (f) forward planning that should begin to assist with institutionalization of certain PSA functions inside of Afghanistan, particularly training and agricultural extension services and (g) project monitoring functions should be better defined and mutually agreed upon.

Regarding options for the future for ASSP/PSA project, we do not consider termination in December 1992 to be in the best interest of O/AID/Rep. This is based upon our review of the Afghanistan Strategy Document and based upon the immediate needs of Afghanistan once bilateral relations are reestablished.

Options to be considered are (1) continue full existing program through 1993 as well as continue fertilizer supply to Afghanistan, (2) maintain ADT and PPA components past 1992, and (3) continue either the ADT or PPA component to at least the end of 1993. Options (2) and (3) do not consider the fertilizer import option. **We strongly recommend option (1) as this option would provide O/AID/Rep the widest range upon which to develop bilateral programs and which would provide the capability from which the most pressing problems facing post-war Afghanistan could receive immediate attention.**

ASSESSMENT OF THE AFGHANISTAN PRIVATE SECTOR AGRIBUSINESS COMPONENT OF THE AGRICULTURE SECTOR SUPPORT PROJECT

SECTION I. INTRODUCTION

A. ASSP/PSA Chronology

April 1978	Coup in Afghanistan.
December 1979	Soviet forces invade Afghanistan.
1985	Cross-border humanitarian assistance program for Afghanistan starts.
September 1986	O/AID/Rep provides one year grant to VITA to design project to assist Afghanistan's agricultural sector.
April 1987	ASSP authorized at initial funding level of $6 million.
June 1987	VITA selected to implement Afghanistan Rural Rehabilitation project (ARR).
August 1987	ASSP restructured and amended to provide assistance for Agricultural Rehabilitation Schemes (ARS).
February 1989	O/AID/Rep amends the ASSP authorization increasing life of project funding to $60 million and adding a Private Sector Agribusiness component (PSA).
April 1989	Request for Proposals issued for Private Sector Agribusiness (PSA) Project.
August 1989	DAI selected as prime contractor and starts project implementation.
December 1989	O/AID/Rep decides to transfer agricultural development activities of ARR project from VITA to DAI.
April 1990	Transfer of agricultural development activities from VITA to DAI becomes effective and is incorporated as the Agriculture Development and Training (ADT) unit of PSA project. DAI contract amended accordingly.
January 1991	All expatriate staff evacuated from Pakistan.
April 1991	Expatriate staff return to Pakistan.
July 1991	Two DAI staff kidnapped in Afghanistan and subsequently released.
September 1991	Upsurge in vehicle seizures in Afghanistan, cross-border trade activities suspended, project transferred from Peshawar to Islamabad along with expatriate staff and many Afghani staff. CAS component, including fertilizer imports, were terminated.
Sept/Oct 1991	Expatriate staff move to Islamabad, project location shifted to Islamabad.

B. Background

Afghanistan was a net importer of basic cereals until the mid 1970s, with between 100,000 to 300,000 MT required, depending upon weather conditions. By 1974-75, the rapid spread of modern wheat varieties and increased application of commercial fertilizers led to self-sufficiency and downward pressure on wheat prices. Based upon a series of surveys undertaken by the Swedish Committee for Afghanistan[1] using 1978 as the base year (pre-war, normal), 1986 agricultural production was 46% of pre-war levels, increasing to 53% by 1987 due to some refugee populations returning to rural areas. The population residing in rural areas decreased from 85% in 1978 to 33% in 1988. The estimated population of Afghans living inside Afghanistan is 12 to 12.5 million. Current food production is sufficient for about 8 million with wheat imports up to 400-500,000 MT needed. With an improved security situation, the population inside Afghanistan would likely surge and agricultural production would initially be unable to respond quickly to increased demand leading initially to food shortages, which will be very difficult to manage given the poor state of infrastructure. In addition, population growth of the existing Afghan population (in and out of Afghanistan) will require 20-25% more total food than was produced during the pre-war period.

Therefore, the Private Sector Agribusiness (PSA) project has the potential to put in place at least some of the inputs and technology needed to meet food needs as well as to play a lead role in planning rehabilitation of agricultural production systems and agricultural institutions.

The Agricultural Sector Support Program (ASSP) represents an umbrella project funding a number of related yet distinct activities. As the project chronology indicates, ASSP first started off with a series of grants to a U.S.-based PVO, VITA. Based upon the initial success that VITA had working inside of Afghanistan, and the changing security and political environment, O/AID/Rep amended the original AAM to (a) increase life of project funding from $6.0 million to $60.0 million and (b) contract with a U.S. private sector firm for an additional set of activities not included under the Scope of Work for the VITA cooperative agreement. The AAM amendment allowed for three major components under the Private Sector Agribusiness (PSA) project:

<u>Agricultural Rehabilitation Schemes</u> and infrastructure rehabilitation to serve individual farms and small groups of

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[1]These survey results are based upon very limited samples and must be used with caution. However, they probably provide useful trends.

farms with rehabilitation services, such as roads and irrigation systems.

A Private Sector Agribusiness component to serve individual farms and small groups of informally organized farmers with production inputs, services and marketing outlets.

A Monitoring, Analysis and Planning component to serve as the market surveillance and analysis system essential in the monitoring of project progress.

Initially, the first component was to remain with VITA while the second and third components were to be provided by a new U.S. private sector contractor. At that time, the VITA contract was for Agricultural Rehabilitation Schemes with a total contract amount of $11.1 million. Development Alternatives Incorporated (DAI) was selected in August, 1989 to implement the second and third components at an initial contract amount of $33 million which included (a) the option of adding on the Agricultural and Rural Rehabilitation option (VITA component of ASSP) at the Missions option during the first quarter of 1990, (b) $1.2 million of logistical support to be retained by the Mission and (c) $25.26 million of program costs retained for direct disbursement by the Mission. The goals, purpose, and components of the project as of August 1989, are set out in Section D below. The PSA project, at least until termination of the CAS unit, was consistent with the O/AID/Rep Afghanistan Strategy Document which highlighted a "focus on human capital development and increased reliance on Afghan private sector, nongovernmental delivery mechanisms to lay the groundwork for broad based economic and political participation in free Afghanistan. These foci are essential for building the support for and the development of, a future policy environment which encourages reliance on markets and a representative political process." (USAID, 1991,A).

In December 1989, it was decided to transfer the agricultural development and training (ADT) activities from the VITA project to the PSA project, retain the rural works (irrigation, roads) activities of ARR with VITA and extend the VITA cooperative agreement through May 31, 1992 (subsequently extended to the end of 1992). This exercised the option in the original DAI contract. The current budget for the DAI contract is:

Technical Assistance	$ 6,349,048
Logistical Support	1,175,000
Program Costs	23,262,877
Total	$ 30,786,925

The ADT component started April 1, 1990 under DAI. Due to cancellation of the CAS component, the budget and Scope of Work is again in the process of modification. The project will be renamed the Agricultural Production and Planning Subproject of ASSP. Original subcontractors included:

(i) Development Research and Management Services, a Pakistani economics consulting firm.

(ii) GIC Agricultural Group, specialists in agribusiness and commodity trade.

(iii) Harza Engineering, a U.S.- based water resources consulting firm.

(iv) Earth Satellite Corporation, specialists in remote sensing analysis.

(v) AgriSystems Overseas, Ltd. a U.K.- based firm with experience in rural surveys in Pakistan.

Subsequently, two additional firms were subcontracted for assistance: Management and Financial Applications, a Pakistani firm specializing in management and financial applications; and High Value Horticulture, a U.K.- based firm specializing in production, processing and marketing of horticultural products. The only subcontractors that remain involved in a substantive manner with PSA are Earth Satellite Corporation, GIC Agricultural Group and High Value Horticulture.

C. Scope of Work for Assessment Study

The scope of work provided to Winrock International is given in Annex I. The report is based upon that scope of work.

D. Project Details

1. Goals

The goal of the ASSP is to help facilitate the resettlement of war-affected Afghans into Afghanistan over the near term (AAM, Amendment No.2, page 22).

2. Purposes

The purposes of the ASSP are (1) to help restore agricultural productivity through small-scale agricultural infrastructure rehabilitation (VITA component), (2) help assure the provision of essential production inputs and other crucial commodities and (3) to broaden the economic base of Afghanistan by building trade links and commercial ties with Pakistan and other open-market countries.

3. Components

Following incorporation of the VITA agricultural development and training component, the ASSP/PSA project consisted of three units:

Commercial Agricultural Sales (CAS) unit to promote farm input sales and cash crop exports through a mixture of incentives and assistance activities to Afghan and Pakistani traders and dealers;

The Programming, Planning and Analysis (PPA) unit (formerly called Monitoring, Analysis and Planning (MAP) which collects information on the execution of project activities and on agriculture sector performance for analysis and planning.

The Agriculture Development and Training (ADT) unit which conducts agriculture technology testing and transfer and extension activities through a network of agriculture development agents located at ADT sites within Afghanistan. This was formerly a component of the ARR project under the VITA cooperative agreement.

Each unit was to be staffed by an expatriate advisor and a counterpart senior Afghan professional. Overall activities were coordinated by a Chief of Party.

In addition, the following units provide general support to the operational components:

(i) Monitoring and Reporting Unit (MR): This unit prepares a monitoring plan, oversees monitoring programs, and prepares reports on project activities, as well as serves as the oversight office for special studies, some devoted to the task of monitoring field teams.

(ii) Information Unit (IU): This unit maintains the computer equipment, training staff, provides management information services for all project activities, and computer support for all data entry operations.

(iii) Administration and Finance (AF): This unit undertakes general administration and management tasks, provides accounting services for all project activities, and controls the flow of funds to the other divisions. The AF Unit also:

- Provides logistical support to all components;
- Consolidates the yearly budgets for all components;
- Provides personnel function; and
- Manages the physical facilities of the project.

The ASSP/PSA organizational structure during full project implementation was provided in the June 1990 - July 1991 Workplan prepared by DAI in October 1990. This is reproduced as Figure 1/

Subsequently, the following changes have taken place:

(i) The Senior Advisor position has been transferred to the ADT Component with Deputy Directors designated for seeds, training and extension services.

(ii) The Information Unit has been placed under the Chief of Party.

(iii) The Monitoring and Reporting Unit is under the PPA.

A map of Afghanistan (map 1) indicates where the primary ADT and CAS field sites were located.

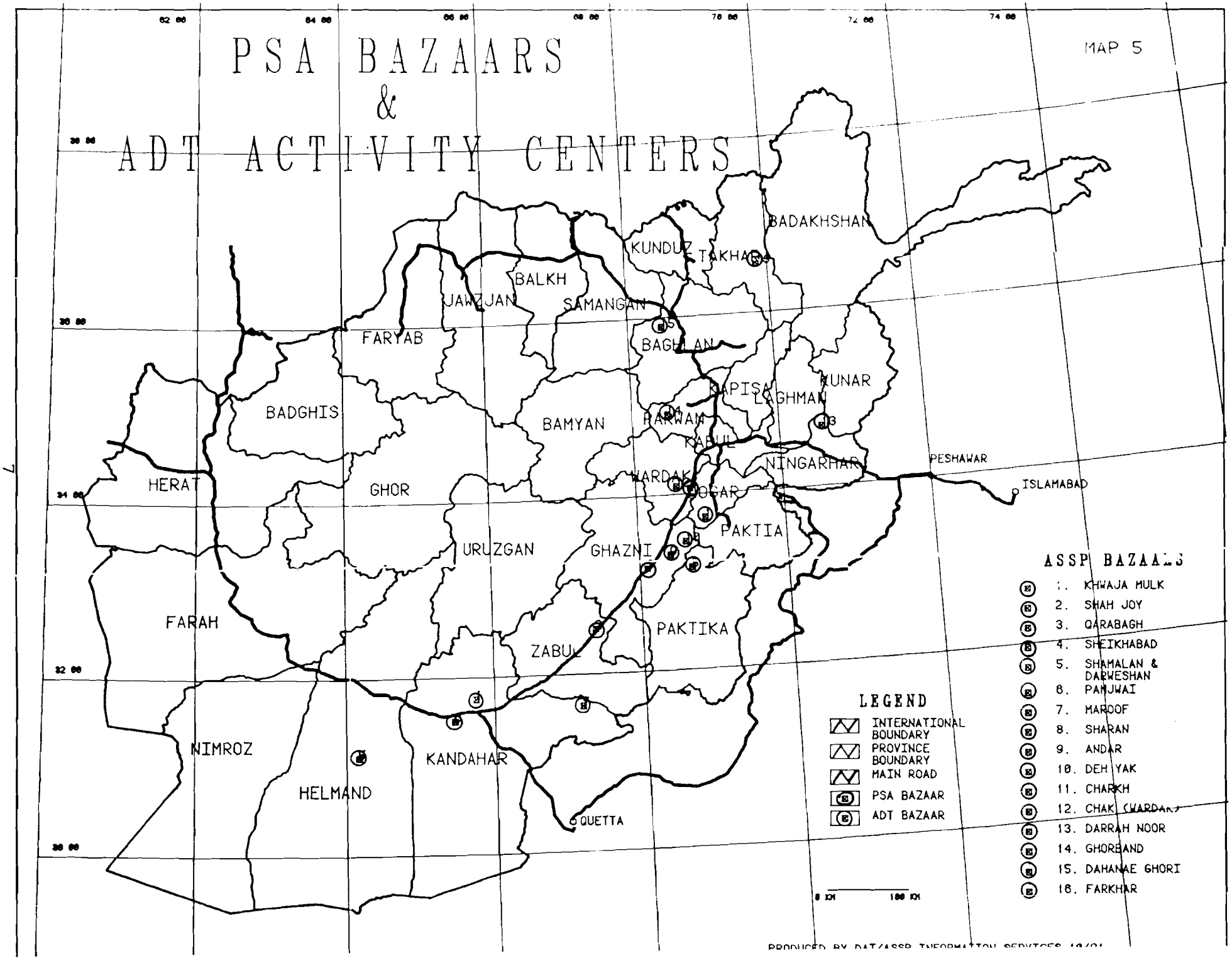

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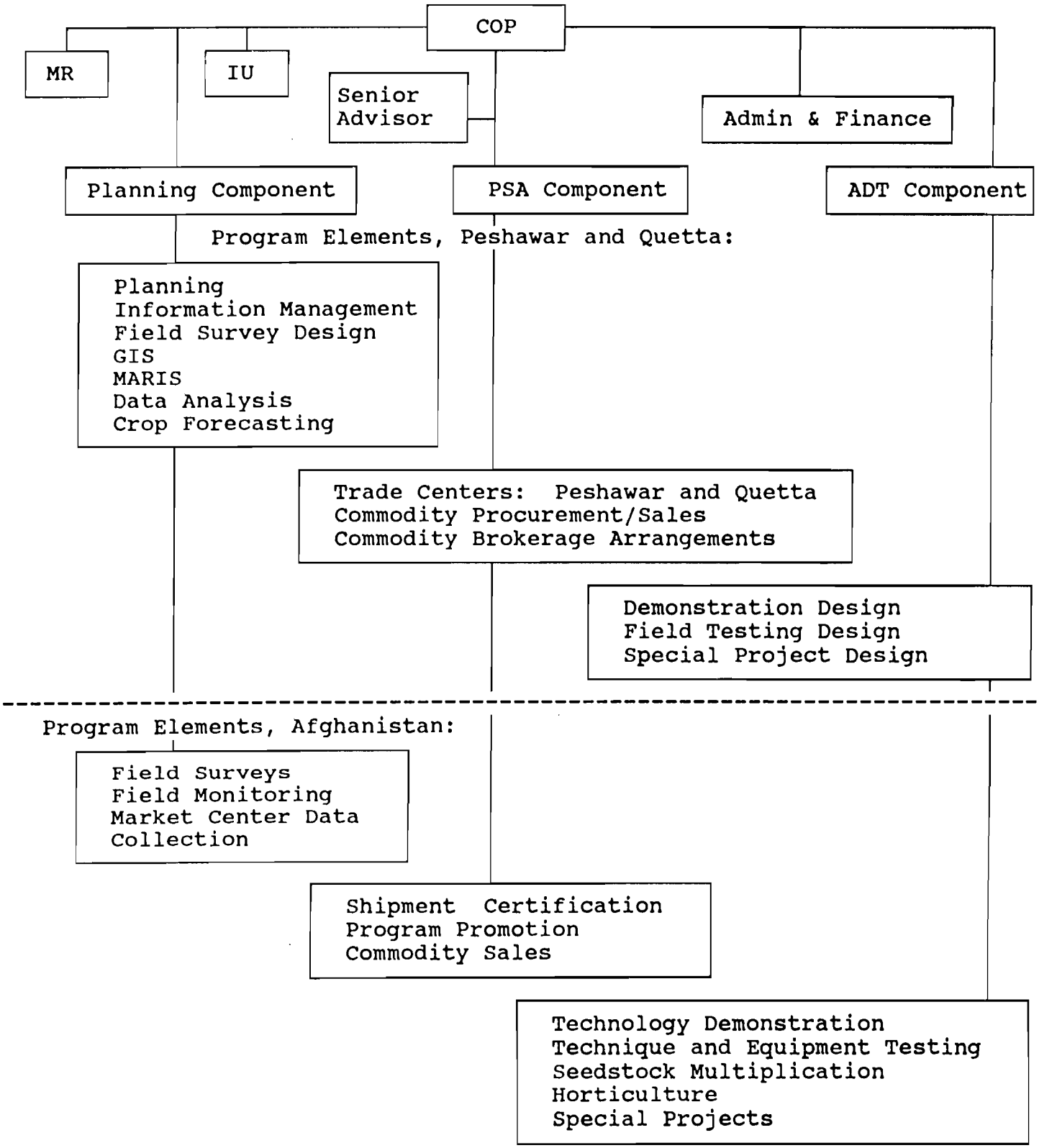
Figure 1. Original ASSP/PSA Organogram



4. Implementation Plan

The project was to be implemented by a prime contractor located in Peshawar. Implementation was to be fairly standard for USAID Technical Assistance contracts with the exception of (a) U.S. staff not being able to travel inside Afghanistan, (b) there being no host country government with which to liaise and coordinate, and (c) there being no specific bilateral agreement between the USG and GOP governing cross-border assistance to Afghanistan through the PSA project.

Consequently, the authorizing agreement for implementation was the contract with DAI rather than the normal Project Grant Agreement typically executed between USAID and the host country government. Also, the Workplan remained as the primary implementing authority rather than the series of Project Implementation Letters which typically follow signing of a Project Grant Agreement. Therefore, O/AID/Rep had a much larger decision making and policy making role than is normally the case where a contractor's primary client is the responsible unit of the host country government.

Due to the urgency to start operations before the 1989 wheat planting season (October-November), the contractor was asked to field short-term consultants to initiate CAS activities soon after contract signing. Within 55 days of execution of the project, the contractor was to complete a draft strategy for accomplishing PSA objectives. Within 90 days of contract execution, the contract was to complete for Mission approval the Implementation Plan detailing how the PSA strategy will be implemented and a work plan for the first six months. New work-plans would be prepared, reviewed and approved on a six month basis. The PSA Strategy Statement, Implementation Plan and Semi-annual Workplans would be modified throughout the life of the project. More detailed descriptions of project implementation to date are given in Section II, "Progress Towards Objectives."

5. Commodity Focus

For CAS input supplies into Afghanistan, the priority crops, in order, were wheat, maize, potatoes, horticultural crops, rice and barley. For export promotion under CAS, the focus was on traditional horticultural crop exports, mainly dried fruit, raisins and nuts. The first priority was to increase production and productivity of the key food crops-wheat and maize- to help feed the current population more adequately and to avoid major food shortages when large scale repatriation of refugees begins.

The commodities targeted for export assistance to the target bazaars are [DAI, 1990(A); P.16]:

- NPK fertilizers
- Modern varieties of wheat seed
- Tractors
- Tractor-drawn implements
- Agricultural machinery, including threshers, spraying equipment, and water pumps
- Horticultural stock
- Plant pesticides
- Agricultural hand tools and implements such as shovels, pick axes, wheelbarrows
- Spare parts for vehicles, machines and tools
- Wheat and other staple foods.

In terms of the importance of various commodities in Afghanistan, Table 1 gives some base data.

Table 1
Area And Production of The Most Important Crops in Afghanistan 1978

Crop	Area 1000 ha	Production 1000 Mt
Wheat	2,345	2,652
Maize	480	760
Barley	310	300
Rice	210	400
Cotton	128	136
Vegetables	114	860
Fruits	210	1,122
Other Crops	179	645
Total of All Crops	3,976	

Source: Lea. 1988

Wheat has been and is the major crop in Afghanistan. In 1978 it occupied nearly 60% of the total area cropped and there was nearly five times as much area growing wheat as there was maize, the second most important crop in Afghanistan. Wheat occupied half of the irrigated land and most of the rain-fed crop land before 1978 and was the basic staple of the Afghan diet.

Corn was grown throughout the country over an area comprising about 500,00 ha. It was consumed by both people and animals. Barley cultivation took up over 300,000 ha in rainfed highland areas. Rice was grown primarily in the north around Baghlan and Kunduz, as well as Herat and Nangarhar. Afghanistan

was well known regionally for its variety of fruits and vegetables.

Afghan farmers will need assistance to reestablish agricultural production to its pre-1978 levels. The most obvious needs are for supplementary food and agricultural inputs. The Agricultural Sector Support Project places major emphasis on increased wheat production by the use of improved, high yielding, disease resistant varieties; adequate and appropriate fertilizer; sound agronomic practices; and appropriate harvesting and storage methods. Considerable emphasis is on fruit trees, especially apples, with increasing interest in maize.

The original commodity focus is reassessed (see Section II.C.6 and Section IV G) in this report.

6. Private Sector Focus

The project was designed to assist the Afghan private sector in those areas dealing with agricultural reconstruction, rehabilitation and productivity enhancement, working both through the supply of inputs from and through Pakistan to Afghanistan bazaars and through assistance to Afghan exporters of traditional agricultural commodities. Services supporting private sector activities, such as market information, freight rates and commodity availabilities would also be provided for marketing agents.

The strategy is to build upon the well developed trading networks which existed in Afghanistan before the war, recognize the changes that have taken place since then and promote private market activities to support agricultural production in present day Afghanistan.

The pre-war markets have been disrupted in that the supply of many essential commodities to liberated rural areas is restricted or blocked off, some traditional agricultural inputs are only available through government-controlled central markets or must make costly detours around them. The cost of some essential inputs has increased beyond the farmers' ability to pay. Restrictions are placed on traditional importation of goods from Pakistan and from third countries. Government controls in Afghanistan have discouraged traditional exports of dried fruit and nuts.

The focus of private sector activities under the Commercial Agricultural Sales (CAS) component of PSA is (a) to supply 10 key provinces in Afghanistan with a significant range of commodities (listed above) essential to get agricultural production moving, (b) supply such commodities at affordable prices and (c) help expand commercial trade links with Pakistan and other open market

economies. This is done through a combination of trade centers, PSA bazaars, assistance to traders, transportation rebates, assistance with GOP documentation to assist movement of goods from and through Pakistan, assistance with marketing Afghan products and bulk importation of bonded goods.

7. Programming, Planning and Analysis Focus

The overall objective of the PPA component is to provide information necessary for long-range planning for development of rural Afghanistan. In fact, PPA was to play the lead role in the execution of the overall ASSP, both for CAS and ADT components. Project activities would be planned and executed based upon the information being collected in Afghanistan through a variety of means. PPA activities would play the lead role for coordinating ASSP work with that of other donors and also for overall USAID planning for assistance to rural Afghanistan.

8. Donor Interactions And Other Linkages

DAI staff have established excellent rapport with other donors, particularly FAO, UNDP and WFP staff, have open discussions of constraints each program works under, understand each others programs well and work together to meet common objectives. UNDP assistance in agriculture targets UNHCR provinces with high refugee loss where rehabilitation of agricultural production will be critical. UNDP finances the MCI animal health program which is regarded as an excellent prototype for rural development in post-war Afghanistan. UNDP agrees with the PSA project objectives of establishing private sector linkages, selling inputs for cash and getting fertilizer and seeds to key areas in Afghanistan. UNDP policy does not permit monetization of contributed commodities but are trying to distribute commodities to PVOs which can sell for local currency.

FAO works closely with DAI and SCA on coordination of seed supplies to Afghanistan and is actively promoting on-farm seed production programs and farmer-to-farmer seed exchanges. FAO is procuring, through international competitive bidding, between 800-900 MT/annum of DAP for seed production and wheat grain production as well as for maize, vegetables, etc. The FAO has projects on seed testing/multiplication and on assistance to NGOs to support cross-border operations in many areas. (Fort et al. 1991)

GIS technology will play a key role in helping other donors plan and implement development programs, and a small workshop is recommended to illustrate potential uses of this technology. Many organizations, institutions, research stations, departments, companies, committees and individuals have linkages with the ADT component. As indicated in the section on Training, many resource persons and organizations are cooperating with DAI for

the training program. MCI, SCA and FAO work closely together in the multiplication and distribution of improved varieties of wheat. CIMMYT is assisting ADT in both the wheat and maize programs by offering both advice and germplasm.

SECTION II. PROGRESS TOWARDS OBJECTIVES

A. The Commercial Agricultural Sales (CAS) Component

1. Detailed Objectives

In determining the objectives of the CAS component of ASSP/PSA Project, we reviewed AWARD/Contract 306-0204-C-00-9829-00 dated August 15, 1989, an Activity Assistance Memorandum - Amendment No. 2 (306-0204), undated, and a document prepared by DAI entitled Strategy for the Afghanistan Agricultural Sector Support Project (ASSP) dated April 1990.

In addition, we noted the description per the Scope of Work assigned to Winrock, International. Regarding the CAS component, it states ".....promotes farm input sales and cash crop exports through a mixture of incentives and assistance activities to Afghan and Pakistani traders and dealers." DAI, in their statement of the Objective is more specific in mentioning that "the objective is to offer the private sector assistance in increasing the delivery of a *restricted* range of commodities essential to the rehabilitation of the agricultural sector." (DAI, 1990).

The other documents mentioned above naturally go into considerably more detail but do not always speak in terms of sub-activities which would have separated out the CAS component. We have had to do that for the sake of the analysis presented in this report. We see the detailed objectives of the CAS to be:

- Serve individual farms and small groups of informally organized farmers so that agricultural production will be increased as quickly as possible in an effort to sustain the returnees and internally displaced.

- Provide services and marketing outlets for produce in excess of family consumption needs.

- Provide financial export incentives to increase the flow of agriculture production-related commodities. Up to $30 million, over three years, was identified for this component.

- Facilitate the provision of critically required production inputs and assist in eliminating shortages of agricultural inputs which have developed over the last ten years (viz. 1979 - 1989). (See Page 10)

- Encourage and revitalize private sector agribusiness trading links between Pakistan and Afghanistan.

- Assist in facilitating commercial transactions, drawing heavily on goods and supplies available on the market in Pakistan.

It was stated that the "intent of the PSA component is not to directly finance production inputs for export to Afghanistan but rather to encourage private sector trading links.....". This intent was subsequently changed as the PSA component did indeed make financing available, as is evidenced by the purchases of fertilizers and other components and the offering of rebates.

DAI, in their strategy dated April 1990, decided to focus on two approaches to revitalize the private agribusiness sector in Afghanistan. These were:

(i) The direct sale to Afghan traders of critical agricultural inputs (e.g. DAP fertilizer and improved wheat seed) not presently available at affordable prices.

(ii) Facilitate the sale of agricultural inputs available in Pakistan to Afghan traders and distributors. Examples of these inputs would be tractors, threshers, etc.

2. Expected Inputs

From FY 89 to and including FY 91, AID was to provide a total of $54 million in addition to the original budget of $6 million. Of this $54 million, $34 million was to be allocated to Private Sector Agribusiness per the following schedule:

FY89 -	$11.5 mm
FY90 -	12.5 mm
FY91 -	14.0 mm
Total	$34.0 mm

A contingency/inflation factor of $2.5 million was also included to be utilized by both the Agricultural Rehabilitation Schemes (VITA) and the PSA (DAI). The actual budget for the PSA project at the time of this assessment was $30.8 million

There was not to be any counterpart contribution. This could well be because there has never been a viable counterpart - a problem which has plagued the PSA component from the onset.

3. Expected Outputs

The Winrock team was not presented with a LOGFRAME so we have utilized some fairly generic information provided in the Activity Assistance Memorandum - Amendment No. 2.

It mentions a number of outputs without specifying which component will have been the cause. We can assume that the outputs will be from all the components working in concert.

- "A high proportion of the productive agricultural areas of Afghanistan targeted for support will have been brought to the levels of productivity which existed prior to 1979 and many of the areas will be at a higher level of productivity...."

- "Commercial trade links between Pakistan and Afghanistan, by virtue of linkages having been reestablished and strengthened between agribusinesses and traders in the two countries, will be expanded and will have a high probability of being self sustaining....."

4. Anticipated Interventions

The CAS component of the Project was anticipated to "assist in facilitating commercial transactions and to provide financial export incentives to increase the flow of agricultural production related commodities" (AID Contract, 1989). It was anticipated that most of these commodities would already be available in Pakistan. Financing of imports into Afghanistan was not to be an intervention. The primary interventions were to be an encouragement of private sector links, assistance in facilitating commercial transactions, and to provide financial export incentives.

Anticipated interventions were to be accomplished by (1) research and studies pertaining to input needs and the availability of commodities to meet these needs, (2) establishing better trade relations with Pakistan, (3) achieving accountability, (4) preparation of periodic progress and financial reports for the Mission (5) overall project coordination with the PPA and ARR (VITA) units and (6) assist in the procurement and delivery of critical commodities which cannot be met by private sector channels in a timely manner.

5. Implementation

It has been necessary for the project to proceed under this seemingly unique situation whereby there is not even a viable Ministry of Agriculture in Afghanistan. At one time, prior to DAI involvement, the O/AID/Rep had formed a group of Afghans into an association called the Agricultural Council. It was made up of members from the seven Afghan resistance organizations that are operating in Pakistan with approval from the Government of Pakistan (GOP). The information we have is not clear on the exact timing of this occurrence but it seems to have been during the 1986 - 88 period. It is also not clear as to whether the

Council was officially disbanded or simply died a natural death. In any event, it does not presently interact with the PSA project.

Training

It was necessary for DAI to create its own organization within Afghanistan to accomplish the project objectives. Before the evacuation caused by the Gulf War, DAI had initiated a recruitment program to form a cadre of personnel who could work across the border. By a process of interviews, 46 candidates were finally selected for formal training. This group included 10 senior staff who had already worked with the PSA. The balance of 36 were new to the program.

DAI contacted the Agribusiness Institute at California State University at Chico who, together with two senior Afghans, put together an intensive semester's training in commerce, economics and agribusiness.

The training course which was developed started in May 1991 and lasted approximately six weeks. The result of the course was that the 46 participants were prepared to go into Afghanistan and begin working with Afghan businessmen in the bazaars where the ASSP was working.

Network of Bazaar Representatives and Targeting of Commodities

These bazaars became ADT centers. Teams of Afghans were sent to Kunar, Nangarhar, Paktika, Logar, Wardak, Ghazni, Paktia, Kandahar and Zabul to identify the most important bazaars from which private sector agribusiness activities could be centered. Surveyed bazaars were ranked, in a sensible manner, by appropriate variables.

Thirty-one bazaars were identified and classified as primary, secondary and tertiary depending on relative importance. Bazaars were to be the selling points and also the gathering points for market data pertaining to inputs such as fertilizer, improved wheat seed, farm machinery and implements. Along with identification of bazaars, Trade Centers in Peshawar and Quetta were leased. Negotiations with the Railway Board for a Depot site also started. These later fell through. An alternate depot site was selected in Chaman.

Farm machinery was needed as the population of pack and farm animals has been severely reduced. It has been separately estimated that under normal conditions, it will take between 17 - 40 years to bring these populations back to pre-war levels based upon a natural increase of 3%. A solution could be to import oxen; however they may have problems with changes in climate and

imported animals could be used for consumption. It is apparent that mechanization is the solution.

Trade Incentives to the Private Sector

A CAS component of PSA started promotion operations in May of 1990. The CAS role was to be threefold: bring Afghan buyers and Pakistani sellers together, obtain the necessary documentation and permits from the GOP, and support the traders through a system of trade incentives (rebates) to cover transport costs. These rebates amounted to Rs.15-17,000/tractor, Rs.4,300-8,000/ thresher, and Rs.17,000/pump. Freight rebates were also paid on fertilizer (Rs.1,400-3,640/MT) and Rs.3,510/MT for wheat seed. The range in rebates depended upon the ultimate destination, in Afghanistan, of the input involved.

Farm Inputs Distributed

By June 1990, 129 threshers were shipped. By September of the same year, 92 tractors and 44 water pumps had been shipped. In early 1990, 1000 tons of improved wheat seed was ordered. These seeds could not be delivered due to fighting in the region and a financial loss was incurred. This was complicated by the fact that the seed also proved to have a low germination rate and was infested. 750 MT were later destroyed as a total loss.

In October 1989, the O/AID/Rep purchased 5500 tons of urea and 1100 tons of DAP from the GOP with the intention of selling it in Afghanistan. DAI, VITA and RONCO were to facilitate its movement into Afghanistan. Cross-border shipments of fertilizer started in November 1989. The concept envisioned critical use of individual Afghan traders from both Peshawar and Quetta.

Trade Centers in Peshawar and Quetta began marketing fertilizer in May, 1990 through Afghan traders. The system was to deliver the fertilizer to the traders FOB PSA Warehouses, Peshawar, Quetta, and Chaman. PSA would pay a rebate to offset transportation costs to the 5 primary bazaars located in Eastern Afghanistan.

During the second quarter, 1990, AID purchased 10,000 MT of DAP to be distributed in Afghanistan towards the end of the year. These 10,000 tons were received in a timely manner. In 1991, 12,500 tons were ordered, canceled due to the Gulf war, and then reordered. The 1991 Fertilizer Marketing Strategy included the use of a consortium (the Afghan Fertilizer Group) for the Southern provinces. In the East, the strategy was to continue with individual traders.

The 12,500 tons finally arrived in July, 1991. It was accompanied by a multitude of problems including bag weight and use of hooks. Some blame was placed on RONCO's contractor. The

bulk of this consignment is still in warehouses due to the suspension of all cross boarder activities. (July-December 1991). Termination of CAS activities was ordered by O/AID/Rep in late 1991. O/AID/Rep management included fertilizer imports as part of the termination decision.

Impact

The July - September 1990 Quarterly Report issued by DAI states that by 1990, 11,100 MT of DAP and 5,500 MT of urea had been distributed by the Project. Per that report, "the marginal productivity of these 16,000 MT of fertilizer measured in terms of additional wheat produced could range from a low of 58,000 to a high of 96,000 MT, depending on the assumptions about current farming practices. These quantities of wheat would have a market value of approximately $12.5 million to $21 million at current Afghan wheat prices and exchange rates." The subject of fertilizer impact is further covered in Annex VIII.

To prevent possible fertilizer backflows into Pakistan, DAI has prepared a strategy for marketing fertilizer in 1992. This strategy, as much as possible, takes every precaution to prevent a backflow into Pakistan and to target fertilizer deliveries to specific bazaars.

Reflow of Funds, Conversion and Use

As of September, 1991, DAI had held approximately Rs 63.5 million worth of fertilizer reflow funds. The proceeds of the sales are presently sitting in a profit and loss account earning the equivalent of about 7% p.a. A working draft has been prepared by O/AID/Rep which suggests that these rupees and others to be generated by the future sale of inputs will be granted to various NGOs in support of their on-going Cooperative Agreements and programs with AID/REP. This subject is still evolving.

Expenditures

Total CAS expenditures through the end of 1991 are itemized as follows:

Description		$ Amounts (000's)
Operations		$1,447
Trade Facilitation		4
Trade Incentives and Marketing		9,582
Commercial Development of Exports		70
	Total	$11,103

We draw your attention to the following:

- Transportation Rebates included in the figure of $9,582,000 amount to $2,212,000

- Commercial Development of Exports went fully to the HVH subcontract.

6. Constraints to Implementation

Constraints Within Control of, or Directly Related to, DAI/AID (REP & W)

(i) U.S. citizens or permanent residents employed, either directly or indirectly by USAID, are not allowed to travel into Afghanistan for security reasons.

(ii) Fertilizer and other inputs must be "targeted". Clearly, regions known to be poppy producing areas such as the northern areas of the provinces of Helmand and the province Nangarhar were to be avoided. Afghanistan is officially the world's second largest producer of opium. Recent unofficial reports indicate that it could emerge as the world's number one producer.

(iii) AID rules and regulations do not always coincide with commercial business practices. The cheapest price, best quality, and most rapid delivery do not always govern purchasing decisions. Waivers are oftentimes unobtainable.

(iv) DAI entered into an agreement with USAID to manage part of the ASSP in August 1989. Certain policy decisions taken by AID have not allowed the Project to advance in a fluid manner. The first was the temporary suspension of cross-border activities in July, 1991. Secondly, the decision was made by AID in August,1991 to cease all CAS activities because of apparent difficulties in promoting private sector cross-border trade. Finally, in September, 1991 it was decided to transfer the expatriate staff from Peshawar to Islamabad.

(v) There is a feeling amongst a number of the Afghan staff that they are viewed without sufficient respect and almost in an inconsequential manner. Whether this is true or not is basically irrelevant. The fact remains that this feeling exists.

(vi) DAI staff are demoralized by the lack of control they have over the project.

Those Constraints not Within The Control of DAI/AID.

(i) There is no local (i.e. Afghanistan) government which can serve as a counterpart to USAID.

(ii) Afghanistan is a country devastated by 13 years of war and considerable outside intervention. It has been estimated that as many as 25 million anti-personnel mines are presently in the country. Roads, bridges, and irrigation systems have been severely damaged. The countryside is ruled by commanders who are nothing short of warlords extracting tribute as and when it is expeditious to do so. The population has been severely displaced, both as external and internal refugees. The population of pack and farm animals has been decimated.

(iii) Afghan businessmen have lost some faith in the ability of DAI and O/AID/Rep to fulfill obligations and programs. They have been disappointed by the inability of DAI to deliver all of the PL480 wheat sold in 1991 and by cessation of the fertilizer program due primarily to GOP inaction rather by DAI or O/AID/Rep.

(iv) The transport of fertilizer through Pakistan to Afghanistan is a significant and costly problem which involves complicated government to government agreements. The end result is that private traders cannot effect the shipment, either in bond or otherwise, through Pakistan. PSA has addressed this restriction by moving commodities (i.e. DAP) under the full control of USAID utilizing road permits requested by DAI.

(v) Some senior AID officials in Pakistan have felt that fertilizer movements to Afghanistan have been diverted back to Pakistan. This has created, at some levels, a lack of faith in the entire concept of the commodity program. The price should have been set high enough to discourage this possibility.

(vi) The risks of moving bulky, low profit commodities through a war zone make such an enterprise relatively unattractive.

(vii) Monitoring various aspects of the project, such as the final destination of the fertilizer, has been extremely difficult at best and the results not easily verifiable.

(viii) The evacuation which became necessary in January 1991, a result of the Gulf war caused a disruption in project activities.

Response to Constraints on Commercial Trade Promotion. DAI has responded to the constraints under their control by developing and pursuing certain interventions. These interventions, already mentioned, included:

- The creation of an Afghan bazaar network to deal with the Afghan private sector.

- The creation of an Afghan cadre to serve as "salesmen" in the selected Afghan bazaars.

- The promotion of farm machinery.
- Fertilizer and seed importation and transport through Pakistan by USAID.
- The offering of freight rebates.

In terms of timing, it may be relevant to note that CAS activities started to deteriorate during the end of 1990 and 1991. During this period 750 tons of improved wheat seed were found to be substandard and were destroyed; 5,000 tons of PL480 wheat, sold to Afghan traders by DAI, were determined to be unavailable (as far as the GOP was concerned). DAI could, therefore, not fulfill the terms of the contracts. Three DAI long-term advisors left the project. Negotiations for a depot in Chaman (the most likely place) failed and a subsequent site was not pursued due to the cessation of CAS activities.

Following suspension of cross-border operations in August, 1991 and a perception by O/AID/Rep that the CAS component was meeting its original objectives, O/AID/Rep management terminated the CAS component in September, 1991, including all fertilizer imports; the major activity under CAS.

7. Summary

To date, the CAS component has probably not reached expected outputs. This is, under the prevailing circumstances, understandable. There have been many constraints not within the control of DAI/AID which have created difficult obstacles. Yet, these have been met and solutions sought with some degree of success.

Since the inception of the project, approximately 13,000 MT of DAP and 9,000 MT of Urea have been marketed. An additional 10,000 MT of DAP is presently in inventory. A well thought out contract with the Afghan Fertilizer Group (a marketing organization) has been developed which could be the starting point for a more vigorous and efficient effort now that the border has been reopened.

The machinery program (tractors, threshers, etc) has been somewhat effective but not to the extent hoped for. CAS began its promotion program in May, 1990 and was successful in that a significant number of threshers were sold. Tractors were not yet included in the program. In the third quarter of 1990, the program was expanded to include tractors and water pumps. Towards the end of the year, an important trade fair was held. The results were somewhat disappointing with 129 threshers sold in May 1990 and a similar quantity sold after the fair. The fair did not, therefore, provide much value. The fair did not result in the sale of any tractors.

We believe that fertilizer costs have been above market rates. This has been due largely to high freight rates, excessive handling at the port of entry, and inventory financing.

Special attention now needs to be paid to those constraints which are within the control of DAI and O/AID/Rep. It is vital that they take a truly private sector approach to the movement and storage of inputs with attention given to minimizing risks and expenses by working with experienced private sector firms and brokers.

Measures to assure that commodities reach those areas in Afghanistan targeted by the project are covered in Section II,B.5 (Monitoring). Attempts have also been made to obtain receipts as verification of delivery.

B. PPA Component

1. Detailed Objectives

The initial concept of the PPA component is set out in Section I of the report. The AAM Amendment No.2 states specifically that a market surveillance and analysis system will be essential to monitor prices in Afghan markets, to provide a basis to set subsidies as needed and to identify rapid price rises which will help identify shortages in regional markets.

More specific objectives of the planning component, as listed in the strategy paper, are to establish a capacity to provide accurate and timely information on Afghan agriculture to the Commercial Agricultural Sales and the Agricultural Development and Training components of the PSA, develop resource inventories and maps of the project areas for field use, create the base for long-range planning for Afghanistan's development through the generation of geographic information systems, support immediate marketing decisions of the project, and for Afghan traders, through a marketing information network, and establish integrated planning for the development of target areas selected by the project.

PPA was to be the overall project management tool, through both Marketing Information Services (MARIS) and GIS components, to help the CAS unit and the O/AID/Rep plan food requirements, changes in land use, cropping patterns, infrastructure status and help with program targeting (e.g. VITA ARR component). PPA would provide the strategy through which ASSP will promote agricultural rehabilitation in Afghanistan, support indigenous agribusiness, and foster agricultural trade between Afghanistan and other free market countries. The PPA would systematically gather and analyze data on all aspects of Afghan agriculture. In so doing, PPA would create a market surveillance and analysis system essential in the monitoring of ASSP programs (DAI, 1990).

2. Expected Inputs

Figure 2 indicates the previous structure for the PPA component while figure 3 gives the structure at present. The PPA component relies heavily on input from project subcontractors, including Earth Satellite Corporation helping with GIS, GIC assisting with design and analysis of the MARIS component and several DAI-fielded consultants who assisted with specialized tasks under MARIS and the Surveys and Monitoring component. The latter component included two non-U.S. citizen expatriate cross-border monitors.

Figure 2. Organogram of The Original Programming, Planning, and Analysis Component

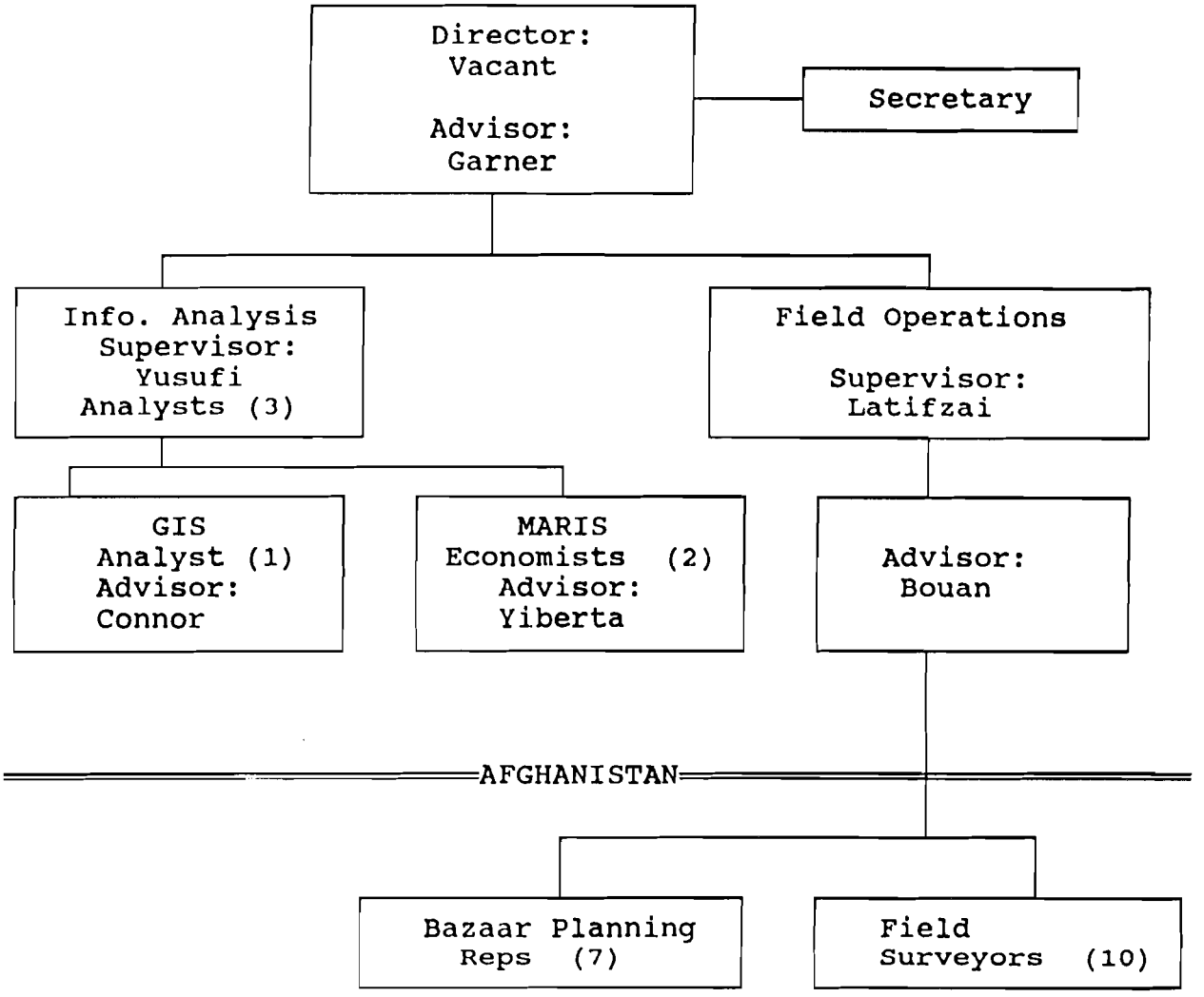
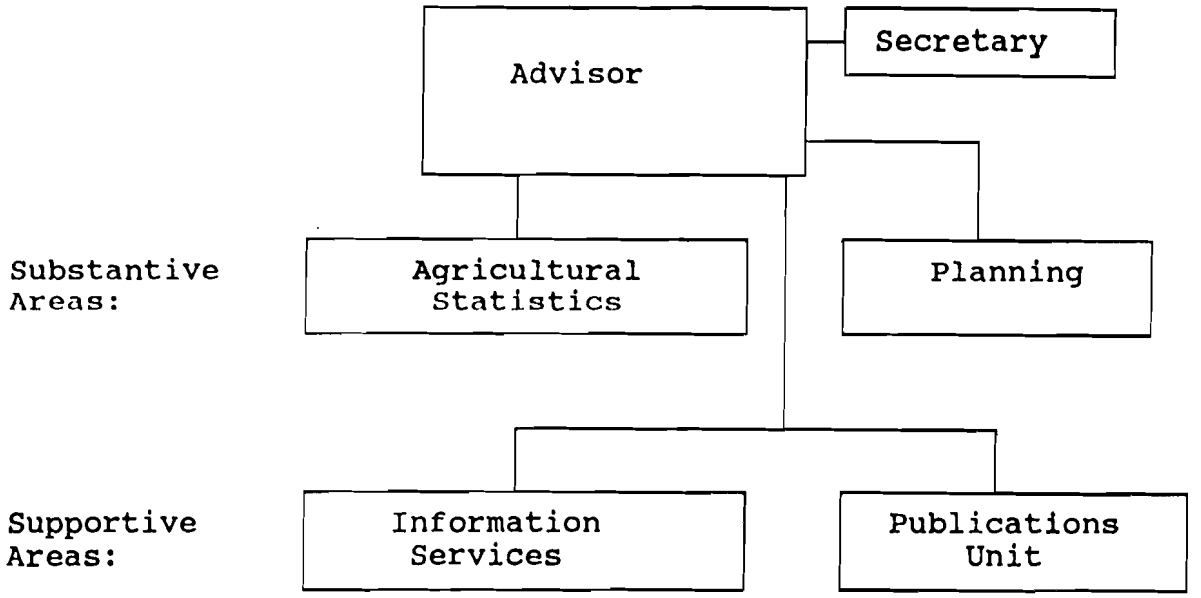


Figure 3. Organogram of the Programming, Planning And Analysis Component of PSA in 1992



The Agricultural Statistics Unit is responsible for the two ongoing studies approved under the analytical agenda and is staffed by 23 field surveyors in Afghanistan and two field supervisors. The Information Services Unit provides 75% of its services to PPA and includes 8-9 staff, many working in GIS, which is located in this unit. The publications unit serves all project components.

3. Expected Outputs

Some outputs, as anticipated in the DAI contract, included: Providing information to Afghan traders and marketing agents on current prices of a broad basket of goods in different locations in Afghanistan; provide current market information and contact with travelers in Persian Gulf markets; economic analysis of the agricultural and rural sector of Afghanistan focusing on the agricultural rehabilitation objectives of the project; construction of a database on consumer prices, commodity prices and wage rates to assist the CAS component with operational decisions; and development of resource inventories for land use, irrigation systems and roads based upon a user needs assessment.

Some more specific outputs will include detailed GIS information on land use, extent of irrigated area, village and town locations, roads and related infrastructure and changes in these items over time; a market information system which consolidates price, market and data from specialized surveys; assessment surveys from cross-border units to identify bazaars (primary, secondary and tertiary), distances between bazaars, road conditions, travel times, transportation costs, and local political and security conditions.

4. Anticipated Interventions

Interventions taken through PPA activities would be in response to information gathered and analyzed under MARIS and GIS as well as information gathered through cross-border surveys. MARIS analysis would pinpoint rapid price increases for agricultural products, assisting with relief efforts in areas requiring high priority for CAS commodities. Price and wage data assist in targeting CAS agricultural machinery deliveries. GIS information would be used to identify areas requiring infrastructure rehabilitation and analyze changing cropping patterns, both of which can lead to interventions. The analytical work on the Food Needs Assessment will help facilitate informed and timely responses on the part of O/AID/Rep and other agencies to food problems in Afghanistan.

5. Implementation

Market Information System (MARIS) and Cross-border Surveys

During the first three months of the project (August-November, 1989), about 12 Afghans were recruited to start cross-border surveys, the first of which started in December 1989. The initial work focused on the location and characteristics of bazaars. During 1991, approximately 100 bazaars were surveyed in 12 provinces. During the first year of the project, four major surveys were carried out in bazaars in areas where PSA was trying to work. These first four surveys provided information needed to position subsequent project activities.

Information currently available includes:

(i) Bazaar information based on the 4 surveys plus the continuing work on agricultural inputs and prices of key commodities including numbers of shops, shops selling wheat and fertilizer, sources of supply, quantities sold, truck traffic, road types and condition, input availabilities and livestock markets.

(ii) Transportation data including prices, obstacles, and delivery times.

(iii) Trade catchment points (border crossings) role and size of trade centers, commodities traded, nature and pattern of trade, modes of transport, levies and security.

(iv) Agricultural resources in project activity areas. This is related to the intensive data collection in two sites, one in Wardak and one in Zabul, to feed into GIS maps for those areas.

(v) Tractor survey including crops used on, ownership and use patterns, type of equipment in service, repair facilities.

(vi) Ground truthing for GIS including condition of wheat crop, date planted, varieties, diseases, infestations, cropping patterns, exact location.

(vii) Fertilizer merchant survey including location of merchants, sales of other products, promotional activities, location of customer, size of sales by type, sources of supply, prices, transport modes, timing of supplies, finances and constraints.

In addition, PPA staff were beginning to assume a leadership role in planning and programming overall project activities, particularly the CAS component. With cancellation of the CAS component in August 1991, there were fewer opportunities for PPA staff to provide direction to cross-border activities.

The Agricultural Statistics Unit now carries much of the work formerly under MARIS. The Agricultural Statistics Unit consists of 7 teams of 3 persons each, one team being devoted exclusively to MARIS work. The work is coordinated by an agricultural economist assisted by a junior Agricultural Economist and Statistician. Major activities underway are (a) the food needs assessment study and agricultural inputs assessment under the "analytical agenda" for 1992, (b) assistance with monitoring fertilizer shipments and (c) ground truthing under the GIS program. In June-July 1992 the team will work on collecting more accurate wheat yields and wheat harvest data by a combination of field surveys (in cooperation with ADT crop cut teams) and GIS data on wheat area, and in the fall will repeat field surveys to estimate 1993/94 wheat plantings.

GIS and Planning Functions

GIS work is carried out under the planning section and is coordinated by a DAI advisor with 6 local staff working on data entry, analysis and mapping. The U.S.-based subcontractor, Earth Satellite Corporation, is utilizing data from satellite observations and carrying out interpretation in the U.S. with liaison and coordination provided by a geographer posted at DAI

headquarters. Interpretation of satellite imagery data is carried out in the US, but most could now be carried out in Islamabad.

The applications of GIS that are applicable for the PSA project goals and purposes can be summarized by going from the simplest to the most complex applications of the technology:

(i) Presentation/display of information. The displays have been derived by digitizing maps generated by the U.S. Defense Mapping Agency (DMA). These maps are then used, in conjunction with geo-positioning systems to find PSA sites in Afghanistan and the locations of infrastructure (villages, roads, irrigation works, etc.) as well as contour maps.

(ii) Annotate and enhance the base maps generated from digitalizing DMA maps. This was described above. Other donors, using geo-positioning systems borrowed from DAI, have used these maps to help pinpoint locations in Afghanistan where they are working (e.g. schools, health clinics, roads, irrigation rehabilitation). The PPA unit also conducted intensive field surveys in small areas of two provinces where surveyors identified everything on the ground and this data was put back into the digitalized base maps.

(iii) Visual display of satellite-generated data. Satellite data is now used for applications such as ground cover which is overlaid on the digitalized base maps. This will provide part of the information needed for the food needs assessment study as well as key information needed by other donors (e.g. forest cover, areas where cropland has gone out of production, probably indicating irrigation system break-downs; more precise location of roads, etc.). At this stage, ESC has been providing computer generated maps but not the raw data from the satellites. Ground truthing required to assist in distinguishing land cover types of crop grown and estimated status of crops is also needed at this stage. The DAI staff now have the hardware, software and training to take over this area of work and must quickly come to an agreement with ESC to provide the data tapes so interpretation can take place in Islamabad and Afghanistan. If this is done, we recommend the use of a short-term consultant (not from ESC) who is an expert on GIS applications to agriculture, particularly identification of different crops and crop growth status and could provide guidance on interpretation of the digital data and ground truthing methodology.

(iv) Interactive/live data base - this is the interpretative stage following from (iii) above where analysts interact with the live display of digital data to work with various sources of data regarding land cover signatures and signatures for other types of structures.

(v) Modelling/Simulation - the examples used now are in crop suitability modelling where a variety of satellite - generated data is synthesized to estimate growing regions for crops. This would have to be conducted at ESC headquarters where they have access to all the data sources and computer models needed for this work.

If PPA undertakes the major mapping exercise that we recommend below, it would position the PPA component very well in meeting a probable objective of a future USAID bilateral program in Afghanistan, that of assisting the major donors and lending agencies with analyses and feasibility studies. This exercise would require considerable resources for ground truthing and it may be desirable to reactivate the AgriSystems sub-contract to assist with this as they have 130 trained Afghan staff in the field who have been working on a major farming systems study for the SCA.

Training

Staff in the PPA component have been both a recipient as well as provider of training. Training is best discussed under the several different categories of employees within the component.

Surveyors and Monitors. While individuals have come and gone and titles changed, the number of staff in this category has remained fairly stable at approximately 25 people. These staff have been provided training in simplified survey and monitoring techniques including observation, reporting, and validation and cross-checking of results. Courses offered by Save the Children (UK) have been used for this purpose. Training in team building, communication skills, and community participation has been provided to the surveyors. Also, informal, on-the-job training using survey exercises, pre-tests of survey instruments, and case studies of past survey's in an effort to learn for the purpose of change and improvement.

Analysts. Analysts are responsible for design of PPA studies, development of data gathering, interpretation of information and report writing. These staff have received on the job training with limited short course exposure. The people in this category ranged from one to three people, supplemented by short term advisors.

GIS Technicians. PPA has maintained three full time GIS technicians and trained another three individuals at a lower level to do digitizing of base maps. As of this writing there has been a complete turnover of GIS technicians. Training has included Earthsat Short Courses where Earthsat sent a two person team to provide two one-month sessions in the use of the Arc Info Software. The training was conducted in Peshawar. Next, several

staff including the Director of Information Services, the PPA Advisor, the DAI Liaison with Earthsat and DAI's home office backstop staff member attended an orientation to Arc Info and use of remote sensing at the University of Nebraska. Also, all GIS staff spent considerable time using the manuals and tutorials to self-learn most of the advanced features that had never been covered in the formal training.

Information Unit Staff. Staffing levels in the information unit has ranged from three to eight people. While most staff are hired with requisite skills, some training has been provided in local computer schools, English language training, and on the job training.

In terms of the training provided by PPA staff to others, the following are most important:

MARIS staff participated in training for ADT staff, organizing a series of interviews with ADT extension workers on topics of grain production, marketing, crop calendars, and horticultural crop diversity. Extension workers' responses provided a variety of information useful for ADT program planning. MARIS staff also briefed ADT extension workers on the plans for fall fertilizer distribution and their role as field monitors in selected bazaars.

The IU organized training for approximately 100 people to enable them to better use computers to carry out their work. This training included staff in all components and units within the project and focused on the following: Word processing, Database software and applications, DOS operating system, Computer Graphics.

Expenditures

Expenditures of the program budget funds for PPA support through the end of 1991 was $1,721,000 out of a total expenditure of program funds of $15,828,000, or about 11%. This relatively low proportion of total expenditure of program funds is due to the fact that PPA had relatively fewer field staff and is not charged for major procurement orders.

Monitoring Cross-border Trade

This component of MARIS has been accorded a lower priority given the approved analytical agenda and the pressing need to do the bazaar and trader surveys inside of Afghanistan. We feel that estimating changes in cross-border trade in and of itself does not provide that much useful information at this stage due to the clandestine nature of some of this trade, the

traders obvious reluctance to disclose commercial information to strangers and the inability to use cross-border trade data as an indicator of PSA impact.

Another aspect of monitoring that PPA staff has initial responsibility for was monitoring fertilizer distribution in Afghanistan. While this was necessary to satisfy O/AID/Rep, this was a difficult and often risky task which resulted in an overload of current PPA staff. This responsibility has now been transferred to ADT. The PPA program has gradually put in place a substantial capacity for collection and analysis of information inside of Afghanistan.

- Field surveys in bazaars, border crossings, local resource inventories and agricultural mechanization.

- Monitoring of ADT and PSA activities, e.g. input deliveries (the latter task now transferred to ADT).

- Key informant interviews with traders, truckers, farmers and local leaders.

- Remote sensing capabilities backed up by ground truthing capabilities.

- Ability to incorporate information provided by other agencies as well as the ability to provide these agencies techniques and information under both MARIS and GIS activities.

- Twenty - four trained field surveyors and supervisors working cross-border.

- Ten agricultural monitors working cross-border.

- Forty ADT extension agents and bazaar representatives working cross-border who provide regular reports useful for PPA and can assist PPA with special studies.

- Key informant network in Peshawar and Quetta and debriefing of travelers.

- Washington and Islamabad-based analysts.

Impact

The general goals of providing information about the agricultural conditions of key PSA areas, operation of marketing systems, input availabilities and monitoring have been accomplished but the project has been slow in progressing to the next stage due to (a) staffing changes, (b) evacuation of staff from Pakistan, (c) temporary suspension of cross-border

activities and (d) problems working with ESC. Nevertheless, accomplishments to date have been substantial and capacity has been established to move along in the analytical agenda and to start making a major contribution towards O/AID/Rep and other donors' capacity to plan activities in Afghanistan under the current political and security situation.

6. Constraints to Implementation

GIS. Use of GIS is relatively new in Afghanistan and DAI and the main subcontractor for the technology, Earth Satellite Corporation, had not worked together on this type of project. The original DAI field team did not include a specialist who understood the potential uses that could be made of this technology and what kind of field data was required to get the system working to provide useful outputs to the PSA project and other potential users. Therefore, progress was slower than anticipated and Earth Satellite Corporation costs were higher than expected.

Training of local technicians also took time but by mid-1991, the PPA group was working on a land cover map of Afghanistan. A key output is determination of cropping areas and net additions and losses of irrigated cropland between time periods. One substantial ground truthing exercise was carried out and more are planned to try and identify signature patterns for different crops. The work on establishing signatures for ground cover and specific crops has been hampered by lack of expert advice in these areas.

Data Collection and Analysis. Given the objectives of this work and the chaotic circumstances under which they had to operate in Afghanistan, if was difficult to establish clear methodologies and procedures to be followed. Consequently the data that PSA as well as most other projects collecting cross-border data were open to criticism on grounds of reliability, representativeness, sampling frames, coverage, etc. A strong professional in agricultural economics was badly needed and DAI should have made every effort to field such a person.

Donor Demands for PPA Expertise. This is a welcome development and fits into O/AID/Rep's strategy for a future bilateral program but is now beginning to cause constraints in getting on with the work expected by O/AID/Rep. One solution is to invite donors to send qualified local staff to DAI for hands-on training so they could then perform most of the analysis themselves. The other would be for DAI to subcontract with other donors to provide analysis and the fees could be used to offset some additional local costs or to purchase additional software or geo-positioning systems.

Staffing. The PPA component lacked an advisor with strong analytical and GIS capability for the first 2 years. There seemed no strong, underlying analytical agenda that would lead to a number of discrete research projects, each with a well defined goals, objective, methodology and expected output. This was reflected in a slow, expensive start-up process of the GIS work. Staffing now is one of the strong points of the PPA component and with a few key consultant inputs and a good Agricultural Economist to provide leadership to the staff capacity already in place, progress should be rapid.

General. We feel the PPA unit should have always been located in Islamabad with organization and monitoring of cross-border surveys handled by local supervisors posted in Peshawar and Quetta. The work on GIS and analysis of statistical data needed a more central location to attract highly qualified staff, have better access services for the information and publication unit, be able to better interact with some key clients for their products (e.g. O/AID/Rep, U.N. agencies, other bilateral programs) and better communicate with subcontractors. Following the move to Islamabad, this unit has been able to move ahead rapidly.

7. Summary

The PPA component has gained strength and momentum since mid-1991. Inclusion of the support areas of Information Services and the Publication Unit has improved the services provided to the PSA project and has concentrated the considerable capabilities in computer operations in one unit. The PPA component is gradually gaining the capabilities and confidence to assume more intellectual leadership in providing direction, particularly for any new initiatives that may be called for if the PSA project is extended. Demand for GIS services is growing and should assume the lead role if the project is extended.

C. ADT Component

The effective supply and use of agricultural inputs has been greatly reduced due to the conflict in Afghanistan. Abandoned fields are overgrown with shrubs and weeds. Soil has become compacted and difficult to till. Draught power is in short supply because up to half the oxen have been killed. Wheat yields have deteriorated by as much as one-third of the genetic potential of the original seeds. Farmers in many areas report that phosphate fertilizers (DAP) are in chronic short supply. (DAI 1990.A).

1. Detailed Objectives

The Agricultural Development and Training Program will:

(i) Help restore agricultural productivity in large areas of eastern and southern Afghanistan through the "resurrection" of a coordinated agricultural extension service.

(ii) Field test and demonstrate agricultural technologies which will pave the way for large scale provision of agricultural inputs through the CAS component of PSA. Such commodities include (1) seed and other planting materials of improved varieties or clones; (2) agricultural machinery such as appropriate and improved reapers, plows, threshers, sprayers, fruit graders, grain drills, and drip and bubble irrigation systems, and (3) new pesticides with benign environmental impact.

(iii) Develop and implement a seed multiplication strategy inside Afghanistan. Initial efforts will focus on wheat.

(iv) Develop and implement a strategy for rehabilitating and promoting horticulture crops in Afghanistan.

(v) Develop training courses to produce the skilled workers needed to run the extension service.

(vi) Prepare annual training plans which will include a training needs assessment of all field and headquarters personnel as well as participating farmers.

(vii) Identify specialized technical training resources available in Pakistan in agriculture, accounting, management, and other skills needed for ADT work.

2. Expected Inputs

The expected inputs in order to fulfill the stated objectives of the project include:

(i) A sum of approximately $1.6 million for the ADT component for restoring agricultural productivity.

(ii) The development of a decentralized extension network within each of the targeted provinces of Afghanistan with training and backstopping coming from appropriate offices in Pakistan.

(iii) The establishment of observation/demonstration trials in the target provinces.

(iv) The training of extension supervisors and extension agents, both inside and outside Afghanistan, so that they in turn can train the farmers in Afghanistan.

(v) The development of training courses to produce skilled workers, i.e. tractor drivers, mechanics, thresher and reaper operators, etc.

(vi) The development of a complete package of practices for the various crops (especially wheat) including (a) high quality seed of improved, high yielding, disease resistant varieties, (b) optimum rates of fertilizer, (c) proper seedbed preparation (d) control of weeds, diseases and insects, (e) proper harvesting operations to avoid damage to the grain (seed) and harvest losses, (f) proper handling and storage of the commodity to prevent losses and to produce a high quality product.

(vii) The development and implementation of a strategy for seed multiplication of improved varieties in Afghanistan.

(viii) The introduction and screening of promising germplasm which may be adapted to conditions in Afghanistan.

(ix) The introduction of agricultural machinery into Afghanistan such as appropriate tractors, plows, threshers, reapers, tine tillers, seed drills, P.T.O. pulleys, disc harrows, trailers, shellers and ridger attachments.

(x) Provision for sufficient fertilizer and seed for demonstration/observation trials.

3. Expected Outputs

(i) Establishment of agricultural demonstration plots and/or farms near key population and trade centers.

(ii) Training to transfer new technology to Afghan farmers, custom tractor operators, marketing agents and cash crop producers (such as fruit growers).

(iii) Development of higher technology and output packages for testing on farmers' fields.

(iv) Implementation of a seed multiplication strategy inside Afghanistan. Initial project efforts will focus on wheat.

(v) Development and implementation of a strategy for rehabilitating and promoting horticultural crops in Afghanistan.

(vi) Creation of an agricultural extension service which will help restore agricultural productivity in large areas of eastern and southern Afghanistan.

4. Anticipated Interventions

In order to fulfill the objectives of the ADT component of the project, certain interventions were anticipated and provisions were made for the interventions.

(i) Introduction of wheat, maize, rice and potato germplasm.

(ii) Re-introduction of high-yielding fruit trees and other tree crops (apples, pears, apricots, pomegranates).

(iii) The multiplication of the improved seed and fruit stock inside Afghanistan.

(iv) Supplying herbicides, fungicides and insecticides as needed.

(v) Providing machinery in Afghanistan for appropriate testing and observation.

(vi) Furnishing fertilizer (DAP and sometimes urea) for wheat, rice and maize demonstration/observation trials.

5. Implementation

Plant Genetic Materials And Variety Screening

The ADT component has made good use of existing varieties which are locally available and has introduced germplasm of several species from various sources.

Wheat. Wheat is the most important crop in Afghanistan. The statistics from before the war, 1978, placed the wheat acreage at approximately 2.34 million hectares with 0.48 million hectares of maize, 0.31 of barley, 0.21 of rice, 0.13 of cotton, 0.11 of vegetables and 0.21 million hectares of fruits. Approximately 50% of the wheat is irrigated and this irrigated area accounts for 80% of the total wheat production (Lea, 1988).

The vast majority of wheat grown in Afghanistan is autumn sown. The fall-sown wheats probably occupy 90 to 95% of the hectarage. Both spring and winter habit wheats can and are sown at this time. Which type is sown is determined by the temperature during the growing season. Autumn sown spring wheats are estimated to occupy 80% or more of the total. The winter type wheats are grown at higher elevations (above 1800 meters). Two new improved varieties of wheat, Pirsabak 85 and Pak 81, were identified early in the program and have been widely tested. These varieties are spring wheats and are usually sown in November and December. They can be grown under irrigated or rainfed conditions; when either or both combined are above 400 mm (Saari, 1990).

The cultivar Bezostaya 1 has been distributed in the higher elevation areas (above 1800 meters) in limited quantities. It has performed reasonably well, but has not been well accepted in all locations due to grain and straw quality. It was recommended in 1989-90 because it was the only variety commercially available with a proven performance record, and a known safety record from disease and winter killing.

Testing of commercial cultivars available in other countries in the region of West Asia suggests that the variety Atay 85 from Turkey is suited to high elevation irrigated areas of Afghanistan. Seed of this variety is being increased by ADT and the variety is being promoted. Atay 85 is a high yielding cultivar, moderately resistant to stripe rust and resistant to stinking smut. In 1992, 6 tons of this variety will be introduced in the provinces of Wardak, Logar and Paktika for demonstration and multiplication.

ADT works in concert with the Swedish Committee for Afghanistan (SCA) which has established a 100 acre farm near Charssada (near Peshawar) where over 5,000 lines are being tested from which promising pre-basic seeds will be selected. The SCA wheat program has been underway for more than 4 years.

Maize. When the ADT maize program was first initiated in early March 1991, DAI staff had determined that the Afghans, for the most part, wanted maize for food and preferred a yellow flint type. The crop had to fit in a rotation with wheat as the main crop and therefore earliness (short duration growing season) was also necessary. Hybrids, which need new seed each year, were not considered appropriate and it was decided to work with open pollinated varieties. It is known that a variety which takes 110 days to mature at 1000 masl may take 140 days at 2000 masl. To take elevation into consideration, it was decided to request genetic material for mid elevation (500-1500 Masl) and highland (1600-2000 Masl) (Rice, 1991).

In May 1991, three of the DAI/ADT staff visited CIMMYT in Mexico and, with the assistance of CIMMYT maize breeders, selected several experimental populations for both the highland and mid-elevation regions. These populations are being evaluated along with breeding lines from the CCRI maize program and with local varieties.

Two CIMMYT varieties (population numbers 31 and 45) and two Pakistan varieties (Kissan and Sarhad Yellow) are being observed at 20 locations at intermediate elevations (500-1500 meters). Three CIMMYT varieties (pop.845, Batan 8686 and Across 8786) and one Pakistan variety (EV-II) are being observed at 20 locations at higher elevations (2000 meters).

The 1991 results of the maize observation trials can be summarized as follows: At the higher altitude locations none of the new varieties (pop.845, Batan 8686, Across 8786 and EV-II) are earlier in maturity than local varieties being used. Population 845 will receive further evaluation. Batan 8686 and Across 8786 will be dropped.

At the lower elevations all of the varieties appear to be better than the local varieties. In Helmand, Kandahar and Nangarhar provinces, yields ranged from 2.0 to 12.4 tons per hectare. The average yield of the local variety was lower in each province than that of the 4 varieties. Sarhad yellow was the highest yielder, with average province yields being from 1.2 to 4.6 times the yield of the local check variety. All 4 of these varieties will receive additional testing. In 1992 the maize program will continue to emphasize new variety observations, demonstration plots and seed multiplication.

Thirty tons of the variety Sunehri will be purchased from the Maize and Millet Research Institute at Sahiwal, Pakistan. This is an early maturing yellow maize variety.

Rice. In early 1991 ADT procured four metric tons of the rice variety Basmati 385 to be used for observation/ demonstration trials in Afghanistan. Basmati 385 is a long grain popular Pakistani variety of rice which was released to the Pakistani farmers in 1985. The variety has been tested by SCA in Nangarhar, Laghman, Kunduz and Takhar provinces. ADT extension personnel in Nangarhar (Darrah Nur) and Baghlan provinces have introduced this variety to progressive farmers for testing. Each province has received two metric tons of rice seed for 15-20 hectares of land.

Farmer acceptance of Basmati 385 in both Baghlan and Nangarhar provinces was good. Grain yields in Nangarhar province were severely affected due to hailstorms prior to heading and during grain filling. The overall average yield of Basmati 485

in Baghlan province, grown by 40 farmers from 13 villages, was 3.8 t/ha as compared to 2.3 t/ha for the local variety.

In the rice program the extension staff have emphasized improved practices including introduction of a new variety, row planting, application of fertilizers and evaluating the yield and farmers' acceptance of the new variety.

Positive results from the 1991 performance of Basmati 385 have confirmed its selection for more seed in 1992 and 10 tons have been ordered for distribution in Baghlan and Nangarhar provinces.

Seed Multiplication and Demonstrations

(i) Wheat As indicated in Table 2 considerable quantities of wheat seed have been sent to Afghanistan since 1989. This seed is used to establish demonstration plots using the best available technology. Fertilizers are also made available to these demonstration farmers. The farmers are contracted to return to the program 70 kgs of seed for every jerib of land planted with project seed.

Table 2. Estimated Impact of Improved Seed Supplied to Afghanistan

	MT Improved Seed				
Year	ADT Annual Program	Seed Available from Farmer Multiplication	Hectares Planted to Improved Vars.	Estimated Wheat Produced MT	Mil.$
1989	189		1,260	4,032	0.9
1990	545	1,000	10,300	32,960	7.3
1991	507	7,640	54,600	174,720	38.8
1992	600	35,000a/	237,333	759,466	168.6
Total 89-92	1,884	43,640		971,179	215.6

a/ Assumes approximately 20 percent of 1991 wheat production is saved for seed.

The Director of ADT and his staff estimate the impact of the ADT wheat program as follows:

"Assuming that improved wheat seed yields 40 percent more than local varieties, a total of 388.5 thousand additional metric tons of wheat will be produced over the period 1989-1992 from improved varieties

distributed by ADT and through farmer multiplication. The value of this additional wheat is $86.2 million in terms of current wheat prices and exchange rates in Afghanistan. The additional production of 388.5 thousand metric tons is enough to meet the estimated annual requirement for grains for 1.9 million people."

For 1992 ADT has ordered 600 tons of Pirsabak 85 seed wheat. The 600 tons will be allocated as follows: 200 tons are to be distributed by Mercy Corps International (MCI) in coordination with ADT. Next, ADT will distribute approximately 200 tons of new wheat seed to ADT working areas. Emphasis will be given to seed production increases and demonstration of the complete package of practices for wheat (moldboard plowing, seedbed preparation, seeding, reaping, threshing and seed cleaning). Finally, ADT will collaborate with SCA to distribute the remaining 200 tons north of the Hindu Kush.

A summery of 1990 wheat yields is given in Annex Table IV-1. The improved varieties yielded, on average, 56% more than the local varieties.

(ii) Maize Only 2 or 3 kgs of seed of each of the maize populations were available from CIMMYT for use in the Afghan program. Therefore, it was necessary to increase the seed of the new varieties at the same time that they were being observed in the experimental trials. The Cereal Crops Research Institute, Pirsabak, has assisted ADT with this seed increase. Seed of the short duration (higher elevation) varieties was grown in the Swat Valley and seed of the longer duration (lower elevation) varieties was grown at the Pirsabak Station. Excellent yields, ranging from 3.4 to 5.4 mt/ha, were obtained from these seed multiplication plots. Detailed results are presented in Annex Table IV-2.

In June of 1991, 30 demonstration plots (one jerib each) and 36 multiplication plots (five jeribs each) were planted with Shaheen (white) maize seed in Nangarhar province. Plans were made to continue multiplication of the varieties Sarhad yellow, Pop. 31, Pop. 45,Pop. 845, and Shaheen at D.I. Khan in early 1992.

(iii) Summary of Demonstrations and Demonstration Plantings in Afghanistan, 1989-91

As indicated in Annex Table IV-3 there were many demonstrations in Afghanistan on iron deficiency in apples, sulfur on fruit and vegetables, tractor performance, wheat reapers and wheat threshing. There were also many plots demonstrating the performance of improved varieties or wheat, maize and rice; the effect of fertilizer on potatoes, fruits and vegetables; and the effectiveness of 2,4-D for weed control.

Horticulture

(i) Fruit Trees Distributed in Afghanistan. Annex Table IV-4 indicates the quantities of apple trees that have been distributed in the provinces of Logar, Ghazni, Wardak, Paktika, Nangarhar, Parwan, and Kandahar. In 1991 10% of the trees were pear, plum, and apricot.

These orchards, when in full production, will easily produce 3000 5-ton truckloads of fruit per year creating employment for picking, grading, packing, and transporting besides the economic value of the crop itself.

(ii) Nurseries. ADT has supplied nursery material to Afghanistan as indicated in Annex Table IV-5.

ADT now has 8 nurseries in 5 provinces in Afghanistan (Logar, Wardak, Ghazni, Paktika and Kandahar). In full production each nursery should produce 100,000 fruit trees. This means that ADT will furnish with the current program, 800,000 trees each year. 1,000,000 trees/year is within the abilities of the program. This amount of trees could produce over 10,000 5-ton truckloads of fruit per year.

(iii) Vegetable Production. Vegetable production is recommended for inter-cropping with fruit orchards. In the first quarter of 1991, peas (300 kg) and onion seed (20 kg) from Quetta and 50 lb each of cauliflower and carrot seed from the U.S. were sent for planting in orchards in Wardak, Ghazni, Logar and Paktika provinces.

(iv) Potato Program. As the result of a study and a report by a potato specialist in July/August 1991, an ADT potato program was initiated, training was conducted (in the winter of 1991-92) and ADT has now ordered 3.5 tons of potato seed of the Diamant variety from Punjab, Pakistan.

Training.

The ADT training unit offers a wide range of courses, both technical and non-technical, to fit the needs of the target groups to be trained. ADT training profile (Annex VI-A) gives a clear picture of the various courses offered and the duration of the courses. It will be noted that from August 1989 up to early December 1991, 246 people were trained with a total of 7,539 man days of training. This profile does not include the 133 trainees who participated in the 1991-92 twelve-week winter training program which began on December 15, 1991 and ended on March 7, 1992.

The training of extension personnel includes both classroom training and field site visits. At the end of the training period detailed plans are developed by extension supervisors and extension agents for the coming year.

Annex VI (B through I) provides an overview of the various types of training programs offered.

Technology Transfer.

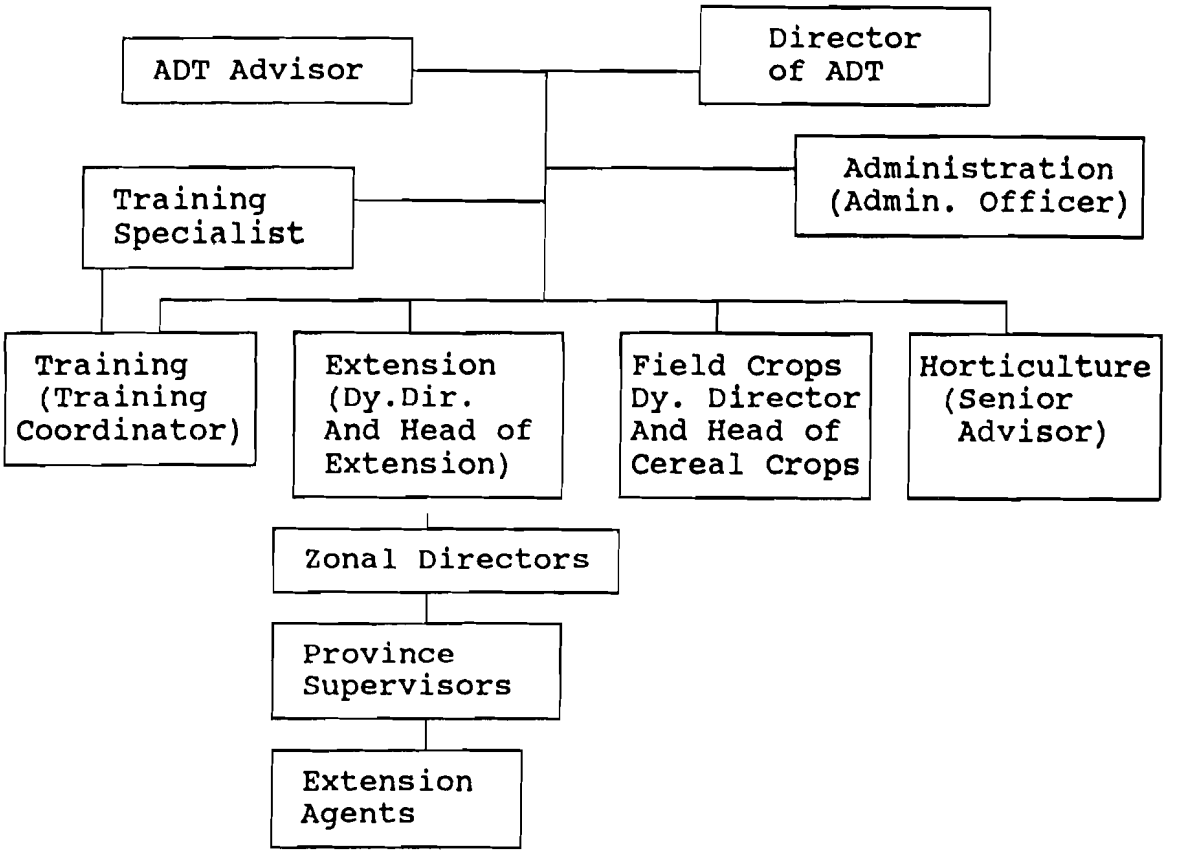
DAI's scope of work and instructions were not to start a research program but to limit their work to only observation trials, extension work and seed multiplication. This has been done and given the cooperation of GOP research institutions, CIMMYT and others, there has been no need to set up an ADT research program to achieve project objectives.

The potato program has great potential for increasing local food supplies and farmer income. The traditional linkage still exists between the lower areas where storing seed potato is not practical and high elevation areas where potato storage is possible. Indian technical assistance has been working to try and improve traditional seed storage methods. Good seed, in limited supply, is available from a commercial producer in Punjab Province and the PSA project has been able to secure 3.5 tons for this summer for high elevation production. The program should be limited to areas where an assured supply of fertilizer, including urea and potash, can be provided, to gain maximum seed multiplication increases.

Extension Services inside Afghanistan

Organization And Administration The organizational framework for the ADT component is given in Figure 4.

Figure 4. Organogram of the ADT Component of ASSP/PSA Project



The field extension staff are based in Afghanistan where the action is. The headquarters extension staff are based in Pakistan and provide logistical support and training to the field staff. The provincial extension supervisors and the extension agents (village level workers) are members of the field staff. The director of ADT, the head of cereal crops and the head of extension are members of the headquarters staff. A zonal director, a recently created position, could be considered either field staff or headquarters staff. Zonal directors are the vital link between the headquarters and field.

The extension supervisor meets frequently with his extension agents who in turn make frequent visits to the farmers in their area. Most, if not all, of the extension supervisors and extension agents are farmers, have their own land and do their own farming. There are 3 to 13 extension agents in a province.

The provinces in Afghanistan which have active extension programs supported by ADT are Helmand, Kandahar, Logar, Paktika, Wardak, Ghazni, Nangarhar, Baghlan, Takhar, Parwan and Bamyan. It has not been possible to expand these programs into the North due to logistical and security constraints.

The location of extension activities and extension personnel in 10 of the provinces in Afghanistan and Pakistan is summarized in Annex Table IV-6.

Extension Methodology. ADT is training extension agents to transfer suitable technologies from Pakistan and elsewhere to the Afghan farmer. Field activities focus on training farmers to adopt new technologies and to improve crop management which leads to increased yields. Afghan activities are planned with specific goals and objectives for the field staff. Recently an extension consultant studied ADT's Agricultural Extension System for Afghanistan. A reformed extension system is proposed which is patterned after the T and V system of agricultural extension. The proposal is under study.

Extension Materials. There have been five silk screens completed: row planting of rice, advantages of improved wheat varieties, wheat reaping, wheat threshing and sharing improved wheat seed. The next four will be: the way to improve potato seed stock by staking good plants, why row planting of maize is better, the safe use of pesticides, and pruning and grafting processes.

Three extension bulletins have been published for use by extension agents:

Publication No.1	Growing Corn in Afghanistan, 1991
Publication No.2	Growing Potato in Afghanistan, 1991
Publication No.3	Safe use of Pesticides, 1992

Five additional bulletins are being prepared covering wheat, rice, machinery, horticulture and poultry.

Mechanization

The number of draught oxen owned by farm families in Afghanistan declined by 40% since 1978 and rebuilding the farm power resources of Afghanistan may be one of the more critical constraints (Lea, 1988). The broad range of tasks performed with animal power implies that the transition to mechanical power will be costly. Be that as it may, the objective of PSA machinery assistance is to restore agricultural productivity by substituting mechanical power for human and animal power on farms in Afghanistan. The strategy employed is promoting the use of power equipment through demonstration.

The ADT component, with assistance from the CAS component, has sent a considerable amount of agricultural machinery and equipment to Afghanistan for demonstration purposes during 1990 and 1991 as indicated in Annex Table IV-7. This machinery and equipment has been mainly distributed among 6 provinces--Logar, Helmand, Kandahar, Ghazni, Wardak and Paktika.

In order to operate the machinery, many people have been trained as farm mechanics, tractor drivers and tillage and thresher operators. Training of farmers and mechanics in Afghanistan in equipment operation and maintenance is next.

The major problems faced by the ADT extension workers in dealing with machinery are the lack of repair facilities, a shortage of locally available spare parts, and the inability to satisfy local demand for use of the equipment being demonstrated.

The 1992 machinery program for ADT will focus on demonstrating all of the operations which are being recommended. Machinery demonstrations in general will be for primary tillage, seedbed preparation, planting operation, cultivation, reaping or digging, threshing or shelling, and cleaning.

Staff Qualifications.

One of the main reasons the ADT training and extension programs are enjoying a certain degree of success is because of well trained, experienced, energetic, well organized and considerate staff members.

All senior Afghan staff have B.S. degrees, in agriculture or botany, from Kabul University and M.S. and/or Ph.D. degrees from U.S. Universities. The professional experience of the Training Specialist includes 22 years of increasingly responsible positions in: formal and non-formal training, urban and rural development, program design and evaluation, refugee health and clinical nursing.

Miscellaneous Activities

Locust Control Program. This project in Badghis Province, which began in July 1990, reached fruition after two months of training, a month and one-half of traveling and four and one-half months of surveying, making farmer contacts, and extension training. During the month of May 1991, 2433 farmers were contacted on Locust control in the Badghis province. In the spraying operation, 4242 bands of locust hoppers were identified and sprayed. These bands covered 18,579 jeribs of land. Six hundred and fifteen (615) jeribs of adult locust swarms were observed and 52 swarms were sprayed using a total of 3950 liters of Malathion (96%A.I) spray concentrate. Based on observations

of the locust and senn pest control agents, average percentage kill of locusts after 48 hours was 95% plus. In the training part of the program, 1643 farmers were trained in locust control spraying.

Apricot Drying Pilot Project. In cooperation with MCI an experimental training course was held at Quetta in June 1991 to evaluate different methods of drying apricots. Fresh cut apricots were exposed to burning sulfur as a means of improving quality and increasing the keeping time of preserved apricots. It was determined that high quality sulfur is necessary for best results. The way in which sulfur burns also affects the quality of the apricots. Sulfur not only promotes drying but also acts as a fungicide and an insecticide. The 23 Afghans trained in apricot drying went into Afghanistan the first part of July 1991 to introduce the technology to apricot growers.

Current plans are for the establishment of 70 apricot orchards of 250 trees each by June 1992. The improved varieties used in three orchards will be the basis for a uniform product. Another training program, in conjunction with MCI, on processing and packaging dried apricots is planned for June 1992. The future for the apricot program should be defined by then. We recommend specific actions on this in Section IV.

Rootfuel Project. The Afghan rootfuel project, carried out in Pakistan, identified some local dryland plant species that have potential to produce root biomass as an alternative cooking fuel in Afghanistan. Two species, *Citrullus colocynthis* and *Cucurbita foetidissima* were tested in experimental growing plots. Even though these tests were conducted under less than ideal conditions due to external factors, they provided helpful agronomic information on the factors of soil, water, pests and temperature (time of planting).

Poultry. In 1991 attempts were made to ship Fayoumi chickens into Afghanistan. However, because of intolarable heat and the halting of cross-border activities, operations were suspended. ADT will continue with various approaches in trying to introduce Fayoumi chickens. Hopefully, they will be able to set up a pilot project in Afghanistan.

6. Commodity Priorities

(i) Based upon the characteristics of the commodity groups and the comparative advantage of the various donor groups working in Afghanistan, we recommend that overall ADT activities focus on cereal crops and, to a lesser extent, on re-establishing horticultural crop exports. Horticulture production, with the exception of potato, should be left to NGOs. The technology, logistics, quality control and package of inputs is more critical for cereal crops and potato and, with the exception of the SCA

agriculture unit, NGOs are not equipped to handle the entire chain of activities needed to get good quality seed of appropriate varieties into Afghanistan, along with the fertilizer and machinery needed to make the package attractive to Afghani producers. The PSA project, based upon this reasoning, and with some cooperation, should be able to get the input supplies flowing.

For horticultural crops, however, saplings/seedlings of appropriate varieties are available in Pakistan and, to a lesser extent, in Afghanistan so the logistics and procurement are simpler and can be handled by most NGOs. The package element to help reestablish and rehabilitate the horticultural industry consists primarily of agricultural chemicals (sulfur, insecticides, fungicides, preservatives) that USAID is particularly ill-suited to provide whereas NGOs and UN agencies not using USAID-funds will have far less restrictions on procuring these inputs. This would also provide a good linkage with the Hudson Sprayers in stock. The NGOs can provide the chemicals with DAI providing the sprayers.

The area where NGOs may not be strong enough technically is processing and export market development. The HVH group fills this area well and support for HVH should be continued under the DAI subcontract.

(ii) The project should take a hard look at barley and see whether it should have a higher priority than it apparently has now. It is particularly important in more marginal rainfed areas which could immediately benefit from improved varieties. What is the scope for improving yields with improved varieties and agronomic practices? What are the economics of barley growing and marketing? In 1978, among the cereal growers, barley ranked third in hectarage and fourth in production.

(iii) Vegetables are reported to be in short supply in Afghanistan and are frequently profitable when grown for the local market. Perhaps PSA should be assisting the farmers in growing select vegetable crops.

7. Constraints to Implementation

(i) The most serious constraint is the fact that U.S. citizens and green card holders cannot go into and travel around Afghanistan. Without being able to see what is happening and to obtain first hand information relative to project activities does present problems. However, there are highly qualified Afghans in agriculture who can be trusted to supervise the extension activities and obtain reliable data on the performance of the extension/demonstration trials.

(ii) We feel that the decision by O/AID/Rep management to terminate fertilizer imports in September 1991 jeopardizes ADT's ability to provide an economically attractive package of inputs to Afghan farmers.

(iii) Other constraints, relevant to the ADT, have already been covered in the CAS and PPA sections.

8. Summary

The purpose of the Agricultural Development and Training (ADT) component is to help restore agricultural productivity in Afghanistan. The following practices are being employed by ADT to assist in this restoration.

(i) Seed of new improved disease resistant varieties (especially of wheat, maize and rice) is being introduced, increased, and sent to Afghanistan for extensive evaluation. Seed of varieties which look promising is increased in Afghanistan as rapidly as possible. The strategy for seed multiplication has been developed. Under adequate fertility and proper crop management, dramatic yield increases, conservatively estimated at 40%, are being realized from some of these new varieties.

(ii) Large quantities of asexually propagated fruit trees, especially apples, have been taken into Afghanistan. ADT now has 8 nurseries in 5 provinces.

(iii) Another component for high yields is adequate plant food. In the demonstration/observation variety trials in Afghanistan fertilizers are supplied by ADT in order that lack of plant nutrients will not be a limiting factor. ADT also sponsors fertility trials.

(iv) Diseases and insects may cause serious yield reductions. If disease and insect resistant varieties are not available, then it is necessary to resort to agricultural chemicals. ADT offers assistance to the extension network to evaluate the various agricultural chemicals but is not in a position to furnish chemicals for a large number of trials.

(v) An agricultural extension system has been set up <u>inside</u> Afghanistan in 11 of the provinces. It is gradually improving and expanding. Eleven extension supervisors and 69 extension agents are in place. Appropriate technology is being transferred.

(vi) A strong training center has been established in Peshawar and has been fully operable for sometime. Its main goal is to train agricultural extensionists and much of this is done during the winter season. However, the center is also set

up for training of tractor drivers, tiller and thresher operators, farm mechanics and surveyors. Nearly 400 personnel have been trained at the ADT training center.

(vii) ADT has been and is furnishing machinery and equipment for demonstration purposes in order that the farmers can decide which equipment they need and/or want and/or are able to buy. Such a procedure also stimulates the private sector who are selling the equipment/machinery.

D. Technical Advisory And Local Staff Management

For the first two years of the project (August 1989 to mid-1991), DAI staffing went through various changes. This affected project performance, particularly since the project was so complex, many assumptions upon which the project was based were not met, problems were developing over expectations and implementation of the GIS component, and relations between USG and GOP were changing. Unfortunately, continuity, cohesiveness and leadership suffered. During this period, the Chief of Party, ADT advisor and Finance and Administration Supervisor left the project and were replaced. The Pakistani agricultural economist did not perform up to expectations and was terminated. Several proposed candidates for original or replacement expatriate positions were rejected by O/AID/Rep with some justification. The Afghan Senior Technical Advisor was also terminated.

A particularly costly series of events leading up to destroying 750 MT of wheat seed in 1991 should have been averted by bringing in a consultant seed specialist to handle the entire process. This was not only costly but disrupted the program in the field when adequate seed was not available. The first ADT advisor left at the end of 1990 and was not replaced until mid-1991 by which time other more pressing needs plus suspension of cross-border activities put the wheat seed problems on the back burner. The evacuation of staff between January-April 1991 also contributed to these types of disruptions.

To DAI's credit, they have now been able to field what, in our opinion, is a solid team of professionals with the skills and personalities needed to keep the program on track. The PSA project has been able to recruit an impressive group of Afghan staff, representing many of the best agricultural professionals that worked in pre-war Afghanistan as well as field surveyors, bazaar monitors and trainers. These staff are the heart of the program and will be key personalities in helping shape the future of agriculture in Afghanistan if reasonable levels of support will be available for them.

Fielding of short-term consultants from both DAI as well as from various subcontractors has yielded mixed results. Donors, O/AID/Rep included, approve short-term consultants with the

expectation that the consultants activities and reports will serve to either (a) push a program along or (b) lead to new initiatives. Given the flux in long-term staffing of advisors noted above, it was difficult to meet these conditions.

The Afghans are a proud people and not used to working under the supervision (real or perceived) of expatriate advisors. Many were senior staff in pre-war Afghanistan with considerable power and authority. Some staff commented they felt they did not receive proper "respect" from DAI staff but working relationships we observed did not indicate the type of situations where this was obvious. DAI advisors should be aware of these feelings, however, and try to minimize them.

Finally, the subcontract between DAI and ESC has not provided the level of staff and technical support expected by DAI field staff and O/AID/Rep. This is noted in Section II B 6.

E. Integration of PPA and ADT Components with CAS Trade Promotion Activities

This integration was to be accomplished by selection of physical areas where ADT work was to operate, carry out the necessary survey work on bazaars and assess input availabilities so inputs could be targeted to these areas and the MARIS work under PPA could provide supporting market information to PSA staff, traders and farmers. Trade promotion work would not be limited to ADT target areas but would work with a much broader clientele. The GIS work of PPA would focus on ground truthing exercises in certain key areas of the ADT regions, in addition to work that was national in scope (e.g. mapping, food security, land cover maps). GIS work was originally targeted to support CAS activities which seems to be a little value.

Now PPA has generally assumed the lead role for this integration with overall management and decision making the responsibility of the Chief of Party and, in some cases, subject to O/AID/Rep concurrence. Working cross-border with American supervisory staff unable to go to Afghanistan obviously limits integration of activities; as does the lack of daily interaction with project participants needed to get a feel for how integration is occurring. Despite these limitations, a great deal of progress had been made by mid-1991.

The activities of each group were becoming mutually supportive, inputs were starting to flow to the appropriate areas, ADT field staff (the extension agents) were trained well enough to effectively utilize and demonstrate the equipment being supplied and market information was becoming available upon which future work plans could be based. The key linkage, of course, was the ability of CAS activities to support ADT efforts, particularly in the provision of improved seeds by ADT being

backed up by CAS assistance in the supply of fertilizer, machinery and other inputs.

SECTION III. PROJECT ISSUES

A. General

1. Political and Security Environment

There is an obvious concern regarding security, as is evidenced by transfer of the PSA Project from Peshawar to Islamabad; however there is some feeling that there may have been overreaction.[2] There is certainly this feeling when the discussion turns to the cessation of cross-border activities based upon some relatively minor incidents such as two kidnappings, one shooting (with no fatality involved) and some stolen vehicles. It is very hard for the Afghans to understand the U.S. concern over these matters when they have certainly lost over one million people.

Implementation problems were the result of a complex mixture of DAI staffing problems, perceived mission management, a rapidly changing set of expectations and reality about what was going on inside Afghanistan and a gradual shift in U.S.-Pakistan relations that were reflected in the ability of the PSA component to meet its goals. The withdrawal of Soviet forces created expectations among all parties that collapse of the Kabul regime was expected soon and project design should allow for rapid expansion of cross-border activities as security improved. Actuality was that cross-border operations got riskier. By early 1992, there was evidence of more informal cooperation and complicity between some rebel group and the Kabul regime, perhaps opening up opportunities that did not exist during 1989-91.

The failure of many of the assumptions of early 1989 to materialize is reflected in the O/AID/Rep revised Afghanistan Strategy Document (O/AID/Rep, 1991). The PSA project was based upon the O/AID/Rep 1988 Strategy Statement. A revised 1991 Afghanistan Strategy Document notes that:

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[2]Many issues noted in Section III.A.1 reflect the high degree of uncertainty under which O/AID/Rep was also subjected to. Good communication and detailed discussions as to why certain actions are taken is next to impossible under these circumstances. Some contractor staff either did not fully understand the implications of these changing relationships or thought that USAID could overcome them, thus frustrations over USAID policy actions increased among some DAI staff.

"a revision of that strategy is appropriate at this time primarily because many of the assumptions underpinning existing AID assistance levels and competing demands for assistance in other parts of the world dictate a sharper approach for US aid to Afghanistan. The withdrawal of Soviet troops did not lead to the collapse of the PDPA regime in Kabul. The mujahiddin, while making inroads on regime held territory, have not achieved military victory. The Afghan Interim Government (AIG) has not proven to be an effective interim administrative body, representative of and supported by the Afghan people. The UN has not been able to spearhead and coordinate resettlement and reconstruction. Tension in U.S. - Pakistan relations was not envisioned when the present strategy was drafted. Cooperation with the Soviets instead of confrontation now characterizes US foreign policy in general. International support for the refugees and for the resistance is diminishing. Lastly, the war has lasted far longer than was anticipated, and Afghan refugees, numbering in the millions, have yet to return in significant numbers." [USAID. 1991(A)].

Critical to the above is the fact that the primary rationale for ASSP-the expected large inflow of Afghan refugees to rural areas and the need to feed them-did not eventuate. The assumption that the Agricultural Council, formed from the A.I.G., would be a viable counterpart organization to work with was not valid due to the above reasons. We also feel that an unanticipated reason why CAS and ADT activities have received less than full support from the local political structures in Afghanistan is that the immediate impacts are less obvious than other programs (e.g. ARR program of VITA) where roads, bridges, mine clearing, irrigation system rehabilitation and buildings provided immediate, tangible, visible impacts and result in a considerable flow of funds to local truckers, suppliers, contractors and wage laborers. These are "good" programs whereas the PSA programs are less visible and obvious. Afghan farmer and merchant frustrations with PSA monitors, data collectors and extension agents mounted as did the resentment that PSA was getting something (i.e. data) without providing anything in return.

2. Host Country Facilitation

The GOP is concerned about commodities with a substantial foreign exchange component (diesel fuel, fertilizer) or that are in short supply in Pakistan (wheat, fertilizer, cement) flowing to Afghanistan in large amounts, or about items which Pakistan subsidizes (tractors, fertilizer) going across the border at a loss to the Pakistan treasury. This has resulted in a highly political, stop and go situation regarding application

of existing GOP and Provincial regulations concerning exports and transhipment of goods. This has limited the options PSA could use for cross-border trade and made it more difficult and time consuming, adding to the highly uncertain environment facing the project clients.

3. Private Sector Environment

See Section III, B 3 and C 2.

4. DAI and Subcontractor Staffing And Management

Project start-up is often critical in a long-term project as it tends to set the tone for what follows, crucial staffing and organizational decisions are made, the project becomes associated with an area of expertise, and advisors fit into daily work routines based upon a workplan. Initial staffing by DAI was not adequate for this task. Also, the final status of activities to be included in the workplan was unclear for almost 8 months. The key issue defining the overall Scope of Work for DAI was what part of existing VITA projects would they take over. From contract signing in August 1989 to the end of December, 1989, this issue was not decided. Once it was decided to shift the ADT component, three more months were needed to implement this transfer. Relationships between VITA, a planned cooperator with PSA, and DAI were strained, at least initially.

The major problems related to DAI staff provided under the prime contract fall under the following categories:

(i) The Chiefs of Party were unable to provide the exceptional levels of conceptual ability and interpersonal skills needed to convince O/AID/Rep that the TA team had an overall plan of action that would provide the expected results.

(ii) The PPA component was initially staffed to allow it to develop an overall strategic plan and to help recruit Afghan staff who started the survey program. At the same time, the advisor lacked the analytical capacity to subsequently manage the analytical agenda and the GIS work.

(iii) The projects' long-term agribusiness advisor did not have an adequate private sector commercial background to provide leadership in procurement, logistics, negotiations, contracting and analysis and was thus unable to convince O/AID/Rep that DAI's plans would lead to a workable program for private sector agribusiness activities in Afghanistan and Pakistan.

(iv) In retrospect, the RFP and O/AID/Rep management put too much emphasis on Afghanistan experience and too little on the qualities of overall leadership and management skills needed to navigate through uncharted waters. This is not to fault DAI for following the bidding instructions.

(v) DAI home office managers were either not fully conversant with field staff personnel problems or did not take prompt enough action to rectify problems that subsequently affected contractor - O/AID/Rep relations.

(vi) The medical condition of two of the original advisors should have been carefully evaluated by DAI given the rigors demanded under the Scope of Work.

(vii) A quality professional agricultural economist with a good background in sample survey work was needed from day one. The various stopgap measures tried to help fill this gap have not provided the continuity needed in the survey and analysis work and has left DAI open to justifiable criticism.

(viii) Initial staffing did not provide for an experienced GIS person who understood agriculture and who understood project needs from GIS techniques and technologies. This could have been provided by a short-term consultant on a continuing basis.

(ix) Overall staff recruitment procedures, personnel policies and contract compliance were good. We found very few problems, despite a large, dispersed staff representing many variations in nationality, qualifications and previous salary histories.

5. Contractor - USAID Relationships

Some basic assumptions of AAM Amendment No.2 were not realized during project implementation. Virtually all of these subsequently affected project implementation and DAI-O/AID/Rep relationships. These original assumptions were:

(i) A reasonable number of refugees would return to agricultural areas in Afghanistan with a "grubstake" or some equivalent assets needed to give them sufficient liquidity to get re-established in agriculture and purchase inputs.

(ii) The project would also target more favored agricultural areas in the North where effective demand would be higher and distribution problems fewer.

(iii) The strong belief that GOP will facilitate cross-border trade for essentially all required agricultural inputs.

(iv) The project CAS system would not be management intensive and would require a minimum of expatriates to facilitate the processes. In fact, four USAID Project Officers are involved, in varying degrees, trying to manage the PSA project.

(v) The goods to be financed and supplied under the project will be purchased from Pakistani markets (generally valid except for some key inputs such as fertilizer).

(vi) Neither AID direct hire nor DAI contract staff would be involved directly in purchase, storage and import of goods and services to be distributed in Afghanistan.

(vii) Commitments would be negotiated by the O/AID/Rep and the contractor with GOP for unrestricted purchase in Pakistan from distributors of agricultural inputs, including special provisions for volume purchases for export to Afghanistan and for special cases where Pakistan is import dependent, special purchase and import licensing and accounting will be obtained. This would include payment of full replacement costs of these inputs at world market prices. We are unsure how vigorously this was pursued by O/AID/Rep.

B. Beneficiaries

The RFP and other project authorizing documents did not go into great detail regarding potential beneficiaries of PSA project activities. The underlying premise upon which the project was based was that substantial increases in food production were needed to feed the existing population resident in Afghanistan as well as the flow of refugees anticipated as internal security conditions improved. One of the means to achieve this end, fostering private sector trade in agricultural inputs into Afghanistan and assisting in renewal of traditional Afghan agricultural sector exports, also implies an additional set of potential beneficiaries. Although it is too early in PSA implementation to clearly identify beneficiaries, we can nevertheless give our impressions to date.

1. Refugees and General Population

During project implementation, there has not been a major inflow of refugees back to Afghanistan so we have little basis to judge what significant project-related benefits may have accrued to them in terms of food supplies, employment and agricultural sustainability. The same would apply to internally displaced refugees, most of whom have apparently not yet moved back into villages and commenced farming.

Our review of project documents and estimates provided in Section II of the report indicates that the impact of improved

wheat seed and the limited amount of fertilizer supplied has been substantial and that between $12-25 million worth of increased production may be attributable to fertilizer alone and around 388,000 Mt of additional wheat production is resulting from improved seed plus the fertilizer supplied through 1992, or enough additional output to feed 1.9 million additional people. This assumption (Section II, part C 5) makes quite reasonable estimates regarding amounts of improved seed saved and distributed by farmers. Additional supplies of fertilizer, if it can be arranged, would boost these figures even more as several independent estimates place the DAP demand in project areas at 40,000 MT/annum as compared with past supplies through PSA of only about 10,000 MT/annum.

This incremental output of wheat is more than would have been needed to feed the inflow of refugees which may have occurred during 1989-early 1992. This is also reflected in the fact that wheat prices have not increased dramatically over this period.

2. Farmers.

We have no reason at this time to doubt the very favorable benefit - cost ratios calculated earlier for the application of DAP to modern rust resistant wheat varieties. Imported seeds are also giving very high returns based upon rust resistance alone, particularly following serious losses to rust in the 1991-92 crop. Benefits to the farmers from CAS efforts to promote machinery sales are less clear. Annex VIII summarizes our estimates of economic benefits to farmers using some inputs in Afghanistan.

3. Private Sector Businessmen

The efforts of PSA in organizing the bazaar structure has been commendable. The groundwork has certainly been laid for a more organized approach in the future. It seems that the bazaar network has been the strength of the PSA in dealing with private sector businessmen.

The network of exporters has not yet been well organized, probably due to the erratic history of the program caused by changes in official policy. The work started by DAI regarding a consortium of Afghan businessmen must be further developed.

Benefits to private sector businessmen from handling project-assisted commodities are questionable. Regarding the PL480 wheat sales, it must be remembered that we are dealing with people who are accustomed to living up to obligations on the basis of faith and trust. The bid document No. DAI/W3/1991 dated July 1, 1991 was very one sided in favor of DAI. For example, it requires the buyer to put up a performance bond. The normal

procedure would have been for the buyer to open a Letter of Credit or make a pre-payment or forfeit the bid bond and for the seller, not the buyer, to open a performance bond. The performance on the part of DAI would have been to make delivery on time and as per specifications. DAI did not perform (for reasons which are not of any concern to the buyers) and would ordinarily have forfeited the performance bond, or perhaps have officially declared force majeure. Either would have been more acceptable than what did happen.

C. CAS issues

1. Host Country Facilitation

To date, discussions by the Winrock team (together with the O/AID/Rep) with the GOP pertaining to the CAS seem to indicate that the GOP may provide more assistance in facilitating handling of fertilizer in Karachi. We believe that they will find ways to assist assuming that there is some compensation to the GOP agency for services provided.

2. Private Sector Attitude

USAID seems to have a desire, as evidenced by this project, to become involved in private sector activities and yet, as also evidenced by this project, they do it without real financial accountability or fiduciary responsibility. If indeed USAID wishes to be active in the private sector arena, they must consider the need to proceed as if they were a private sector company. Such a company has a fiduciary responsibility to its owners (i.e. shareholders). In the case of USAID, we could say that the shareholders are the American taxpayers. However, congressional mandates often make AID unable to explore these opportunities fully. As an example, the cost of U.S. bottoms for shipment of DAP was $155/MT. We understand that in the process of competitive bidding, a non-U.S. flag carrier offered a freight rate of $65-70/MT and yet RONCO was verbally told by AID/W to accept the higher rate as AID was behind in the 50% allocation rule. Also we do not know how intensely AID negotiated the rate, whether it was liner terms or a charter party, etc. We have subsequently found that G.O.P., through negotiations of bulk purchase of DAP, pays a freight rate for DAP from Tampa of approximately $32/MT.

A second "private sector" concern associated with these 12,500 MT DAP, of which 10,000 MT is currently in storage in Pakistan, would be the related financing costs. We understand that there are presently 10,000 tons of DAP stored in warehouses.

The cost of financing is approximately per the following calculation:

12,500 MT at a CIF value of	$4,300,000
Therefore, the balance remaining of 10,000 MT has a CIF value of	$3,440,000
Handling, documentation, etc giving an arbitrary value of	60,000
	$3,500,000

The fertilizer has been paid for since, say, June of 1991. This means it has already been incurring financing for 8 months. For the sake of argument, we can say that 30 year Treasury Bonds have had a yield of 7%/p.a. during this period or 4.7% for 8 months. This fertilizer, by sitting in warehouses unsold, has - so far - cost the "shareholders" 4.7% of $3.5 million or $165,000. These charges are continuing at the rate of approximately $21,000 per month not including associated warehousing expenses.

The obvious questions are - Why is this material being stored given the existing circumstances? Why wasn't it immediately sold to a third party, even at a minimal loss? Why didn't AID decide to "cut their losses" and then repurchase later if the program was to be reinstituted? The point is - USAID and DAI must think as if they were commodity traders if indeed they intend to market commodities to the private sector.

In analyzing the 1992 fertilizer sales strategy, we believe that such a great deal of concern has been placed on a backflow of fertilizer to Pakistan and the possibility that some may end up on poppies that DAI has been getting too far involved down the marketing chain. Regarding the backflow of fertilizer, it should be noted that there is no significant evidence that this has happened.

We do not believe that DAI should be involved in negotiations of inland freight rates to the interior of Afghanistan. The "Tourist Tax" will be simply too high!

We believe that a marketing strategy involving USAID (as financier), DAI (as manager), the GOP (as facilitator), a private sector marketing agent (as marketer starting at FOB Karachi at best; FOB Chaman at worst) and reputable U.S. fertilizer trading companies and processors, should be investigated. The exposure of USAID/DAI should be minimal.

Regarding the transfer of PSA commercial trade activities to the private sector, this has been a cloudy issue due to the

multitude of individual, probably overly "opportunistic", traders with whom the PSA has been working. Again, the PSA should concentrate on two or three well established groups such as the AFG. Only then will commercial trade activities be transferred in a sustainable manner.

D. PPA issues

The PPA component has suffered less from many of the issues constraining project performance than have the CAS and ADT components. In general, cross-border survey staff have been able to operate with few disruptions but extended periods in Afghanistan with little if any supervision or feedback is bound to effect efficiency of data collection interpretation and analysis. The problems experienced by DAI field staff working with ESC are mentioned in several areas of this report. DAI has not been able to control the performance of the sub-contractor to the desired extent as DAI's home office coordinator for GIS work is not fully conversant with ESC capabilities, technologies used and alternative means to cut costs.

E. ADT issues

1. Location of ADT Training Unit

An unresolved issue concerns the final location of ADT training activities. The reasons for keeping the ADT training unit in Peshawar include:

(i) Training should be in Dari or Pushto. Pakistani Pushto speaking agricultural resource speakers are in NWFP.

(ii) Short courses designed and presented by several Peshawar based NGOs, are used in the ADT training program.

(iii) Many of the Afghan Peshawar-based staff have been settled and working in Peshawar for several years. Moving to Islamabad might threaten their emotional and physical security, and would jeopardize their financial stability.

(iv) The expatriate ADT Training Specialist can spend the necessary time in Peshawar with minimum problems.

2. Farm Chemicals

Farm chemicals (herbicides, insecticides, fungicides) are often needed as part of the package of practices to achieve acceptable crop yields. USAID-funded projects are poorly suited to provide these chemicals. As suggested above, certain NGOs and UN agencies have far less restrictions on procuring these inputs and should be encouraged to cooperate with PSA in ADT areas.

3. New Rust Races of Wheat

Saari (1990) states that "a real concern is emerging over the extensive cultivation of PAK 81 and Pirsabak 85 in both Pakistan and Afghanistan. Their popularity with farmers suggests that they will continue to spread. There are indications that new rust races are evolving which could overcome the resistance of the two related cultivars. Experience in other countries indicates that both varieties can become susceptible to new races of rust. It is only a matter of time before such races of leaf rust and stripe rust evolve in either Afghanistan or Pakistan. There is a growing urgency to develop a strategic program to produce a group of varieties with additional resistance which can be substituted for PAK 81 and Pirsabak 85."

A shuttle breeding program using the above two varieties was suggested with CIMMYT participation. Personnel from the ADT component should be aware of the constant and continuing need to develop new varieties of wheat for Afghanistan and should encourage SCA to work with the research stations in Pakistan on a joint program which could eventually be carried into Afghanistan.

4. Farm Power

Oxen are used in wheat, maize and rice cultural operations to perform ploughing, leveling, planting, cultivation (maize), partial threshing, transportation, fodder chopping and sugarcane crushing. Typical animal drawn implements include plough, land plane, leveler, hoe roller, drill, hoe, cultivator, thresher, fodder chopper, digger, persian wheel, cart and sugarcane crusher. Lea (1988) points out that this broad range of tasks implies a costly and expensive range of implements to fully replace these tasks with mechanical power. Therefore, we recommend (Section IV) that PSA take another look at this issue. The best means would be through a workshop where the issues and constraints could be more clearly defined and the cumulative experience of PVOs working in this area could be assessed.

5. Extension Training

The ADT extension supervisors recently indicated that some of the recommendations by certain NGOs are not in agreement with ADT recommendations. They further suggested that such recommendations were probably coming from individuals who are not trained in agriculture. Perhaps these individuals, if they can be identified, should be invited to the ADT training courses.

6. ADT Priorities

The ADT component is involved in many activities; perhaps too many. Periodically it will need to assess its

priorities and programs and make sure that they are not spread too thin.

F. Institutionalization

Several efforts were made to try and partially institutionalize PSA activities by working with, or trying to create Afghan institutions which could gradually assume responsibility for project activities and could move back into Afghanistan as legitimate development institutions when a peace settlement was reached. Some of these institutions existed in pre-war Afghanistan while others would have to be new creations.

In 1986, O/AID/Rep had helped form a group of Afghans into an association called the Agricultural Council, made up of representatives of each of the seven major Afghan resistance organizations permitted to operate from Pakistan. The idea was to channel assistance through the Council as part of a process to help build Afghan political institutions. This did not prove to be a workable option for project implementation. A second, PSA-initiated institution was formed in 1991 with the express purpose of forming a consortium of Afghan businessmen to handle fertilizer imports, transportation and sales for Afghanistan. This was called the Afghan Fertilizer Group, or AFG. The idea was for the group to directly import DAP through Karachi port for transhipment to Afghanistan. For various legal and bureaucratic reasons, primarily on the GOP side, this did not prove possible at this time so USAID imported 12,500 MT of DAP from the USA with a sub-contract to AFG to sell the fertilizer to selected retailers in five provinces. The concept of the AFG is still valid and is being revived as DAI and O/AID/Rep reexamine a fertilizer strategy for the PSA project.

A third initiative undertaken was a result of DAI holding fertilizer reflow funds and the need to explore options for channeling these Rupee funds to development activities. Using the local firms as subcontractors (Development Research and Management Services, Management and Financial Applications), DAI prepared a series of studies looking at options for use of these funds for supplier or producer credits, revolving funds, equipment leasing and market promotion. The proposed organization to use these funds was to be called the Afghan Development Corporation (ADC). Institutionalization would be accomplished by setting up Trade Centers through an indigenous organization, the ADC, rather than directly through a project contractor. The concept of ADC was designed so it could work with a future Ministry of Agriculture in Afghanistan. The decision to terminate the CAS component of PSA effectively put an end to efforts to create the ADC and eliminated one option to which the Rupee fertilizer funds could have been channeled.

Another aspect of institutionalization concerns ADT and PPA components. The ADT unit has been able to create a critical mass of staff including many of the top pre-war Afghan research and extension personnel and provides excellent, intensive training to district and lower level extension staff. This capacity should be retained once a new government takes power in Afghanistan. Although most of the Afghan ADT staff we talked to said they eventually wanted to return to Afghanistan to work under Ministry of Agriculture research units or extension department, the reality is that a new government will be starved for funds and will have huge needs for reconstruction. We must assume that salaries, benefits and general living conditions will be far less than currently enjoyed under current contractor rates. One option, being seriously explored by UNDP through MCI assistance, is decentralized or NGO-type organizations providing localized services (e.g. routine animal health care) on a largely self-supporting basis.

The third consideration is PPA activities. Most of these are most clearly the type of efforts to be carried forward to central government units. The functions of monitoring, statistical collection and analysis, planning and liaison with user agencies could be put into a revitalized Ministry of Agriculture. The GIS work could be folded into a University, a government agency or a private sector unit doing contract work on GIS.

SECTION IV. RECOMMENDATIONS

We have chosen not to prioritized recommendations. Recommendations, taken together, lead us to the critical issues for O/AID/Rep: Options for Reconfiguration (Section I, below). Therefore, the summary which follows flows from sections II and III of this report.

A. Recommendations by Component

1. CAS Component

(i) USAID should, to the extent possible, take a private sector approach in the handling of fertilizer purchases. Freight rates need to be negotiated emphasizing that they must be competitive with world market rates. Special circumstances such as Tramp Steamers and Charter Parties need to be investigated. Once fertilizer is purchased, it should be sold as quickly as possible. Fertilizer tied up in inventory costs money.

(ii) The fertilizer sales strategy should remove DAI from the internal marketing process as much as possible. It would be counterproductive for a foreign entity (i.e. DAI) to be dealing with Afghan truckers. DAI needs to work with one or more reputable traders/marketers and should turn over title to the commodities as close to the Pakistan receiving point as possible.

At the conclusion of our March 10 meeting with O/AID/REP, we were asked by them to suggest the simplest scenario with which to proceed in structuring the fertilizer contractual relationships. This proposed scenario may not be the simplest because we have also sought ways to minimize risk. It must also be noted that we have taken a long term view. The intention is that a program will be developed which will continue for a number of years and involve tens of millions of dollars. The groundwork must therefore not be laid out in a "one time only" fashion.

Every indication is that DAI will proceed as per Option III of their Fertilizer Marketing Strategy and Pricing Policy dated March 10, 1992. The Winrock Evaluation Team is pleased that this decision has been taken and fully supports it.

A single person with the personality and character traits of the textbook "Project Manager" needs to be appointed who can coordinate and bring together all the aspects which are enumerated below. He must be able to conceptualize the entire project even from the beginning, manage all the "players" (who, probably have differing objectives) and basically move the project from stage to stage independent of supervision. This

person would be a private sector entrepreneurial type of businessman. His only responsibility would be the fertilizer, therefore, he would not be employed full time but only as and per the needs and timing of this fertilizer subproject.

The first step would be to identify more than one consortium with which to work. The AFG has already been identified and "due diligence" has been performed on AFG with satisfactory results. The findings are positive. Now the task is to find another group of a similar caliber. This could be a sensitive issue and needs to be handled with considerable tact not to offend, or send an incorrect message, to AFG. There are reasonable explanations which could be given to AFG during the negotiation process. They should not find out about the second consortium as a surprise.

A minimum of two groups is necessary to provide real data and information to DAI. It also creates a built in mechanism of control and competition. At a later stage, one group could be dropped when a track record, and more importantly - trust - has been developed.

The next step is to negotiate contracts with both consortiums. Fax 021-241-8617 dated 7 August 91 from DAI to Messrs. Izatullah and Nasrullah Rehmat is an excellent starting point and probably only needs minor modifications.

Simultaneously with developing the consortium contracts, offers need to be solicited from various U.S DAP fertilizer trading and processing companies. These offers should be the result of negotiations conducted, in person, at high levels within the corporations involved. Six twelve-month fixed price contracts should be developed. Simply requesting bids would probably not be advisable unless each potentially acceptable bid is also negotiated separately. This procedure must be carefully discussed with AID/W to make sure it complies with existing regulations.

It may also be useful to visit the sources of supply in Florida. Such a trip would provide market knowledge and probably additional potential sources of supply.

The offers received will, no doubt, not be equivalent in terms of transfer of title, shipping terms, etc. The shipping terms are especially critical. There were many lessons learned from the 12,500 MT DAP shipment and some of the pitfalls can now be avoided.

It would probably be useful for the Project Manager to also spend some time in New York which is a world center for shipping and insurance. This would provide information which will be useful in the negotiation process with fertilizer suppliers and considerable money could possibly be saved.

When contracts with the consortiums are nearing conclusion, it is then necessary to start serious discussions with the Government of Pakistan. These discussions/negotiations should probably be conducted by non-U.S. Government (including DAI) individual/s. This refers to the private sector businessman mentioned earlier. The Afghan consortiums should not be included in these discussions. Non-U.S. Government participants should conduct these discussions so that the conversations stay on a business level and do not get elevated to a political level. Also, this gives DAI/AID a separate veto power which could be invaluable in the negotiating process.

We mentioned above that discussions with the GOP should start when the consortium contracts are close to being concluded. The ultimate goal of the discussions with the GOP would be to completely remove DAI/AID from the gap that starts at the port of Karachi and ends at the warehouse in Chaman. Title could be transferred from the U.S. shipper, through DAI/AID, to the Afghan consortium without DAI/AID actually taking physical possession. Ways for the private sector (i.e. consortium) to effect fertilizer transit through Pakistan need to be explored. There would have to be tight back-to-back paperwork involved. This is a lofty goal which may not be fully attained. The GOP could also be significantly involved in reducing such problems as experienced at Karachi with the recent 12,500 MT shipment.

As the business progresses, attempts may be made to have the Afghan consortiums open Letters of Credit directly to the fertilizer suppliers. This should be possible if the transit through Pakistan problem is solved based upon conversations with the GOP. This concept should not be told to the consortiums at the onset but the initial contracts should be written in such a way that this could happen after the consortiums are locked in. This way, DAI would not lose control in terms of targeting the ultimate destination even if non-USAID Letters of Credit are opened directly. Of course, rupee reflows would then not be a part of the scenario.

Through the entire process described above, it will be necessary to work with private sector attorneys knowledgeable in matters dealing with the contract law, the U.S. government, and international trade. There are attorneys in Washington D.C. who can satisfy these requirements. These attorneys would need to work closely with the private sector businessman and AID/W Contracting/Procurement offices.

(iii) Explorations of alternative means of getting fertilizer to target areas of Afghanistan led us to the conclusion that this element of the program should be continued, and at least 20,000 MT tons planned for 1993/94 and, if possible, another 10,000 MT ordered the first half of 1992 to supplement

stocks already in store to assist with the 1992/93 wheat crop. Given the information obtained from the Government of Pakistan, DAI, RONCO and various Afghan traders, we believe that the fertilizer price structure in the world market allows for at least a "break-even venture" vis-a-vis Afghanistan. Of course, this largely depends on obtaining viable freight rates - probably through a process of negotiation with the carrier. The proceeds of fertilizer sales can then be converted to the maximum amount of reflow Rupee funds. These fertilizer sales would be critical to support ADT activities and maintain the credibility of O/AID/Rep and PSA staff and programs in Eastern Afghanistan.

(iv) Assistance to exporters could best be done by assistance in improving the quality, grading and packaging of traditional horticultural exports. This was shown to be practical by HVH consultants and by trial work by MCI. We recommend that one of the major uses of reflow funds to be channeled to NGOs be used for this purpose inside of Afghanistan, with technical advice, training, support and equipment provided by DAI and subcontractors. Security conditions permitting, these NGOs should be encouraged to set up a training and demonstration center in Afghanistan and invite merchants and exporters to observe and comment on their work.

(v) A limited amount of additional machinery should be provided to selected ADT centers, particularly threshers and attachments - that could be used with existing Massey Ferguson tractors - such as backhoes, dozer blades, sprayers, trenchers, cultivators, pumps and large transport trailers that could be used to haul commodities and threshing machines.

We feel that the machinery program could readily be deemphasized in comparison to the fertilizer program. The PSA should concentrate its efforts on areas where market forces do not flow in a normal manner, such as the provision of improved wheat seed and DAP fertilizer. Russia and Millat-Pakistan will certainly find ways to sell their tractors into Afghanistan as the need arises. Also, they will be in a competitive mode which will work to the advantage of the Afghan farmers.

However, it has been brought to our attention that there is oftentimes a lack of market knowledge when it comes time to consider such items as ploughs, threshers, reapers, and other similar farm implements. Apparently, there is no functioning market mechanism which enables an Afghan farmer to readily know from where or from whom in Pakistan to buy some of the various implements he needs. Likewise, the Pakistani manufacturer, who may be nothing more than a cottage industry, may not be aware that a need exists. Therefore, for these items, DAI should continue to play a "match maker" role and show these implements at Depots yet to be established. We feel that rebates should not be a part of the program.

Assuming that above concept is approved and accomplished, then the problem of responsibility arises. We would prefer that DAI/AID not be put in a position of providing even "implied" warranties. Regardless of what is stated or written, the Pakistani dealer or Afghan farmer will certainly come to DAI/AID as soon as a problem arises and if the machinery maker declines assistance. As long as DAI/AID is solely associated with the Depot and is perceived to have both "deep pockets" and a reputation to preserve, then DAI/AID will be the ultimate recourse.

We doubt that any of these minor implement manufacturers are of the status of a Millat or a Fiat. We suggest the following in order to avoid this problem.

DAI should enter into negotiations with Millat and/or Fiat. Perhaps Millat or Fiat, given the appropriate financial incentives, would be willing to lend their name to the machinery in the DAI Depot. It would be clearly spelled out that they (i.e. Millat/Fiat) will provide the manufacturers' warranty. The financial incentive to them could be as simple as receiving a mark-up for inspecting the equipment and providing the warranty.

With the above solution, demonstrations, management of the Depot, etc. would still be the responsibility of DAI. The only difference now would be that any implements recommended by DAI would also need to be approved by Millat or Fiat and would carry the full weight of their reputations.

DAI could consider requiring Millat or Fiat to post a performance bond in favor of DAI guaranteeing that they will provide necessary repairs, adjustments, or replacements when/if appropriate. Given the status and reputations of these companies, we doubt that such a performance bond will be necessary.

(vi) Under no conditions should rebates on machinery freight again be offered by the PSA. The Russians and Pakistanis, in a competitive and self serving mode, will make their equipment affordable to the Afghan farmers. Regarding freight rates, both suppliers should take on this task vis a vis the truckers. We are confident that they will find a solution to the problems. We do not believe that such trade incentives will have an impact on long term market forces.

(vii) Other donors with fewer restrictions than USAID should be encouraged to provide some badly needed agricultural chemicals to areas targeted for distribution of sprayers and where ADT staff can assist in training.

2. PPA Component

(i) The PPA component should be extended at least through 1993 and strengthened in some key areas as noted in Chapter II, Section B above.

(ii) Current structure of PPA is appropriate and should be continued.

(iii) Approval should be provided to let DAI hire, on a short-term basis, some of the trained enumerators that will soon be terminated from the SCA coordinated, ODA financed, Afghanistan Farming System Study. They would assist with the ground truthing exercises recommended below.

(iv) The GIS activities of PPA should receive emphasis. Work should proceed to use ESC-supplied data tapes to revise base maps of Afghanistan and refine the food needs assessment.

(v) Next, a large scale ground truthing exercise should be carried out to help move the land cover assessment and food needs assessment studies along.

(iv) Finally, a workshop on CROPCAST modelling should be convened to assess whether PPA and O/AID/Rep wish to continue with this effort.

3. ADT Component

(i) Emphasis should continue on basic cereal crops, particularly wheat. As noted in SECTION II and SECTION III, a strategic program is needed to develop additional rust resistance in new varieties. ADT staff should be involved in this effort now so when the program moves to Afghanistan in the future, the work can be accelerated and Afghan staff continuity ensured.

(ii) If the component is extended past the end of 1992, efforts on maize and potatoes should be stepped up, particularly if the fertilizer flow improves.

(iii) Security conditions permitting, part of the fertilizer reflow funds should be used to construct and equip selected ADT centers, including small storage areas for equipment, seeds and chemicals. Small seed cleaners should be one of the equipment items; also seed treaters for fungicide dressing.

(iv) The on-farm wheat and maize seed multiplication programs have a good start and 1992 plans calls for a very ambitious expansion. On-farm seed multiplication should continually be encouraged and remain a high priority among ADT activities.

(v) The ADT component should be extended at least through mid-1993 (see (I) below).

(vi) Improved wheat seed storage and seed treatment with Vitavax needs to be implemented in ADT centers.

(vii) Seed cleaning and treatment equipment should be considered for each ADT center or bazaar where appreciable amounts of wheat seed are being produced locally.

(viii) The feasibility of using a "mini-kit" approach should be considered as a means of dispersing a package of technology.

(ix) Given the wide range of functions performed by draft animals in Afghanistan (Section III, above), PSA, if extended, should reconsider options in this area, probably using PVOs to help implement a program.

(x) The ADT program should be expanded to higher impact areas such as the North.

B. Recommendations for Institutionalization

(i) The PPA studies should be of immediate relevance to a post-war government. The current analytical agenda, and GIS work is a good start in this direction.

(ii) Training of Afghan staff in economics, statistics and GIS techniques should be accelerated to enhance capabilities to continue this work in Afghanistan.

(iii) Collaboration and joint projects with other donors and user groups should be encouraged once the major GIS workload has been completed. This will build up a good base of support to continue these arrangements after a peace settlement.

(iv) DAI, O/AID/Rep and other interested parties, as appropriate, should initiate a workshop/seminar series on a regular basis (e.g. every 3-4 months). The purpose of the workshops would be to (a) present new information and results, (b) generate discussion about proposed new initiatives, (c) improve communication between groups and individuals, (d) inform a broader group of individuals about project activities and capabilities and (e) provide more visibility.

Each workshop/seminar should have a focus or theme which would determine the individuals playing lead roles, location and target audience. The location would vary depending on the topic, e.g. a GIS workshop in Islamabad, an ADT workshop in Peshawar to discuss results of crop trials in Afghanistan and plan the next seasons activities and a PVO-focused workshop in Quetta focussing

on potential assistance for horticultural processing in Southern Afghanistan.

C. Replicability

The basic functions of the ADT and PPA components, and the activities we recommend be continued through 1993, are relevant to a new government in Kabul. Agricultural technology transfer, extension, training and input support will be essential components on any agricultural development strategy. The key to replicating the ADT functions in post-war Afghanistan will be the institutional structure under which these functions are supported and carried out (Section III,F.).

We feel there could be considerable scope to restart a variety of agribusiness initiatives in post-war Afghanistan but cannot say at this point what features of CAS activities undertaken from 1989-91 should be replicated. It is not possible to speculate what environment the private sector will be able to operate under, what type of agricultural input delivery system will be put in place and what types of bilateral assistance will be available for importation of DAP and other inputs or even whether donor assistance will be needed for agricultural inputs in the future. The traditional private trading networks are still in place and their main priorities will undoubtedly be government assistance with reconstruction of transport infrastructure and improved security to reduce transport costs. By the middle of 1993, Pakistan will have surplus production of low cost urea and will be aggressively marketing this surplus so Eastern and Southern Afghanistan should benefit from this. A large DAP facility is under construction in Sind Province and hopefully dollar funds can be used to purchase some of this output. Therefore, a major component of CAS may not be needed in post-war Afghanistan. Until such time, we recommend the fertilizer strategy as per Section IV. USAID bilateral programs in Afghanistan will need to take a new look at what types of private sector agribusiness support may be needed.

Replicability of the GIS work under the PPA component is less certain. This area of work will require relatively high levels of expertise, computer hardware and software and a reliable flow of information (some of which may be judged sensitive by a new government) from the USA to Afghanistan. This may best be handled by a private research institute and we recommend this option be explored under a bilateral program.

D. Sustainability

The issue of sustainability refers primarily to the ability of the institutional structures created under the PSA project, once transferred to post-war Afghanistan, to be financed by the

Afghan Government. Long term sustainability, depends upon the support that a new Afghan government provides for the agricultural sector, the governments' ability to undertake policy reforms to attract external financial assistance, the economic health of the rural areas following resettlement, resolution of what will be very serious land tenure problems and the speed at which rural infrastructure rehabilitation occurs. It is simply not possible to speculate on these factors at this time.

We recommend that initial USAID bilateral support be extended to the PSA project components that are moved to Afghanistan until such time as they can receive support from other donors. Realistically, most of the initial support for a new government will come from bilateral donors, UN agencies and NGOs as it will be sometime before Afghanistan will be financially viable enough to attract international development bank funding. Thus, we propose that a future USAID/Kabul program give serious consideration to establishing an Agricultural Research and Extension Foundation to assist in (a) maintaining links with Pakistani research stations, (b) to assist in funding components of a decentralized extension system and (c) continue work on post- harvest processing of horticultural products.

Financial sustainability must address the O/AID/Rep strategy document (1991,A) which assumes that a new Kabul Government will be virtually bankrupt, donor fatigue will be evident and the central government will have relatively little control or authority in rural areas. Under these assumptions a great deal of creativity will be needed to achieve some degree of sustainability.

The ADT component could be provided a financial base with initial grants by donors during the reconstruction phase. These institutions could provide at least part of the base of support to extension workers that has been provided under PSA.

A national statistical system will have to be under a federal government unit and will thus be poorly financed. The GIS should be gradually transferred to a private sector unit on a financially self-supporting basis.

E. Staffing

(i) Current DAI staff should be continued in their current positions as long as the project continues.

(ii) If fertilizer imports continue to be part of PSA, a short-term consultant in commercial fertilizer sales and distribution should be recruited for two six-week consultancies per year, one dealing with estimates of demand and the second one

dealing with fertilizer after arrival in Karachi on through distribution in Afghanistan. This consultant would be directly supervised by the private sector businessman/entrepreneur mentioned in Section IV, A 1 (ii).

(iii) A short-term expert on agricultural applications of GIS should be fielded for about two one-month consultancies per year.

(iv) The work by HVH should be focused, and expanded in line with the ability of NGOs and PSA staff to assist with post-harvest processing of horticultural products.

(v) Immediate consideration should be given to retaining some of the survey staff being terminated by the SCA/ODA Farming Systems Project to help with fieldwork needed to push GIS work along. This is needed even without the extension of PSA.

F. Location of Activities

(i) The ADT training unit should be retained in Peshawar. The ADT advisor, Director and senior Afghan staff should remain in Islamabad to assist with coordination of ADT activities within PSA and with other donors.

(ii) Security and funding permitting, training activities should gradually be moved inside of Afghanistan. This would include proposals to set up a modest post-harvest horticultural facility, build up the infrastructure of selected ADT offices so they could provide more regular training and set up training units dealing with on-farm seed production.

G. Commodities

(i) We recommend wheat continue to receive top priority, with maize second and potato third.

(ii) In horticultural crops, PSA should focus on assistance with post-harvest processing to increase value-added in Afghanistan and assist with export market development.

(iii) DAP to continue as the priority input.

(iv) Some additional farm machinery for demonstration purposes should be procured and supplied to the ADT centers, including PTO-driven spraying units for orchards, backhoes, dozer blades and large wagons and threshing machines.

H. Recommended Role of O/AID/Rep

The strategy that we propose requires strong and consistent support from O/AID/Rep. The adversarial role that was sometimes

associated with O/AID/Rep management was not noted during our study and, in fact, over the 5 weeks we were in Pakistan, we felt a renewed sense of purpose, direction and consensus being formed about what PSA has accomplished and what it could accomplish in the future. Some of the complex tasks entrusted to the product (seed supply, GIS, reestablishing a functioning agricultural extension system in Eastern Afghanistan) are now well entrenched and if the fertilizer supply problems can be worked out, the project deserves full support and cooperation by O/AID/Rep. We recommend that O/AID/Rep staff, to the extent possible, become substantively involved in a few key areas of recommended future activities so they are better able to evaluate, comment on, and provide support to those components. Examples include the seed production and supply program (although we did note good understanding of the procedures, varieties, sources of seed by O/AID/Rep staff), fertilizer procurement and GIS, particularly aspects related to crop modelling, ground cover and ground truthing and the food security assessment study.

I. Options for Reconfiguration

The current status of the project (PACD of 12/92) is not considered here. We do not consider termination in December 1992 to be in the best interest of O/AID/Rep based upon our review of the Afghanistan Strategy Document and based upon the immediate needs of Afghanistan once bilateral relations are reestablished.

Option 1 Continue full program with private sector support activities as outlined in Section II and IV B and C, above, including DAP imports. This option presents AID with the broadest base to build upon for future bilateral programs, is the most consistent with the 1991 Revised Afghanistan Strategy Document and would rebuild the base of support from participating farmers, farm communities and traders. Given the past history of the PSA project, it is also the riskiest in terms of the conditions that would need to be met for this option to achieve its goals and would require a concerted effort by O/AID/Rep and DAI to work out details for an acceptable program of fertilizer imports and distribution within Afghanistan. If option 1 is not feasible, the 1993/94 wheat crop will have to do without PSA fertilizer and O/AID/Rep will be seen in some areas of Afghanistan as an unreliable partner with which to work, thus jeopardizing future bilateral programs in those areas.

Option 2 Maintain ADT and PPA components past 1992 but without fertilizer imports. As noted above, continuation of the ADT component past the PACD will be of limited value without the ability to provide at least some fertilizer and machinery (threshers, in particular) to support the improved varieties of wheat, maize and potatoes. Our meetings with a range of other donors indicated they would not be able to provide enough fertilizer to support the coverage of areas currently under ADT.

Distribution of fertilizer stocks currently in store should at least help get some farmers through the 1992-93 wheat season and would allow the ADT unit to maintain in place a well trained, dedicated group of extension staff. This option would allow O/AID/Rep to maintain an important foothold in the Afghanistan agricultural extension system when bilateral relations assume and would maintain this foothold for about 18 months (April 1992-October 1993) until additional fertilizer would be needed for the 1993-94 wheat crop. Hopefully, during this period, a bilateral program in Kabul will eventuate, fertilizer can start flowing and USAID will be in a position to start a significant program of rural development building upon the continuous presence of ADT staff in Afghanistan. The nature of the PPA program in this option would be the same as described in option 3 below.

Option 3 Phase out either ADT or PPA component by end of 1992, continue the other component at least until the end of 1993. One of the areas that our team agreed upon was that PPA activities were becoming more useful for a variety of donors and for a variety of purposes. If nagging problems of purpose and understanding between DAI, Earth Satellite Corporation and O/AID/Rep can be worked out, the PPA component will play a key role both before and after a bilateral program starts. We consider this to be an option with few risks, cost effective and serves to position the O/AID/Rep well in terms of one of the most immediate needs of a bilateral program - information to guide reconstruction and development programs in post-war Afghanistan. We believe this option could be exercised for all of 1993 with no additional ASSP funding being required. However, if PPA is not extended, we then favor a phase out PPA by end of 1992 and extend the ADT component for at least another full year as in option 2 above. This option makes sense if O/AID/Rep feels that DAI's implementation of the PPA component (a) has not been up to their expectations or (b) would like the PPA activities sufficiently restructured and expanded so that a new project would be designed and let out for bids with the expectation that U.S. institutions specializing in agricultural planning and GIS would be chosen to execute a new project. The ADT component would be similar to the description set out in option 2. Dropping the PPA component at the end of 1992 would allow the ADT component to operate through 1993 on existing savings in program funds, if this option was exercised quickly.

These options, along with estimates of the funding consequences, are set out in Table 3 below.

We felt that it was not an expeditious use of our time to prepare detailed cost estimates of the consequences of each option. O/AID/Rep and DAI are in a much better position to examine options related to costs but we believe the table which follows at least sets out the options of most interest.

Option 1 may require a significant increase in program funds as we feel a minimum of 20,000 MT of DAP would need to be imported to justify an extension of ADT field activities into the 1993/94 wheat season.

Table 3. Options for Reconfiguration and Funding Consequences

OPTIONS	FUNDING CONSEQUENCES
Option 1. Continue full program with fertilizer and other CAS-type activities	Additional contractor and program funds needed. About $1.5 million for contract extension and $3-3.5 million in program and logistical support funds so ASSP obligation would need to go to $65 million.
Option 2. Maintain ADT and PPA past 1992 but without fertilizer imports.	Current levels of funding should be adequate if cost saving options instituted soon by DAI, training cost maintained or lowered and use of short-term consultants and DAI home office staff minimized.
Option 3. Phase out either ADT or PPA by end of 1992, continue remaining component at least till end of 1993	Current levels of funding should be adequate if cost saving options instituted soon by DAI, training cost maintained or lowered and use of short-term consultants and DAI home office staff minimized.

J. Funding

According to the Afghanistan Strategy Document, the proposed FY-92 O/AID/Rep budget will be on the order of $60 million for project assistance and $19 million of PL480 Title II food aid. Project expenditures for 1992 under the PSA project are estimated at about $8.5 million under the TA contract - $7 million of program funds by the end of 1992, plus some logistical support funds of about $1.5 million. This $8.5 million is a little more than 10% of total funds proposed for FY 1992. These cost estimates do not include any funding for CAS-type activities. As noted in Section I. above (Options for Reconfiguration), there are several scenarios that would allow some components of the project to remain in place through the end of 1993, thus preserving some key elements of a future bilateral program. During discussions with DAI, it seems possible to limit expenditures during 1992 so as to have about $2.4 million in program funds remaining at the end of 1992. This would be adequate to (a) add additional funds to the DAI Technical Assistance contract and (b) maintain adequate program and logistic support funds to allow a full PPA or ADT program to continue at least through 1993.

SECTION V. A FRAMEWORK FOR ASSISTANCE IN THE FUTURE

The overall assumptions follow upon the scenarios set out in the O/AID/Rep Afghanistan Strategy Document which is based upon more analysis of possible future developments in Afghanistan than we were able to carry out. The key goals for the "renewal" phase outlined in the document that are of most relevance for PSA are the goals of (a) strengthening the rural economy by improving Afghanistan's ability to feed its populace, increased employment opportunities, reabsorb returning refugees on the farms and speed the demobilization process and (b) initiation of planning for reconstruction by developing the information base needed for environmentally appropriate, prioritized infrastructure reconstruction. In the "reconstruction" phase, the goal of most relevance to PSA is adoption and implementation of policies which encourage reliance on markets and broadbased participation.

A. Issues

The mission's strategy document identifies a "Renewal Phase" in which USAID initiates the planning for reconstruction to strengthen the rural economy and consolidate and replicate measures to sustain basic social services in rural areas. PSA is well positioned to participate and contribute to this phase.

We are faced with the conclusion that a post-war Afghanistan will require most urgently the types of assistance which has fallen out of favor with USAID. More specifically, we feel the most urgent priorities will be to rebuild the institutions critical to sustainable agricultural development, namely Kabul University, the National Agricultural Research and Extension System and the other supporting institutions to get agricultural growth back on track. Long-term institution building will be a necessity yet this goes against current USAID/W priorities. The market system is alive and well and will simply require adequate supplies of agricultural inputs and incentives to supply them to farmers. Traditional market outlets for traditional Afghanistan exports, such as dried and fresh fruits, nuts, and vegetables still exist and require relatively little U.S. technical assistance to regain their former place in the nations exports.

The future programs must avoid becoming a surrogate for inefficient government operations in the Ministries/Agencies most closely associated with PSA. This would include the Ministry of Agriculture, Central Planning Agencies and a National Statistical Institute. We note our preference to reconstruct agricultural extension systems on a limited bases using NGO-type structures with local responsibilities and maximum local decision making. The GIS area should go private but agricultural statistics and

analysis will almost certainly have to go into some type of national program.

The structure of an agricultural research system in Afghanistan must consider the conclusions of a USAID-financed study of prior U.S. Assistance to Afghanistan "This conclusion applied, for example, to the Ministry of Agriculture which despite large and sustained US assistance failed to develop a viable institutional capacity for support of Afghan agricultural development" (Devres, 1988).

Some specific issues related to sustainability, replicability and institutionalization of current PSA programs in a future Afghanistan are discussed in some detail in Section III.

B. Scenarios

An important lesson learned by the review team is how risky it is to forecast what may happen inside of Afghanistan. Opinions of PSA Afghan staff are as diverse as those expressed by O/AID/Rep staff and others well informed on the Afghan scene. Our basic implicit assumptions are that current government structures operating in Kabul and provincial capitals will remain essentially in place. The implications for many ADT and PPA activities are then fairly clear.

We assume that the agricultural research system will be reestablished, will be small, underfunded, poorly supported and poorly staffed. Some donor support is called for, particularly from USAID which has comparative advantage in helping develop successful agricultural research systems in less developed countries. Agricultural extension will be under tenuous central control but should be placed largely under provincial control and supported, to the extent possible, by local resources and by one or more larger, better supported NGOs or a national research and extension foundation. Production of certified wheat seed through private sector means will probably not be profitable enough so some public support will be needed, perhaps again under a large, well recognized NGO or research foundation.

The above scenario also implies a fairly direct role for the agricultural statistics sub-component of PPA. The survey and analysis work would go to the relevant Central Government Unit. The GIS work should go to a recognized research institute, University or private sector consulting firm.

Strong encouragement of private sector activities have not been a characteristic of the current or previous Afghan governments. There seems little reason to expect this attitude to change dramatically although pressures to establish international financial credibility will probably push a new government towards gradual economic reforms, privatization and

open market pricing. A recent additional factor is increasing pressure by supporters of the Afghan resistance parties to open trading routes through Afghanistan to the Central Asian Republics of the Commonwealth of Independent States. We conclude that the long-term outlook for promotion of private agribusiness is generally favorable. In the short term, we must assume that major donor support for CAS types of activities would be risky and could well lead to the types of problems identified in our report.

SECTION VI. LESSONS LEARNED

1. Projects to promote the private sector in developing countries have generally been difficult for USAID to implement. Most characteristics of USAID operations are direct opposites of those most associated with the private sector operations in developing countries. When these constraints are confounded with the issues listed in Section III, it is no surprise that the CAS component had great difficulties.

2. For this project to succeed with CAS objectives, the private sector actors on both sides of the border needed to be actively involved from the beginning, not only for execution but also in designing the project workplan.

3. For a CAS-type of operation to be successful, both the contractor and O/AID/Rep need key staff fully conversant with how private sector trading operations operate, particularly for bulk commodity procurement and shipment. This expertise is needed to blend private sector operations with USAID requirements.

4. Separating the procurement function from the technical assistance contractor generally produces poor results. In some areas such as import of vehicles, office equipment, etc. a mission procurement contractor works fine. For specialized areas such as seeds, agricultural machinery and specialized computer hardware and software, this separation generally doesn't work well and DAI should have sought O/AID/Rep clearances to procure such items themselves.

5. For high technical areas such as GIS, the interface between clients, analysts and project managers is critical. The original role assigned to the GIS work was not really appropriate. A GIS expert to advise DAI on an independent basis was needed early on.

6. A sub-project such as the PPA component needs a solid core of analysts early on in the project. This was recognized but DAI efforts to recruit local experienced analysts were not successful. These efforts are continuing.

7. Projects of this complexity and funding levels are really designed to operate under conditions of stability and a high degree of certainty regarding conditions in the host country. The project design simply had too many assumptions that were not met, even so project implementation was not flexible enough to quickly adjust to changes in conditions inside Afghanistan. Plus, the changes are almost continuous, even to this day and the nature and extent of these changes themselves are highly uncertain.

8. In retrospect, the project design needed to reflect a great deal of flexibility, options to pursue if it became clear that original objectives and operating procedures were not appropriate, and a 'rolling' funding process. While this type of design is not familiar to contractors who have to recruit and field qualified staff under these conditions, such conditions are fairly common with advisors fielded under UN, World Bank and Asian Development Bank projects.

9. We believe that a LOGFRAME should have been developed and in considerable detail. Any deviations regarding the components should be acknowledged by the other party and the contract amended accordingly. We now understand that the targeted commodities in the original documentation are, to some degree, for illustrative purposes only (USAID. 1991,A). This can lead to confusion later, especially if things do not go well. Everything should be well documented. If not, then more and more will go undocumented and the procedure itself loses importance. Misunderstandings will develop. The evaluation process itself becomes more difficult and inaccurate.

If exports from Afghanistan were not to be a part of the project, or if they were to be postponed due to prevailing circumstances, then a formal amendment should have been prepared.

SECTION VII.

Annex I: Scope of Work

PRIVATE SECTOR AGRIBUSINESS (PSA) ASSESSMENT

(Scope of Work)

Background

In March 1987, A.I.D. authorized a $6.0 million Agriculture Sector Support Project (ASSP) as part of its cross-border humanitarian assistance program for Afghanistan. At the outset the ASSP concentrated on rural reconstruction of irrigation systems and farm-to-market roads. In February 1989, A.I.D. amended the ASSP authorization increasing life of project funding to $60.0 million and adding a Private Sector Agribusiness (PSA) component to foster the return of normal commercial trade between Afghanistan, Pakistan, the U.S. and other western countries.

A private consulting firm, Development Alternatives, Inc. (DAI), was competitively selected in August 1989 and began implementing the Private Sector Agribusiness (PSA) component of the ASSP. The infrastructure reconstruction activities continue to be carried out under a separate Afghanistan Rural Rehabilitation (ARR) component through a cooperative agreement with a U.S. NGO, Volunteers In Technical Assistance (VITA). However, in April 1990, the agricultural development activities of the ARR component became the responsibility of the DAI contractor. December 31, 1992 is the current completion date for all ASSP component activities.

The goals of the ASSP/PSA component are:

- Revitalize private agribusiness linkages between Afghanistan and its western neighbors, principally Pakistan;
- Promote the commercial distribution of agricultural inputs to Afghan farmers;
- Test and demonstrate improved agricultural practices and inputs;

- Transfer technology through training programs for agriculture sector workers; and

- Provide necessary information for monitoring the performance and planning the development of rural Afghanistan.

These ASSP/PSA objectives are addressed by three PSA sub-activities:

- The Commercial Agricultural Sales (CAS) unit promotes farm inputs sales and cash crop exports through a mixture of incentives and assistance activities to Afghan and Pakistani traders and dealers;

- The Program, Planning and Analysis (PPA) unit collects information on execution of project activities and on agriculture section performance for analysis and planning. Information collection ranges from field surveys to satellite imagery and is managed through a Market Information System (MARIS) and a Geographic Information System (GIS);

- Agriculture Development and Training (ADT) unit conducts the former agriculture technology testing and extension activities of the ARR component through a network of agriculture development agents located at ADT sites inside Afghanistan.

Purpose of this Scope of Work

It is estimated that, at minimum, a three person contractor team is needed to assess the PSA component activity and make recommendations for possible modifications and future activities. (O/AID/Rep is currently seeking AID/W participation in the field work phase of the evaluation. However, such participation may not be possible.)

Scope of Activities

This assessment is scheduled to begin in September 1991 in Washington, D.C. Field work in Pakistan should be scheduled to begin in November. This assessment follows two years of PSA component activity and about one year before the ASSP project and PSA contract are currently expected to terminate. The PSA assessment, along with a separate evaluation of the Afghanistan Rural Rehabilitation (ARR) component of the ASSP, will form the basis for determining the nature of A.I.D. initiatives in support of Afghan agriculture and rural development beyond 1992.

The assessment will examine performance and accomplishments to date of each of the three sub-activities of the PSA component. Each assessment team member will have primary responsibility for one PSA sub-activity. Together the team members will examine how the three sub-activities have collectively and independently contributed to achieving ASSP goals.

In examining PSA component activities the assessment team will directly address the following:

1. Progress to date: Describe what each PSA component activity has accomplished to date -- plant genetic material and farm inputs distributed, market and crop studies produced, trade and extension systems created, etc. -- and assess how these have contributed to project goals. Indicate lessons learned particularly regarding how the CAS and ADT have worked with the strengths and weaknesses of Afghan private traders and agricultural technicians and within the constraints imposed by Pakistani trade regulations and Afghan security conditions. Examine how ADT input testing and extension and PPA market price collecting activities have been integrated with the CAS trade promoting activities of the project. Describe the organization, operation and accomplishments of the network of bazaar representatives and agricultural extensionists set up by PSA inside Afghanistan.

2. CAS commercial trade promotion: Identify constraints to commercial trade promotion and describe how the project has responded to them. Specifically, indicate how the PSA has addressed GOP restrictions on the movement through Pakistan of agricultural inputs that must be purchased offshore for distribution in Afghanistan. Review the trade incentives provided to the private sector and examine their impact on long-term market forces. Assess the effectiveness of CAS measures to assure commodities reached those areas of Afghanistan targeted by the project. Evaluate how the contract has arranged to transfer PSA commercial trade activities to the private sector so as to meet Afghan farmers' requirements for farm production inputs after the ASSP terminates.

3. ADT Agriculture production promotion and training: Review and identify the successful and not so successful crop and livestock production activities of the ADT. Examine and comment on the number and qualifications of ADT staff and on the quality of direction and training given ADT office and field staff. Examine the mix of ADT activities to determine if, say, horticulture activities have received too much attention to the detriment of other cash and food crop activities. Indicate the numbers of participants and types of training received against assessed needs for staff technical upgrading.

4. PPA Analysis and Monitoring procedures: Review the status of the PPA unit's Geographic Information System (GIS) and Market Information System (MARIS) against targets set for the creation and use of these facilities. Assess what PSA has accomplished in developing procedures to: (a) measure the impact of the project on trader and farmer beneficiaries; and (b) determine the final destination of goods traded.

5. Local currency generation and use: Describe how local currencies (Afghanis and Rupees) are converted and handled. Evaluate the measures taken by the project for the safeguard and use of local currency generations. Discuss how local currency generations have contributed to project objectives.

6. Technical advisory and local staff management: Evaluate the effectiveness of the prime contractor in the use of the subcontractors and consultants in the conduct of technical assistance and program funded activities. Assess the effectiveness with which the contractor has established field offices and quality of output from those field offices and staff. Describe the effectiveness of the contractor's home office support in meeting staff and consultant recruitment and commodity procurement needs of the field office.

7. Recommendations: In addition to the above specific concerns the assessment team should:

- Indicate which PSA activities seem to be the most or least effective in achieving project goals and therefore might be expanded or contracted;

- Identify potential needs for further private sector agribusiness trade development which appear likely beyond the life of the PSA and what the nature of that future assistance might be;

- Recommend what changes A.I.D. and the contractor might introduce at this juncture in the life of the project so that the PSA better contributes to ASSP goals and the AID/Afghanistan strategy;

- Recommend any future reconfiguration of the PSA and specify which, if any, activities might be more effective as a "stand alone" project, particularly the ADT.

Assessment Methodology

The assessment will be conducted using the following techniques:

- Documentation review. Examination of relevant project documentation, workplans, quarterly reports and special reports available in the contractor's home and field offices, and in AID/W and O/AID/Rep;

- Personal interviews. Discussions with contractor project staff and AID Washington and field officers and independent Afghans (e.g., traders on PSA performance);

- On-site inspection. Examination of facilities and activities except as constrained by security conditions, e.g., travel inside Afghanistan.

Assessment Team Members' Qualifications

Each of the assessment team members will be a specialist in a discipline related to the area of examination to which (s)he is assigned:

The agribusiness specialist looking at the CAS should have: (a) hands on experience in private agricultural business -- e.g., farming, input supply, marketing; work experience in developing country environments preferably in Asia; and (b) knowledge of A.I.D. development assistance procedures.

The agricultural specialist looking at the ADT should have training in the agricultural sciences and experience implementing agricultural projects in developing countries, preferably in Asia. Agricultural research or extension would be examples of the fields of experience particularly relevant to ADT activities. Familiarity with A.I.D. development assistance programs is also required.

The agricultural economist looking at the PPA should have training and experience in economic analysis of agriculture prices and policies in developing countries preferably in Asia. This team member should also be familiar with agriculture planning techniques, particularly as they relate to collecting and reporting data from remote sensing and field survey sources, and assessing the performance of developing country agricultural activities.

One of the team members, in addition to being a specialist in one of three technical fields listed above, shall be designated as PSA assessment leader and should have experience in evaluating and/or managing A.I.D. agriculture projects in Asia. He must also have proven leadership and strong oral and written communications skills. The assessment leader will be responsible for organizing and scheduling the team's work and for orchestrating the drafting of the review team final report presenting to AID/W and to O/AID/Rep the Team's findings and recommendations.

Work period and locations

Initially, the contractor team will review project documentation in Washington, D.C. available from AID/W, the O/AID/Rep and the PSA contractor's home office. The contractor's home office staff will collect and compile relevant project documentation prior to the team's arrival in Washington, D.C. The team will also meet with appropriate AID/W and PSA contractor home office staff familiar with the PSA components origins and operations. Included in this Washington D.C. review will be the AID/W in-house assessment of the CAS component conducted earlier in 1991. This phase of the evaluation is estimated to take not more than 5 work days.

It is anticipated that the field work phase of the assessment would begin with the arrival of assessment team members in Pakistan. The assessment team will begin first in Islamabad to meet with O/AID/Rep staff and organize its in-country work. The assessment team will then travel to Peshawar and Quetta to meet with PSA project staff. The team will then return to Islamabad for debriefing and submission of draft and final reports. The field work phase of the assessment is expected to last not more than 31 days.

Reports

On the basis of the Washington D.C. review of project documentation, the team will prepare an outline of the draft assessment document to be presented and discussed with O/AID/Rep staff after arrival in country. NLT 7 days before departure from country the team will prepare and submit to O/AID/Rep staff a draft assessment report together with a draft Project Evaluation Summary (PES). On the basis of a team debriefing with O/AID/Rep and Mission comments on the draft report, the team will prepare and submit a final assessment report, prior to departure from country.

Annex II: List of People and Institutions Visited

Agricultural Development and Training (ADT) Component of DAI/PSA.

- M. Arif Noori, Director
- Dr. Mohammad N. (Norby) Aslamy, Deputy Director and Head of Cereal Crops
- Dr. Abdullah Naik, Head of Extension
- Dr. Abdul Wakil, Advisor
- Mary Ann Javed, Training Specialist
- Qasim Yusufi, Training Coordinator
- Ajruddin (Haji) Wais and Sayed Habib Plant Protection Program, Peshawar
- Abdul R. Ghafary and Saifuddin Saif, Agricultural Machinery Programs, Peshawar
- Dr. Naqi Aslami and Anwar Malham, Commodity Programs

Winrock International

- David Smith, Sarhad Rural development Foundation, Peshawar

Swedish Committee for Afghanistan (SCA)

- Dr. Azam Gul, Director, Agricultural Section, Peshawar
- Dr. Nusrat Wasimi, Seed Section Manager and Deputy Director, Agriculture Section, Peshawar

TIPAN Project Advisors at Northwest Frontier Province Agricultural University, Peshawar, including

- Oval Myers, Team Leader
- Donald E. Kuhlman, Entomologist and Extension Specialist
- Rodney J. Fink, Crop Specialist and Private Sector Advisor
- Ferral Olson, Agronomist
- David Brown, Agricultural Extension

Dr. Hameed Bajoi, Director Agriculture Research Institute, Sariab, Quetta

Dr. Bakht Roidar Khan, Director, Arid Zone Research Institute, Pakistan Agricultural Research Council, Quetta

Drs. Abelardo Rodriguez and Euan Thompson, ICARDA staff on deputation to Arid Zone Research Institute, Quetta

Neil R. Huff, Country Director; David Sherman, Veterinarian and Myron Jesperson, Agriculture Project Coordinator, Mercy Corps International, Quetta

Bedh P. Upreti, Regional Planner, UNIDATA Project, Operation Salam, Kabul, Afghanistan

Management of Agricultural Research and Technology Project. (MART)

Drs. Bill Wright, Chief of Party; Cordell Hatch, Communications Specialist; Taki Azuno, Provincial Research Advisor; Murray Dawson, Farming Systems Consultant; and Qamar Zaman, Administrative Officer

Drs. Chuck Hatch and Gary Naughton, Forestry Planning and Development Project, Islamabad

DAI Contract staff in Pakistan:

- Dr. Richard Smith, Chief of Party
- Dr. Don Oelsligle, Advisor, ADT Unit
- Dr. Miles Toder, Advisor, PPA unit
- Dr. Garry Robertson, Short-term Consultant, Potato Production Program, Peshawar
- Robert Godfrey, Short-term Consultant, Communications, Islamabad
- Sher Ali, Financial Officer
- Asif Niazi, Director, Information Unit

DAI Staff in Bethesda, Maryland

- Don Mickelwait, President
- Bob Otto, Director, Agriculture and Natural Resources Division
- Richard English, PSA Home Office Coordinator
- David Garner, Program Officer
- Kerry Connor, Geographer

USAID, Washington D.C.

- Phil Church
- Larry Crandall, Director, Strategic Planning
- Susan Sawhill Riley, Eastern Europe Task Force
- John G. Crowley, Office of Population

USAID Office for Afghanistan Affairs, Islamabad

- Dr. Gary Lewis, Chief, Agriculture Development Officer
- Dr. Ray Renfro, Deputy Chief, Office of Agriculture and Rural Development (ARD)
- Dr. Fred Smith, Project Officer, ARD
- Jim Stone, Project Officer, ARD

Barbara Naughton, Secretary, ARD
Jonathan Sperling, Acting Representative
Curt Wolters, Evaluation Officer

USAID/Pakistan, Islamabad
James Norris, Mission Director and Acting Director, O/AID/Rep.
Dennis J. Weller, Chief, Ag. Sustainability, Production & Policy, Office of Agr. & Rural Development
Bob Haskell, PSC Employee

VITA, Pakistan (ARR Project of ASSP)
Mir Moh'd Sadiq Ashan, Chief of Party
Qasim Tahiri, Quetta Office

Earth Satellite Corporation, Rockville, Maryland
Kevin J. Howald, Senior Application Scientist, GIS

United Nations Development Programs/OPS, Afghanistan Project Office, Robert W. Eaton, Programme Manager

F.A.O. of United Nations
Anthony R. Fitzherbert, Programme Coordinator, Afghan Agric. Rehabilitation

Millat Tractors Limited, Lahore
Engr. Nadeem Ahmed, Dy. Manager (F.M.)
Zaair Fareed Shah, Sr. Manager (Sales)

Pioneer Pakistan Seed Limited, Lahore
Dr. Essam El Gressi, Managing Director

Cargill Pakistan Seeds (Pvt.) Ltd., Lahore
Dr. A. Rehman Khan, General Manager

Fauji Fertilizer Company Limited, Lahore
Khaliq Rehman, Planning Manager

Ministry of Food and Agriculture, Government of Pakistan
Siraj Shamsuddin, Joint Secretary, Agricultural Inputs
Suleiman Shah, Deputy Secretary, Fertilizer Import Department
Najmus Sadib, Deputy Secretary, International Cooperation

Cereal Crops Research Institute (CCRI), Pirsabak, NWFP
Dr. Muhammad Saleem, Maize Breeder

Rahmat Leather Industries (Pvt) Ltd
Rahmat Tanneries (Pvt) Ltd.
Izatullah, Karachi
Nasrullah, Kabul

RONCO Consulting Corporation - Pakistan Office
Guy P. Bowen, Chief of Party
Irshad A. Akhtar, Sr. Procurement Officer

A. Mousahan - Trader in Quetta
Many other Traders in Quetta and Chaman.

Annex III: Bibliography

Afghan Fertilizer Group. 1991. Fertilizer Agreement. Karachi.

Agriculture Sector Support Project.n.d. Activity Assistance Memorandum, Amendment No.2, Project 306-0204. Not dated. Islamabad.

ASSP. 1990. Private Sector Agribusiness Work Plan, June 1990-July 1991. Prepared by Development Alternatives, Inc. for O/AID/Rep, Peshawar.

Bosch, A.G. 1991. Animal Husbandry Program For ASSP/PSA. DAI Report, Peshawar.

Bradford, L.E. 1990. Agroforestry in Afghanistan. DAI Report, Peshawar.

Bragg, W.G. 1991. Afghanistan Cucurbit Rootfuel Project Report. Winrock International Report. Afghan Rootfuel Project, Washington, D.C.

Campbell, Joseph. 1990. Recommendations on Farm Machinery for Use in Afghanistan. DAI Report, Peshawar.

CHEMONICS, Inc. 1991. Final Report. Afghanistan: Agricultural Rural Rehabilitation Evaluation. Prepared for USAID Office of the Representative for Afghanistan Affairs, Islamabad.

Conje, J.M. 1991. Agricultural Extension System for Afghanistan: Approach, Strategy, and Features of a Reformed Extension Service. DAI Report, Islamabad.

DAI 1989. Afghanistan Agricultural Sector Support Project, Technical Proposal. Vol One. DAI, Washington, D.C.

DAI. 1990(A). Strategy for the Afghanistan Agriculture Sector Support Project (ASSP). Report prepared under contract number 306-0204-C-00-9829-00. Peshawar, Pakistan.

DAI. 1990(B). Standard Operating Procedures ASSP-PSA, Peshawar.

DAI. 1991. Bid Document. Bid No.DAI/W3/1991 Bid for Wheat. July 1st 1991, Peshawar.

DAI. 1992(A). Agricultural Developments in Afghanistan. Vol 1, Issue 1, February 1992, Islamabad.

DAI. 1992(B). Fertilizer Marketing Strategy and Pricing Policy, March 10, 1992, Islamabad.

DEVRES. 1988. Retrospective Review of US Assistance to Afghanistan: 1950-1979. Report prepared for ANE/DP/USAID, Delivery Order No.17, Contract No. PDC-0085-I-00-6095. Washington, D.C.

Eubanks, K.S. Farm Machinery 1990: 16 Provinces in Afghanistan, Analysis and Recommendations, DAI Report, Peshawar.

Eubanks, K.S. 1991. I. Development of a Supply System of Pakistani Agricultural Machinery. II. Optional Details for the Proposed Green Horse Bazaar, Chaman Depot, Baluchistan, Peshawar.

Ewert, T. 1991. Seed Wheat Production, Farm Machinery and Cumin/Caraway. MCI Report, Quetta.

FAO. 1991. Guidelines for Soliciting Invitations to Bid and the Preparation of Attachments to PRs, POs and LPOs for Export Quality Seed (UNO/AFG/104/UNA) Updated 6 October 1991, Islamabad.

Farr, G.M. and A. Gul. 1984. Afghan Agricultural Production: 1978-1982. Journal of South Asian and Middle Eastern Studies. Vol.3, No.1, 1984.

Flanagan, P. 1991. A Review of the Veterinary Resources for Afghanistan: Fundamental Information for the Private Veterinary technician (PVT) Program Proposed by Mercy Corps International, Quetta.

Fort, R.E., Abdul Ferough and Johan Fagerskiold. 1991. UNDP Report of the Evaluation Mission of Farm Projects in Afghanistan.

1. Assistance to NGOs AFG/88/001.
2. UNIDATA AFG/88/002.
3. Seed Testing and Multiplication AFG/88/005.
4. Agriculture Survey and Extension AFG/88/006.

Freed, D. 1990. Restraints and Possible Interventions to Increase Agricultural Inputs to and Outputs from Afghanistan. DAI Report, Peshawar.

Garner, D.A. 1991. End of Tour Report, ASSP. DAI, Islamabad.

Greenham, Jonathan. 1989. Recommendation for the Agricultural Development and Training Component, ASSP, Afghanistan. DAI Report.

Humpal, D.S. 1990. Organization and Training in the Agricultural Development and Training Component (ADT). DAI Report, Peshawar.

HVH. 1990. Cash Crops Rehabilitation and Development Program. DAI and High Value Horticulture, PLC. Proposal to Expand Cash Crop Production, PSA/ASSP, Peshawar.

Lea, J.D. 1988. Agriculture in Afghanistan: A Background Paper Focusing on Wheat.

MCI. 1991. MCI Quarterly Report June 1 - December 31, 1991 (combined report for two quarters) PVO Support Project Cooperative Agreement #306-0211-A-00-0961-00 Mercy Corps International Agricultural Assistance for Southwest Afghanistan, Quetta.

Poulin, R. 1990. Private Sector Agribusiness Support. DAI Report, Peshawar.

Raditz, G.W. 1990. Financing Cross-Border Trade, Reconstructing Agriculture and Agribusiness in Afghanistan. DAI Report, Peshawar.

Rahmat, N. 1991. Memo to John Soden of DAI on Sale of DAP, Islamabad.

Rann, J. 1990. Pilot Locust and Senn Pest Control Project for Afghanistan in Badghis Province. DAI Report, Peshawar.

Rann, J. 1991. Afghanistan Locust and Senn Pest Control Project. Final Report and Evaluation prepared for DAI, Peshawar.

Rice, E. 1991. DAI/ADT Maize Progress Report, Peshawar.

Robertson, G. 1991. Potato Production in Afghanistan: The Present Situation and Strategy for Improvement. DAI Report, Islamabad.

Saari, E.E. 1990. Report on Wheat Production in Afghanistan: An assessment of Potentials and Problems. DAI Report, Peshawar.

Saari, E.E. 1992. Report to DAI on the Assessment of Wheat Production in Afghanistan and Recommendations for Future Activities, Islamabad.

Sediq, M.M. 1992. Briefing Paper on Agriculture and Rural Rehabilitation. 306-0204-A-00-0767-0 VITA Paper, Islamabad.

Sollod, A.E. 1990. Assistance to Afghanistan in the Livestock Subsector. DAI Report, Peshawar.

Smith, R.L. and Robert Haskell. 1991. Request for approval to establish a Chaman-based Pak/Afghan Trade Center (Sales Depot). (Action Memorandum to Gary Lewis and Phil Church of O/AID/Rep). 31 May 1991, Islamabad.

Smith, R.L. 1992. Fertilizer Marketing Strategy, 1992. (Memorandum to Gary Lewis and Ray Renfro of O/AID/Rep) from RLS, DAI, ASSP. February 25, 1992, Islamabad.

Stem, C. 1991. Agriculture in the Middle Helmand River Valley. A survey of irrigation infrastructure, cropping patterns, farm power, livestock production, security and the political situation. Mercy Corps International, Quetta.

Swedish Committee for Afghanistan, The Agricultural Survey of Afghanistan.

First Report 1988.	1987 Agricultural Survey of Afghanistan. May 1988.
Second Report 1989	Farm Power - Vol 1 April 1989.
Third Report 1989	Crops and Yields. Vol 1 August 1989.
Fourth Report 1990	Fertilizer. February 1990.
Fifth Report 1990	Seeds. June 1990.
Sixth Report 1990	1988 and 1989 Surveys. August 1990.
Seventh Report 1990	Agricultural Survey of Afghanistan. Northern Afghanistan. Crop Protection Program. August 1990.
Eighth Report 1990	Northern Afghanistan Insect Damage Survey. October 1990.
Ninth Report 1990	Northern Afghanistan Food Deficit Survey. November 1990.
Tenth Report 1990	Livestock. November 1990.
Eleventh Report 1991	Regional Farming Problems. March 1991.
Twelfth Report 1991	1990 Survey. November 1991.

UNOCA. 1991. Afghanistan Operation Salam for 1992. Report dated November 1991, Islamabad.

USAID. 1989(A). Request For Proposals (RFP) No. Afghanistan-89-0204-019 Afghanistan Agricultural Sector Support Project, Islamabad.

USAID. 1989(B). Islamabad Contracting Officer. Contract No.306-0204-C-00-9829-00. Contractor - Developments Alternatives, Inc. August 15, 1989, Islamabad.

USAID. 1991(A). Afghanistan Strategy Document. Prepared by Office of the AID Representative for Afghanistan Affairs, Islamabad.

USAID/ASSP. 1991(B). Growing Corn in Afghanistan. Extension Publication Series. Publication No.1, Islamabad.

USAID/ASSP. 1991(C). Growing Potato in Afghanistan. Extension Publication Series. Publication No.2, Islamabad.

USAID. 1992(A). The Transition to a Bilateral Program. Discussion Draft prepared by Office of the AID Representative for Afghanistan Affairs, Islamabad.

USAID/ASSP. 1992(B). Safe Use of Pesticides. Extension Publication Series. Publication No.3, Islamabad.

USDA. 1991. Agricultural Resources. Inputs. Situation and Outlook. Economic Research Series AR-24, Washington, D.C.

Wakil, Abdul 1991. Dry Apricot Production and Marketing Promotion. Memorandum to R.L. Smith, dated September 29, 1991.

Welch, W.A. 1991. Horticultural Handbook: Apricots, Grapes, Pomegranates, Mercy Corps International, Quetta.

Annex IV: Miscellaneous Tables

Table IV-1 Wheat Yields from ADT Demonstration and Farmers' Fields in Afghanistan in 1990.

Location	Wheat Variety	Yield* Improved Kg/J	Yield* Local Kg/J
Punjwayee	Pirsabak 85	954	525
Maroof	Pirsabak 85	585	379
Khangyani	Pak 81	504	542
Logar	Bezostaya 1	808	358
Ghazni	Bezostaya 1	424	300

* Average from each location

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Table IV-2. Seed Multiplication of CIMMYT Maize Populations, 1991.

Short Duration - Seed produced at Madayan, Swat Valley

Pop. 845	448 Kg/plot	4480 kg/ha
Pop. 8786	541 kg/plot	5410 kg/ha
pop. 8686	476 kg/plot	4760 kg/ha

Longer Duration - Seed produced at CCRI, Pirsabak

Pop. 31	167 kg/plot	3356 kg/ha
Pop. 45	155 kg/plot	3100 kg/ha

****

Annex Table IV-3 Summary of Demonstration Plots, Demonstrations, and the Number of Farmers Influenced.

Demonstration Plots in Afghanistan

	1989-90	1990-91
Wheat improved variety comparisons	40	40
Corn variety demonstrations	2	281
Corn variety observation trials	0	40
Corn seed multiplication (180 jeribs)	0	36
Basmati 385 rice observations	0	111
Potato fertilization	0	25
Potash on fruits and vegetables	30	30
2,4-D for weed control	200	200
Total	272	763

Demonstrations

Iron deficiency in apples	120	160
Sulfur on fruits and vegetables	140	150
Vegetable seed beds	9	0
Tractor performance	40	220
Wheat reaper demonstrations	40	110
Wheat threshing	80	340
Total	429	980

Farmers Influenced

	Number	Farmers per Plot	Total Farmers
Demonstration Plots	1035	25	25,875
Demonstrations	1409	10	14,090

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Annex Table IV-4 Fruit Tree Distribution in Afghanistan.

YEAR	DISTRICTS	LOCATIONS	ROOTSTOCKS AND FRUIT TREES	ORCHARDS	JERIBS	HECTARES
1990	17	451	123,932	609	1061	212.2
1991	12	364	153,264	690	1528	305.6
1991*	2	2	43,520	-	10	
TOTAL		817	320,716	1299	2599	519.8

* On hold in Pakistan to be delivered when able

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Annex Table IV-5 Nursery Material Supplied to Afghanistan by ADT.

March 1990	Poplar cuttings	39,000
March 1991	Poplar cuttings	5,000
March 1992	Poplar cuttings	25,000
October 1990	Fruit and wood seeds planted in 67.5 jeribs in 4 provinces	932 kg
	Trees grafted	53,539
March 1991	Almond budwood from U.S. to project nurseries	150,000
	Grape seedlings from Maroof nursery (to 3 provinces)	3,000
	Mulberry seedlings (to 3 provinces)	8,000

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Annex Table IV-6. Location of ADT Extension Activities and Personnel in Afghanistan and in Peshawar.

Province	Unit Offices	Extension Agents	Tractor & Thresher Operators	Nursery Men
Kandahar	3	10	6	8
Helmand	2	6	4	-
Nangarhar	1	3	-	-
Logar	2	8	6	10
Ghazni	2	8	4	10
Wardak	2	7	4	10
Paktika	1	3	2	-
Parwan	1	2	-	-
Baghlan	1	3	-	-
Takhar	1	2	1	-
Peshawar/ Pakistan	1	15	-	8
Total	17	67	27	46

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Table IV-7 AGRICULTURAL MACHINERY AND EQUIPMENT SENT TO AFGHANISTAN FOR DEMONSTRATION DURING 1990/1991.

NO	EQUIPMENT	LOGAR		HELMAND	KANDAHAR			GHAZNI		WARDAK		PAKTIKA	KAGAHAR	TOTAL
		CHAREH	BARAKI	SHAMALAN DARWESHAN	KHWAJA KULK	KAROOF	PANJWAEE	DEH-YAK	ANDER	SHIKHABAD	CHACH	SHARAN	KHOGIANI	
1	TRACTOR KF-375		1	2	1	1	1	1		1		1		9
2	TRACTOR DF-240	1	2	2	1	1	1	2	1.1*	2.1*	1.1*	1.1*		15.4*
3	PLOW (R.B.)	1	5	3	2	2	3	4	1.1*	4.1*	1.1*	3.1*		32.4*
4	PLOW (DISK)		1	2	1	1	1	1		1		1		9
5	DISK HARROW	1	2	4	2	1	2	2	1	2	1	1		9
6	TINE TILLER	1	3	4	2	2	2	3	1.1*	3.1*	1.1*	2.1*		24.4*
7	BLADE (FRONT)		1	2	1	1	1	1		1		1		9
8	TRAILER	1	5	5	3	2	3	4	1.1*	4.1*	1.1*	3.1*		32.4*
9	JIB CRANE		1	2	1	1	1	1		1		1		9
10	FIXED HITCH	1	3	4	2	2	2	3	1	3	1	2		24
11	PULLY (P.T.O)	1	3	4	2	2	2	3	1	3	1	2		24
12	THRESHER	5	4	6	2	2	2	2	1.1*	2	2	6		34.1*
13	REAPER (TRACTOR MOUNTED)	1	3	5	2	2	2	2	2.1*	1.1*	1*	2.1*		22.4*
14	REAPER (WALK BEHIND)		1											1
15	SEED DRILL		2	4	1	1	2	1	1	1	1	1		15
16	SPRAYER			2			2				34*	2		6.34*
17	MOTORCYCLE HONDA-CG-125	4	4	4	1	2	1	4	3	3	3	3	1	33
18	CORN SHELLER (P.T.O. DRIVE)	1	1	1		1								4
19	CORN SHELLER HAND OPERATED		1			1								2
20	REAR BLADE FOR (KF-240)								1*	1*	1*	1*		4*

NOTE: '*' USED MACHINERY TRANSFERED FROM VITA'S AREAS INSIDE AFGHANISTAN.

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Annex V: Work Schedule of Team

February 11 (Tuesday): Carl Hittle and Michael Evnin arrive, meetings with ARD and DAI staff.

February 12 (Wednesday): Carl Hittle and Michael Evnin to Peshawar, visits to Dara nursery and potato training. John De Boer arrives, meetings with ARD and DAI staff, then to Peshawar.

February 13 (Thursday): Winrock team visits with Azam Gul, Director of Agricultural Section, Swedish Committee for Afghanistan and ADT staff of DAI.

February 14 (Friday): Trip to Khyber pass, team drafts report outline, team schedule, arranges and reviews documents.

February 15, (Saturday): DAI staff reviews of commodity programs and extension programs, visit to warehouse near Peshawar.

February 16 (Sunday): Visit to Swedish Committee seed farm and return to Islamabad.

February 17 (Monday): Team meetings with O/AID/Rep to discuss draft report outline and travel schedule, clarify issues related to Scope of Work.

February 18 (Tuesday): Meetings with DAI Project staff, review of project documents, move to office at AID/Rep Annex.

February 19 (Wednesday): 10:30 a.m. flight to Quetta, meet with ADT extension group, traders in Quetta.

February 20 (Thursday): Visit A.R.I, Sariab farm, MCI, AZRI, VITA, trip to Chaman (M Evnin).

February 21 (Friday): a.m. visits with traders, 11:30 a.m. flight, return to Islamabad.

February 22 (Saturday): Review project documents at Hotel.

February 23 (Sunday): Meetings with DAI, UNDP, and FAO staff. Start report preparation.

February 24 (Monday): Review of trip with DAI staff, review of project documents, schedule last set of field visits.

February 25 (Tuesday): De Boer-Review of PPA component including GIS results and applications, future workplans. Hittle-Further discussions with DAI staff re. training and future workplans.

Evnin-Discussion of CAS component with DAI and O/AID/Rep staff.
Afternoon: Mid-term review with O/AID/Rep staff.

February 26 - March 1 (Wednesday-Sunday): Field trips:
February 26 - 28: Carl Hittle to Peshawar for further ADT discussions. February 29 - March 1: M. Evnin to Karachi to meet Rehmat Brothers, port facilities, etc.
Feb 28 - March 1, John De Boer to Lahore to visit seed and machinery dealers.

March 2 - 8 (Monday - Sunday): Preparation of first draft of Assessment Report.

March 9 (Monday): First draft of Report sent to O/AID/Rep.

March 10 (Tuesday): Meeting to discuss first draft of report.

March 11 - 12 (Wednesday - Thursday): Additional visits and report drafting as needed.

March 13 (Friday): John De Boer returns to USA.

March 14 - 17 (Saturday - Tuesday): Preparation of Final Report.

March 18 (Wednesday): Printing and binding of Final Report.

March 19 (Thursday): Final Report delivered to O/AID/Rep,

March 20 (Friday): Return travel to USA by Carl Hittle and Michael Evnin.

Annex VI: ADT Training Program

A. ADT TRAINING PROFILE - August 1989-October 1991

Date	Function	# of Trainees	Days	Person-Days
ADT Technical Training				
Aug '89	Staff Training	25	14	350
May '90	Wheat Thresher Operation	17	21	357
May '90	Tractor Operation	14	21	294
Aug '90	Locust & Senn Pest	22	60	1320
Dec '90	Field Staff Training*	38	75	2850
Dec '90	Nursery Operation	8	45	360
May '91	Tractor & Thresher Operation	12	30	360
Jun '91	Apricot Drying	29	30	870
Jul '91	Extension Program Orientation**	19	28	532
Oct '91	Community Participation	15	5	75
Other ADT Training				
Mar '90	Orientation & Mgmt.	30	2	60
Nov '90	AID Project Implementation Course	3	10	30
Training of ADT Administrative Staff				
Apr '91	Making Meetings Work	3	2	6
Apr '91	Office Administration	3	8	24
May '91	Report Writing	2	12	24
Jul '91	Managing Yourself & Your Team	3	4	12
Oct '91	Office Administration	3	5	15
TOTAL		246		7539

* Including 40 hr. SCF/UK sponsored Agriculture Statistics course

** Including 20 hr. SCF/UK sponsored Community Participation course

B. 1990-91 ADT Winter Training Program for Agricultural Extension Personnel (December 16, 1990 - February 24, 1991)

Participant Profile

a.	No. of participants	38
	1. BSc. graduates	15
	2. High School graduates (or less)	23
b.	Provinces Represented	9
	Baghlan, Parwan, Wardak, Logar, Nangarhar, Paktia, Ghazni, Kandahar, and Helmand	

Resource Speakers*

a.	Afghan	13 (73 hours)
b.	Pakistani	18 (134 hours)
c.	Expatriate	2 (5.5 hours)

* Excluding time required for admin issues. An increasing number of qualified Afghan instructors are becoming available each year.

Many subjects were covered and visits were made to research stations and institutes, private seed companies and to plant nurseries.

C. 1991-92 ADT Winter Training Program

Statement of Purpose

The 1991-92 ADT winter training program emphasized working together as a team in order to fulfill the programmatic goals of the Project. The training was directed at enhancing the non-formal training skills of both Pakistan and Afghanistan based staff in all relevant areas of agriculture in order to increase the quality and quantity of actual extension training delivered in the field.

Training Schedule

The Winter Training Program began on December 15, 1991, and ended on March 7, 1992. Training for Tractor/Thresher operators began on January 5, 1992, and ended on February 8, 1992.

Method of Instruction

Attempts were made to acquire Pushto and Dari speaking resource speakers as much as possible. DAI subject area specialists translated from English-Dari or Urdu-Dari, when necessary.

Course evaluations were completed at the end of the training program.

D. 1991 Summer Training Program (July 21 - August 8, 1991)

The purpose of the Summer Training is to update the knowledge of the agricultural extension agents and area supervisors about various ongoing and new programs of ASSP/ADT and to increase the technical and social skills of trainees. Nineteen area supervisors and agricultural extension agents from Logar, Paktika, Wardak, Ghazni, Kandahar, Helmand, Takhar, Baghlan, and Nangarhar provinces participated in this training.

Topics discussed included community participation; potato, maize and wheat programs; machinery operation; extension organization and administration; and field reports.

E. Training for Tractor/Thresher Operators (December 16, 1990 - February 17, 1991)
Peshawar, Lahore and Multan, Pakistan

Phase I — December 16-28, 1990 - Kababian and Abdara Villages, Peshawar.
Topics: Operation and maintenance of the tractor and its attachments.

Phase II — December 30, 1990 - January 17, 1991 - Millat Tractor, Ltd., Lahore.
Topics: Tractor maintenance, field applications, engine servicing, rear axle and hydraulic system maintenance and repair.

Phase III — January 18-February 17, 1992 - Pak-German Project Site, Chak 5 Faiz, Multan.
Topics: Tractor operation, use of machineries/implements, internal combustion engines, tillage implements.

F. List of Peshawar Based Training Sessions
February to Early July 1991

Dates	Subjects	Sponsor	Cost
Mar 2-14	Seed Multiplication (For Agr. Extensionists)	UNDP/FAO	Rs. 600/person
Feb 24-Mar 24	Basic English	IRC	66/person
Mar 10-21	Agr. Statistics	SCF (UK)	100/person per day
Apr (6 weeks)	Office Administration	IRC	500/person
May	Managing Yourself and Your Team	IRC	500/person
Jun 29-Jul 3	Management Skills for the General Manager	PIMS/Karachi	5000

G. Surveys and Sampling Course, SCF (UK) Training Unit

This course will help participants to understand the rationale and basic methodology behind field surveys and the techniques and the skills involved. It emphasizes practical case studies, participative teaching methods and exercises applicable to the situation in the field.

Although relevant to refugee camp programs, this course may be of particular interest to organizations setting up or developing cross-border field-level operations.

Recommended For: Staff working in refugee camps or cross-border, who have to gather information, estimate and forecast data, present information, use basic mathematical techniques and conduct surveys.

H. Motivation/Community Participation Course, SCF (UK) Training Unit

This course is designed to enable participants to understand the concepts of community participation in development programs. The course helps participants to work with Afghan communities, to understand their needs, to develop ways of motivating them to participate in community programs, and find ways of monitoring them once they start. It should encourage better and fuller communication between field worker and community. The course emphasizes a student-centered approach for learning. Participants have the opportunity to participate in group work, role plays and individual work.

Recommended For: Professionals of all categories working with refugee or cross-border village-level community and extension programs.

I. Agricultural Statistics Course, SCF (UK) Training Unit

This course is a one or two week course covering the mathematical, statistical and practical principles of analyzing agricultural data in the field. It incorporates a pre-test in mathematics, basic survey methods, agricultural principles and the analytical and personal skills needed for field workers. It includes a number of simulation exercises, and concentrates on practical skills.

Recommended For: Staff working at field level cross-border who need to gather, interpret and present agricultural data for project analysis or planning.

Annex VII: Project Budget and Expenditures

Contract amendment no. 11 of June 30, 1991, resulted in the following budget:

Category	Total Contract	
Technical Assistance Items		
Home office Support	$ 77,142	
Field Salaries, Wages & Fringe	1,600,157	
Overhead	1,513,738	
Subcontractors	269,943	
Travel, Transport & Per Diem	716,189	
Supplies & Equipment	20,000	
Local Staff	484,615	
Consultants	369,921	
Other Direct Costs	812,532	
Training Support	26,878	
Sub Total	$5,891,115	
Fee	457,933	
Total Technical Assistance		$6,349,048
Logistic Support [3]		1,175,000
Program Costs		23,262,877
Total Contract Cost:		$30,785,925

Expenditure against the Technical Assistance contract as of December 31, 1991, were $4,450,620 or 70% of the total. About $1,898,428 remained for 1992. Total expenditures attributable to each component through the end of 1991 for program funds only is about ADT - $3,570,000, PPA - $1,742,000 and CAS - $10,881,000, or a total of $16,193,000 out of a budget total of 23,262,877. A balance of program funds of about $7,000,000 remains.

At this stage, considerable lee way still exists on how the balance of funds can be allocated. Much depends upon what evolves on fertilizer imports. However, we stress that with reasonable freight rates from U.S. Gulf Coast to Karachi there should be little net cost to the project for importing fertilizer and the reflow account would increase correspondingly.

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[3] Logistic Support will be retained by the Mission to cover the Logistical Support costs as they are incurred.

Annex VIII: Economics of Fertilizer Inputs in Afghanistan

Issue. Does it pay for farmers in PSA target areas to apply fertilizer supplied through ASSP?

The Winrock Team has made three separate calculations utilizing various givens which follow:

		$/MT
(a)	Local price of wheat, E. Afghanistan	$148
(b)	Local price of wheat, Lahore	$140
(c)	Delivered cost of DAP, Eastern Afghanistan @ Rs.375/bag	$300
(d)	Border price of DAP, Karachi	$200
(e)	Subsidized price of DAP, Pakistan retail	$200
(f)	Local price of Afghan urea, E. Afghanistan	$200

FIRST CALCULATION

As per the Activity Assistance Memorandum Amendment No.2, (p.51) the average increase in production from one ton DAP is four tons of wheat.

Therefore, using the ratio of 4:1 we obtained the following information from the above data.

One ton of DAP costs (see "c" above)	$300
Four tons of wheat valued at ($148 - see "a" above - x 4)	$592

The benefit/cost ratio is $592/$300 or 197%. The incremental benefit is $592-$300/$300 or 97%. The conclusion is that it is advantageous for the farmer to use DAP on his wheat crop.

SECOND CALCULATION

As per the Swedish Committee for Afghanistan (SCA) Report dated 1990 the recommended rates per hectare are 125 Kg DAP and 250 Kg Urea. From actual practice, this Report states that farmers are using 1/2 of these rates (62.5Kg DAP/125Kg Urea). The calculation is, therefore, as follows:

DAP = $0.30/Kg (see "c" above) x 62.5Kg = $18.75/ha
Urea = $0.20/Kg (see "f" above) x 125Kg = 25.00/ha

Total Cost $43.75/ha

As per the SCA report the per hectare increase in wheat production when using the above quantities of DAP and Urea is 667Kg. Therefore, the calculation is 667Kg x $148/MT (see "a" above) = $98.72.

The benefit/cost ratio is $98.72/$43.75 or 226%. The incremental benefit is $98.72-$43.75/$43.75 or 126%. The conclusion is that it is even more advantageous for the farmer to use Urea in conjunction with DAP than just using DAP alone.

THIRD CALCULATION

The same SCA report mentions somewhat different application rates in different areas. The application rate is 0.7 bag of fertilizer per jerib. Since each bag is 50Kg and since we know a jerib is 0.2 hectare, we can calculate:

50Kg/bag fertilizer x .7 = 35Kg/Jerib.
Using the DAP/Urea ratio of 1:2
35Kg/Jerib fertilizer = 12Kg DAP and 23Kg Urea

12Kg DAP/Jerib = 60Kg/ha
23Kg Urea/Jerib = 115Kg/ha

60Kg DAP x $0.30/Kg (see "c" above)	=	$18.00
115Kg Urea x $0.20/Kg (see "f" above)	=	23.00
Total	=	$41.00

The benefit/cost ratio is $98.72(from the previous calculation)/$41.00 or 241%. The incremental benefit is $98.72-$41.00/$41.00 or 141%. Again the conclusion is that it is advantageous for the farmer to use DAP and Urea.

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In all of the above calculations, we have not included other cost factors such as labor (or - if family labor - not applied an economic value). Our reasoning is that the conclusions drawn are so numerically positive, that relatively minor costs, which have been omitted, would not have changed these conclusions.