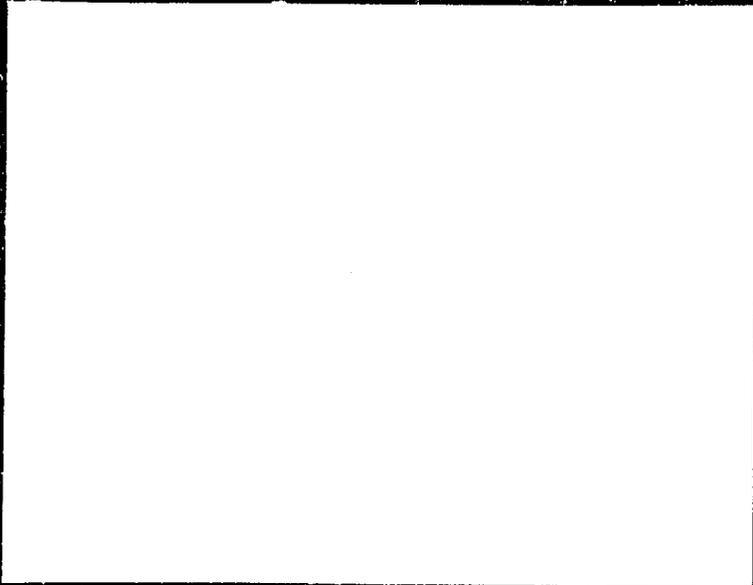


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Price Waterhouse





**ARMENIAN HUMANITARIAN
ASSISTANCE**

**FINDINGS, CONCLUSIONS AND
RECOMMENDATIONS FOR
PRIVATIZATION**

Draft Final Report

January 29, 1992

Price Waterhouse



January 29, 1992

Ms. Elisabeth Kvitashvili
EUR/OSA
U.S. Agency for International Development
Washington, D.C.

Dear Ms. Kvitashvili:

Re: Privatization and Development Project
Armenian Humanitarian Assistance -- Findings, Conclusions and
Recommendations for Privatization

We would like to thank you for the opportunity to assist you in assessing the prospects for privatization of A.I.D.-assisted PVO Projects in Armenia. Despite the challenges posed by the macroeconomic environment, there are at least two activities that can potentially be privatized by the end of the grant period.

Enclosed are five copies of the draft final report for the above-referenced project. We await any comments you or the PVOs might have and will incorporate them in the final report.

If you have any questions or comments please call Jeanne Balcom at (202) 778-1749 or Peggy Norgren at (202) 778-1758. We look forward to discussing our findings with you soon.

Sincerely,

Price Waterhouse

cc: Penny Farley, APRE/EM

TABLE OF CONTENTS



EXECUTIVE SUMMARY

I. INTRODUCTION

A.	Background	1
B.	Scope of Work	1
C.	Methodology and Evaluation Criteria	2

II. ENVIRONMENT FOR PRIVATIZATION IN ARMENIA

A.	Overview of the Economic Environment	5
B.	Political Will and Commitment to Privatization	6
C.	Legal Framework	6
D.	Monetary and Financial Framework	7
E.	Investment Climate	7

III. OVERVIEW OF PVO ACTIVITIES AND PROSPECTS FOR PRIVATIZATION

A.	Health Care Sector PVOs	8
1.	Overview of Health Care Sector	8
2.	PVO Projects and Prospects for Privatization	9
B.	Armenian Assembly Housing Project and Training Program	18
1.	Overview of Housing Sector	18
2.	Armenian Assembly Housing Project and Prospects for Privatization	19
C.	Solar and Wind Renewable Energy and Conservation Project	22
1.	Overview of Energy Sector	22
2.	The Solar and Wind Renewable Energy and Conservation Project and Prospects for Privatization	23

IV. CONCLUSIONS AND RECOMMENDATIONS

A.	Conclusions	26
B.	Recommendations for PVO Activities with the Strongest Potential for Privatization Within the Grant Period	27
1.	The Project Hope Orthotics Clinic	27
2.	The World Rehabilitation Fund Center	31



C.	Recommendations for PVO Activities That Are Not Ready for Privatization Within the Grant Period	33
1.	AGBU Plastic Surgery and Reconstruction Center	33
2.	Red Cross Spinal Cord Injury Center	
3.	Project Hope Children's Rehabilitation Center in Yerevan/Jewish Joint Distribution Committee Rehabilitation Program in Gumri	34
4.	Armenian Assembly Housing Project	35
5.	Recommendations for the Solar and Wind Renewable Energy and Conservation Project	37
D.	Recommendations for A.I.D.	38
1.	Orthotic and Prosthetic Clinics	38
2.	Rehabilitation	38
3.	All Health Care PVO's	38
4.	Housing and Construction	39
5.	Solar and Wind Renewable Energy and Conservation Project	39
6.	Overall Government of Armenia Privatization Program	39

APPENDIX A	SCOPE OF WORK
APPENDIX B	PROJECT DESCRIPTION
APPENDIX C	LIST OF PERSONS INTERVIEWED
APPENDIX D	BIBLIOGRAPHY
APPENDIX E	ARMENIAN PRIVATIZATION RESOLUTION
APPENDIX F	BACKGROUND ON SELECTED PRIVATIZATION TECHNIQUES
APPENDIX G	BACKGROUND ON SOURCES OF FINANCING FOR PRIVATIZATION TRANSACTIONS

EXECUTIVE SUMMARY

Introduction

Following the devastating earthquake in Armenia in 1989, the United States Agency for International Development (A.I.D.) channeled \$9.8 million in grants for humanitarian disaster relief through Private Voluntary Organizations (PVOs). The grants provide medical treatment and rehabilitation for earthquake victims, vocational training in earthquake-proof construction methods, and the introduction of alternative solar/wind energy and energy conservation training in the earthquake zone.

These activities are currently being coordinated through the government of Armenia (GOA), since the private sector has only recently begun to emerge as an alternative vehicle to the state. A.I.D.'s initial goal was to have all the grant-funded activities privatized by the end of the grant period on September 30, 1993. A.I.D. recognizes, however, that this deadline may be unrealistic for most PVO activities in Armenia.

A.I.D. has requested Price Waterhouse's International Privatization Group (PW/IPG) to provide assistance to the PVOs in identifying which activities are "privatizable" within the given time frame and those which are not. For the activities which are potentially privatizable, steps towards privatization are outlined. For the activities which PW/IPG finds not to be ready for privatization within the grant period, constraints are identified and measures proposed to turn them into candidates for future privatization.

Environment for Privatization in Armenia

Armenia is currently undergoing a severe energy crisis due to the blockade by Azerbaijan that has brought its economy to a standstill. In addition, the financial sector is extremely weak and its future structure, as well as Armenia's trade relationships with the other former Soviet republics, remain uncertain. Foreign exchange is also very scarce and the Foreign Economic Bank in Moscow still retains the monopoly on all foreign exchange transactions. Poor infrastructure and lack of management and private sector skills present additional challenges to the emerging private sector in Armenia.

Despite the challenges posed by the macroeconomic framework, the Government of Armenia (GOA) has demonstrated its commitment to privatization in public statements and completed privatizations. Currently, the privatization law is being discussed in Parliament. The President has committed to privatizing the entire housing and construction sectors within a year. The private joint ventures in the solar and wind renewable energy program and the energy conservation project enjoy a high level of political support. In general, privatization in the health care sector is not a GOA priority, as the right to free health care provided by the State is one of the only privileges that people have retained after the fall of the Soviet system. The government is, however, willing to consider privatization of health care

activities on a case-by-case basis, especially in areas where the government itself is not able to deliver the services.

The successful privatization of PVO activities would have the benefit of alleviating part of the government's burden in the financing of these activities, stimulate the private sector, and set an important precedent for future privatizations in Armenia.

Overview of PVO Activities, Prospects for Privatization, and Recommendations

This report examines PVO activities in the health care, housing and energy sectors and identifies which PVO activities are the best candidates for successful privatization, as well as those activities which are not ready to be privatized within the given A.I.D time frame. The recommendations for PVOs to be privatized was based on considerations of the overall macroeconomic and policy environment. The following evaluation criteria applied to each of the project facilities:

- o The government's political will for privatization
- o Support of the PVO and local staff for privatization
- o Independence from Armenian state facilities
- o Ability to finance and obtain supplies, both foreign and domestic
- o Overall potential for sustainability as a private business, including the ability of clients to pay a fee that covers the service's economic value

Table one in section four presents an analytical matrix that rates each of the PVO activities examined in terms of these evaluation criteria.

Despite the challenges posed by the macroeconomic and policy environment for privatization, there are at least two activities that PW/IPG believes have the potential to be privatized by the end of the grant period. They are the Project Hope Orthotics Clinic and the World Rehabilitation Fund's (WRF) Prosthetics/Orthotics Center. The resolution of the energy crisis, however, is a necessary precondition to moving forward with any of these privatizations.

o **Project Hope Orthotics Clinic**

The privatization of the Project Hope Orthotics Clinic offers the best potential for privatization within the time frame of the grant period. The fact that both Project Hope staff and Armenian national staff support privatization and all but one of the necessary materials for privatization are available from local sources favor the privatization effort. In addition, the clinic also has significant potential to expand its clientele and develop side businesses that

could enhance its revenue base. A business plan which includes further analysis of the market, an assessment of people's willingness to pay the economic value of the services, and costs must be carried out to determine whether the clinic can be sustainable as a private business. Sustainability is a key factor in determining whether an activity is privatizable.

- o **World Rehabilitation Fund (WRF) Prosthetics/Orthotics Center**

The WRF Prosthetics/Orthotics Center can also be potentially privatized by the end of the grant period. The Orthotics Specialist that has trained the Project Hope Orthotics Clinic staff and assisted them in preparing for privatization will be joining the staff at the WRF early next year. Already a number of the Armenian staff of the WRF Center are in favor of privatization. The fact that the WRF Center is not significantly integrated into the overall Armenian health care system and/or a particular state facility will simplify the privatization process. As is the case with the Project Hope Clinic, the potential sustainability of the WRF requires further market, demand and financial analysis. The issue of locating local supplies is currently one of the more significant barriers.

An action plan outlining recommendations for next steps in the privatization process for WRF and Project Hope and the technical assistance required is contained in Section IV of the report.

- o **Other PVO activities in the health care field**

The other projects in the health care field are not ready for privatization in the given time frame. In order to prepare these activities for privatization, the PVOs must seek, in the short-term, to build political will for privatization, prepare a plan for the procurement of future supplies by utilizing local sources whenever possible, and find mechanisms to compensate health care workers sufficiently so that they choose to remain in the profession. The PVOs should also attempt to institutionalize the training of staff and to promote the acceptance of western-style methods in areas such as rehabilitation in order to prepare for future privatizations.

- o **Armenian Assembly Housing Project**

The Armenian Assembly Manufacturing Complex is not ready to be privatized by the end of the grant period. The GOA commitment to provide free housing to earthquake victims limits the privatization of this PVO in the medium-term. However, the Armenian Assembly should consider the privatization of the Manufacturing Complex as an alternative for ensuring long-term sustainability. Under private sector ownership or management, there would be more incentive to maintain the quality, efficiency and productivity necessary for the facility to continue to alleviate the tight housing situation in Armenia. In the interim, the Assembly must work to obtain agreement that would give the Housing Board the authority to set salaries, hire and fire employees, procure supplies at market rates, and set prices -- all in order to make its operations more productive and efficient.

Privatization should be encouraged at the level of housing construction, where existing private building cooperatives can be trained in addition to individual tradesman in the earthquake-proof construction methods.

o **Use of Solar and Wind Energy Conservation**

A.I.D. and the Armenian Missionary Association of America (AMAA) are supporting solar energy/wind power development and energy conservation in the earthquake disaster area. The program tasks include: training of technical personnel, assessment of wind and solar resources in the earthquake zone, and evaluation of the ability of local industry to produce inputs for the solar and wind energy devices. The YPI staff are very entrepreneurial, have already formed joint ventures with private firms. They enjoy high level political support for their project. The training program has the potential to be privatized via a joint venture with a private firm, particularly if this facility also offers consulting services. Whether the market is willing to pay for this training at its economic value, however, must be further analyzed. The evaluation by this project of local industry sources for solar, wind and conservation devices can be utilized as an important tool for stimulating private industry. Privatization has already taken place as a by-product in the form of two joint ventures for the production of wind turbines.

Recommendations for A.I.D.

We have also included in Section IV a set of recommendations for A.I.D. on areas where further technical assistance is needed to support PVOs and the GOA in the privatization process. These recommendations include providing technical assistance and/or funding to assist the PVOs with the best potential to move towards privatization. This technical assistance would include feasibility studies, a privatization/business plan, and implementation for the privatization of the Project Hope Orthotics Clinic and World Rehabilitation Fund Prosthetics/Orthotics Center.

In addition, assistance to the GOA in the design and implementation of its overall privatization program is highly recommended. This may include assistance to the Committee on Construction and Housing Reform, of the Council of Ministers with the preparation of a privatization plan for the construction and housing sectors.

I. INTRODUCTION

A. Background

Following the devastating earthquake in Armenia in 1989, the United States Agency for International Development (A.I.D.) channeled \$9.8 million in grants for humanitarian disaster relief through Private Voluntary Organizations (PVOs). The grants provide medical treatment and rehabilitation for earthquake victims, vocational training in earthquake-proof construction methods, and the introduction of solar and wind power devices and energy conservation equipment in the earthquake zone.

These activities are currently being coordinated through the Government of Armenia (GOA), since the private sector has only recently begun to emerge as an alternative vehicle to the state. A.I.D.'s initial goal was to have all these activities privatized by the end of the grant period, September 30, 1993. However, A.I.D. acknowledges that it would be unrealistic to expect many of these activities to be privatized during this time frame, given the economic crisis that Armenia faces. A.I.D. requested Price Waterhouse's International Privatization Group (PW/IPG) to provide assistance to the PVOs in identifying which activities are "privatizable" and those which are not within the given time frame.

B. Scope of Work

The following tasks comprise the assignment:

- o Determine which of the PVO activities can be privatized by the end of the grant period.
- o Provide guidance for the PVOs regarding the steps that must be taken to successfully privatize these activities.
- o Provide a Privatization Action Plan for at least one of these activities.
- o Identify constraints and advise on steps that can be taken to prepare for the future privatization of those activities deemed not to be "privatizable" within the given time frame.
- o Define further technical assistance required by the PVOs to carry out the privatization of their activities.

The following PVO projects were examined by the PW/IPG team:

Health care:

Project Hope Orthotics Lab

World Rehabilitation Fund (WRF) Prosthetics/Orthotics Center

Armenian General Benevolent Union (AGBU) Plastic and Reconstructive Surgery Center (PRSC)

Red Cross Spinal Cord Injury (SCI) Rehabilitation Center

Jewish Joint Distribution Committee (JDC) Rehabilitation Center

Project Hope Children's Rehabilitation Center

Housing:

Armenian Assembly Housing Complex and Training Program

Energy:

AAMA Solar and Wind Renewable Energy and Conservation Project

The complete Scope of Work is available in Appendix A.

C. Methodology and Evaluation Criteria

Secondary sources of data were collected by the PW/IPG team prior to the field visit. Interviews were conducted in Armenia to assess the opinions of various interest groups and to collect primary data.

In order to determine which PVO activities were suitable for privatization by the end of the grant period, the following evaluation criteria were examined:

1. The political will to privatize.

One of the critical success factors for the privatization of any activity is the political will and commitment of the government to implement the privatization. The absence of consistent government support causes many privatizations to break down.

2. *The support of PVO headquarters, in-country staff and the local staff for privatization.*

It is also important to the success of a privatization that the key executives and managers within the entity fully advocate privatization. The Armenian staff must also support privatization, particularly if it involves a takeover by the workers.

3. *Independence from Armenian state facilities.*

The more than an individual project is integrated into the Armenian state economic system or specific Armenian state facilities, the more difficult it will be to privatize. The entity must have control over supplies, staffing, and auxiliary services. If the entity is integrated with the Armenian state facilities, there are ways in which these issues can be addressed, such as compensating the state facility for auxiliary services, but these privatizations would be more complicated.

4. *The ability to finance and obtain supplies, both domestic and foreign, as a private entity.*

The ability of the privatized entity to finance and obtain supplies is a critical factor in the overall sustainability of the facility and a necessary step in the preparation for privatization. Many of the health care projects are receiving donated supplies through airlifts from the West. In order for these projects to be sustainable once the PVOs leave, local sources must be found to provide supplies and mechanisms must be established to generate the hard currency required to procure any supplies that are unavailable locally.

The privatized entities will face great difficulties in functioning as viable, self-financing entities if they must pay hard currency for a large percentage of their supplies. The privatized firms will charge rubles for their products and services. Given the current exchange rate and the limits on access to foreign currency, purchasing these supplies from abroad could impair the privatized entity unless there is a mechanism to cover foreign exchange costs. Alternatives to be evaluated include covering foreign exchange costs by finding a joint venture partner, generating foreign currency through development of a side business, negotiating barter arrangements, and treating patients from abroad to earn foreign exchange. These options may not be viable in all cases.

5. *The potential for sustainability as a private entity.*

Before proceeding with the privatization of any of the PVO activities, a detailed business plan must be formulated and the costs of the operations must be determined. An assessment must be made regarding whether or not the consumers will be willing to pay fees for the services that are equivalent to the economic value of the good or service. For many of these PVO activities, a feasibility study, including a market, financial, and operational analysis

must be carried out before a determination can be made whether the entity will be sustainable as a private firm.

II. ENVIRONMENT FOR PRIVATIZATION IN ARMENIA

The privatization of PVO activities must be placed within the context of the government's privatization program and the economic environment. A prerequisite to privatization is the resolution of the energy crisis that has brought all non-essential economic activities to a standstill. Azerbaijan's trade blockade has cut off Armenia's supplies of gas and a number of other essential goods which traditionally were transported overland through Azerbaijan. Neither the new Commonwealth nor the Economic Union which preceded it has exerted pressure on Azerbaijan to improve this critical situation.

Despite strong political and popular support for privatization in Armenia, the unstable macroeconomic environment and fragile financial sector pose significant challenges to investment and privatization. The recommendations of this report place the privatization of PVO activities within the context of the government's broad privatization program, the current economic framework, and the overall investment climate.

A. Overview of the Economic Environment

There has been little macroeconomic data collected on Armenia, as it has only been an independent republic for a little over a year. Employment, production, monetary indicators, and government spending figures bring little insight to the unprecedented transformation in Armenia. Additionally, what little information that may be used is not very relevant given the current economic crisis brought on by the shortage of gas and other supplies. 70% of the goods, including gas, shipped overland must pass through Azerbaijan, which is in a border war with Armenia over Nagorno-Karabagh. The remaining 30% must pass through Georgia, which is facing political and social unrest. Nonetheless, the following features of the economy are discussed because of their implications for the long-term success of privatization.

Armenia has a population of around 3.3 million of which 89.7% are Armenian, 5.5% Azeri, 2.3% Russians and the rest Kurd. Internally, Armenia is more politically stable and ethnically homogenous than the rest of the former Soviet Republics. Armenia, however, is a Christian country surrounded primarily by non-Christian states, many of which are current or former enemies. Armenia's closest political ally, Georgia, is itself undergoing intense internal turmoil.

Armenia is very dependent on trade and economic cooperation. As of 1989, the Armenian net material product was 6.95 billion rubles. The Armenian contribution to the USSR industrial output totalled 1.2%. The principal industries were and still are electrical equipment, chemicals and consumer goods. Among the products, the most important are electric engines which accounted for 7.7% of the Soviet industrial output followed by metal cutting tools with 5.5%, knitted wear with 4.7% and hosiery with 2.3%.

The industrial structure depended heavily on the centrally planned economic system, where prices for inputs and other products were set centrally without regard to real economic value and where each republic's plan depended entirely on the Union plan. Most Armenian products labeled "Made in the USSR" could not be produced without raw materials from the other republics. The GOA is in the process of trying to develop trade ties with other countries to gain more access and control over the flow of supplies to Armenia.

B. Political Will and Commitment to Privatization

Despite the uncertainty which is normally associated with the newly independent republics, the GOA as a whole has demonstrated a strong and consistent interest in privatization through public statements and completed privatizations of state properties.

In November of 1991, the newly elected president of Armenia committed in his inaugural address to the completion of privatization of food processing, construction, light industries, trade, and services within one year. He noted, however, that the GOA plans to maintain state control over energy, non-agricultural raw materials, and heavy industries.

To date, the GOA has completed the privatization of 130 small businesses and two medium-sized factories. The majority of these privatizations involved a sale by auction or the "turning over" of the facility to the workers. Beginning the fall of 1991, land reform laws and guidelines were enacted to privatize nearly 80% of the collective farms to interested cultivators. The GOA announced that agricultural production increased by almost 35% between 1990-91 as a result of land privatization.

C. Legal Framework

The Supreme Soviet of the Republic of Armenia recently passed a resolution on privatization that establishes the goals, principles, and outline of the privatization program. The resolution, which is the precursor to the law being debated in Parliament, is still subject to significant changes. The resolution also outlines very general guidelines concerning ownership, objects of privatization, sources and uses of funds, and special considerations for large enterprises. The resolution also provides for the purchase of enterprises on a lump sum basis or installments, sale of shares (including shares issued on the margin or on installments for workers, retirees, and management), free transfer, and leasing. The resolution includes no restriction on ownership, but does state that preference will be given to Armenian buyers. Following the passage of the law, sublegal acts providing procedural guidance must be developed.

Given its new Republic status, the GOA has begun the process of drafting and obtaining Parliament's approval of a number of important laws that establish the legal and regulatory framework for the economy. This legislation includes company law, tax law, and a law governing small businesses. At the time of the writing of this report, these laws had not been approved and were therefore not available.

D. Monetary and Financial Framework

Under the new Commonwealth, which Armenia joined along with many of the former Soviet Republics, the non-convertible ruble will be retained as the currency at least for the medium-term.

The Armenian financial sector is currently underdeveloped and fragile, and its relationship with the rest of the republics is unclear. Currently, the loans available on the market are short-term, up to one year, and are more suited to working capital needs than to financing investments such as acquisitions, restructuring, or capital investments. For longer term loans, the high and volatile rate of inflation often results in negative real rates of interest in the loan market.

The USSR Gosbank currently controls the Armenian banking system through the issuance of rubles, licensing and regulation, establishing banking policy and procedures, and setting credit rates. The Economic Union treaty which was signed by Armenia in October set out an interim arrangement for the governance of the financial sector. It is not clear, however, how the financial system will be regulated, supervised, and integrated into the new Commonwealth. This creates tremendous uncertainty in the future of the banking sector and private sector development in general.

So far, financing has not been an issue in privatizations because most of the transactions have been small, consisting of land, small shops and enterprises, and restaurants which have usually been "turned over" or sold to workers at low prices. The condition of the financial sector places more serious constraints on the privatization of large enterprises.

E. Investment Climate

In addition to high rates of inflation and restricted domestic credit markets, investors face problems with the ruble, which is likely to remain inconvertible on free currency exchanges. Currently, all foreign exchange transactions have to be carried out by the Foreign Economic Bank in Moscow. Investors cannot buy foreign exchange with rubles through an Armenian institution. Many foreign investors have experienced losses in revenue due to the rapid depreciation of the ruble. Delayed foreign exchange transactions also have resulted in missed investment opportunities and losses in productivity. Since the breakup of the Soviet Union, it has been unclear as to how foreign exchange transactions will be handled. The difficulty in obtaining foreign exchange, the cost of foreign exchange to domestic investors, and its negative impact on potential foreign investors highlight the need for these PVO projects to find local sources of supplies.

III. OVERVIEW OF PVO ACTIVITIES AND PROSPECTS FOR PRIVATIZATION

A. Health Care Sector PVOs

1. *Overview of Health Care Sector*

Universal health care has always been one of the banners of the Soviet system. Like the rest of the economy, health care was operated centrally, controlled and organized by the Ministry in Moscow. All health care industry requirements -- including pay scales, educational programs for the various medical positions and medical equipment standards -- were established by the Ministry of Health in Moscow and applied uniformly throughout the USSR. The Ministry was also the primary source of all financing and procurement, and had the final word on how the industry's resources were geographically and demographically distributed. Each republic had its own Ministry of Health that was subordinate to the Union Ministry and dependent on it as a monopoly supplier of medical supplies. Since independence the Ministry of Health in Armenia has been responsible for making the final decisions with regard to the organization, planning, and financing of general health care services and the procurement and financing of supplies for the health sector.

Despite Soviet claims, health care in the former Soviet Union has never been "free" or egalitarian. Special hospitals with superior equipment and better trained personnel were always available to the Communist Party elite. Although in principle a patient could receive care for any ailment from a state hospital or clinic without payment, the quality of this care was extremely low, unless the patient or his/her family was willing and able to make additional payments to the personnel responsible for the patient's care. Hence, the average citizen of any of the former Soviet republics is already used to a two-tier medical service system that requires payment for services.

The health care sector is not a GOA priority for privatization given its historic role in the "superiority" of the Soviet system. It is politically contentious to argue that the state system has failed to deliver high quality health care to the majority of the population and that privatization would improve the quality of service. During the recent economic crisis other privileges that were taken for granted under the Soviet system, such as the rights to work and have housing, have been eliminated. The right to free health care is the last of these privileges, and therefore is, in general, a politically sensitive area to privatize. Health care in Armenia is still viewed as being under the rubric of the "social sector" and is considered to be primarily the responsibility of government. The GOA, however, seems willing to consider privatization of selected health care activities, especially in service areas for which it is unable to adequately provide.

Several new private-sector oriented concepts in health care have been introduced in Armenia in 1991: (1) charging fees for health care services; (2) health insurance; and (3) privatization of selected health care activities.

The Government of Armenia has introduced the concept of charging for outpatient health care services even in state clinics. However, in the state facilities and even in some of the private cooperatives, these fees do not cover costs. The GOA will evaluate this program at the end of 1991 to determine whether it should be expanded.

The GOA has also introduced a draft National Health Care Insurance Plan to Parliament. According to the draft plan, workers and/or employers will pay the insurance premiums either directly or through the workers' factory social funds. These premiums will be channeled into and comprise 40-50% of a National Health Fund. The Government will reimburse health care providers from this fund and allocate money from the budget to the fund for the provision of services to certain categories of citizens deemed unable to pay-- such as invalids, the elderly, children, and people with chronic diseases. Private insurance will supplement the National Health Insurance, mainly to improve the patient comfort by, for example, providing a private room. There is one firm currently offering private health insurance, and another private insurance group planning to introduce health insurance next year and set up a health maintenance organization sometime in the future. The introduction of a National Health Insurance Program/National Health Fund is an important step in the privatization process because it provides a mechanism for the majority of the population to pay for health services, and it incorporates a policy for those who are unable to pay or contribute to the system.

In addition to initiating the concept of charging for services and a National Health Insurance Plan, the GOA has initiated the privatization of selected health care activities. A diagnostic clinic has been privatized as a joint stock company in which workers own a 49% share. Hospital Number 4 in Yerevan, a 220-bed hospital in poor condition, is in the process of being privatized via public auction and is referred to as a "pilot" project. A private medical cooperative has made an offer for the hospital, but the government has delayed the sale in order to give the doctors and staff from the hospital an opportunity to make a counter-offer. In addition to these privatizations, there are currently over 60 private medical cooperatives in Armenia. In general, people pay for these services from their own earnings or are assisted by their families. Some clinics also offer financing plans, where a person does not have to pay all of the cost of the service when rendered.

Within the context of these developments, the following health care PVOs were analyzed to determine their potential suitability for privatization:

2. *PVO Projects and Prospects for Privatization*

a. Project Hope Orthotics Lab

i. Description

Project Hope has established an Orthotics lab in Yerevan in order to manufacture and fit disabled Armenian children with high-quality western style orthotic braces. The orthotics

clinic is currently housed in a Ministry of Health (MOH) government facility and the GOA pays the salaries (some of which are currently being supplemented by Project Hope) and the utilities. Project Hope owns the equipment and has an agreement with the government to turn it over to the government when it leaves. Project Hope has been financing the purchase of supplies, initially via shipments from the West. It has identified local sources for all but the thermoplastics required for the braces.

ii. Prospects for Privatization

The Project Hope Orthotics Clinic offers the best potential of all the PVO projects for privatization by the end of the grant period. To fully determine whether privatization is feasible, however, further analysis of the financial, legal and operational viability will be required.

Using the criteria outlined in the Introduction, the potential for the privatization of this clinic is analyzed below:

a. Political Will to Privatize

The Ministry of Health, the project counterpart, was very supportive of PW/IPG's recommendation that the Project Hope Orthotics Clinic be privatized. Since the PW/IPG team left Armenia, this Minister was replaced and therefore the political commitment of the new Minister to privatize remains unclear, although he is reportedly open to new ideas.

b. Support of PVO and Staff in Privatization Efforts

Project Hope headquarters, the local team leader, and the on-site orthotics specialist are actively promoting privatization of the orthotics lab. This is particularly important given that the most likely form of privatization is the takeover of the clinic by the staff. The orthotics specialist has begun preparing the staff for privatization by orienting the Armenian staff to think of this clinic as a private business.

The Armenian staff at the clinic viewed privatization as the only way for them to continue to work at the clinic in the long run. Many staff members said that they would be forced to leave the clinic if they continued to be paid according to the low MOH salary levels, approximately 212 rubles per month. Project Hope is supplementing the salary of the local Armenian Manager. Given the lack of resources and the reluctance to favor PVO-trained specialists, the GOA will most likely not be able to adjust salaries to a level that would retain the orthotists trained by Project Hope once Project Hope withdraws from Armenia.

c. Independence From Armenian State Facilities

The orthotics clinic is not significantly integrated with the overall Armenian Health care system. Although doctors within the Armenian Health care system must refer patients to the

clinic, the clinic does not depend operationally on the overall health care system or any Soviet facility. Project Hope trains the staff, provides supplies and manages the operation fairly autonomously. The services of a medical doctor, when needed, can be obtained through private cooperatives or through an arrangement with the state facility.

d. The Ability to Finance and Obtain Supplies as a Private Entity

Local sources of supplies have been identified for all of the materials required by the Project Hope clinic with the exception of the thermoplastics required for the braces. The Project Hope Orthotics Specialist made this a priority. The Orthotics Specialist and one of the PW/IPG team members who has prior experience with the Soviet plastics industry are convinced that with increased effort a source for these plastics could be found within the former republics of the Soviet Union. If a local source for thermoplastics is found, the clinic would be able to operate with supplies purchased entirely with local currency. Identifying a local source, however, does not mean that it can be simply acquired. It may be necessary to develop a barter arrangement and obtain goods that are in short supply from other suppliers in exchange for, say, shoes from Armenia, which are reputed to be of higher quality than those available in the other Republics.

e. Potential for Sustainability as a Private Entity

The determination of whether the Orthotics Clinic can survive as a private entity will require further analysis. This analysis would include an assessment of demand based on an analysis of the market, economic value of service fees, productivity, efficiency, management capability, tax structure, rental rates and rates for leasing equipment.

The clinic faces a number of challenges that will affect its ability to sustain itself as a private entity. Armenians are used to making informal payments for medical services but these payments usually do not cover costs. The Clinic will have to compete with free services provided by the state and other donor-funded projects (i.e. WRF, Red Cross) that provide or will be providing this service. Another constraint is the clinic staff's lack of business and management skills.

The clinic has a number of factors favoring sustainability. It has the potential to expand its patient base as the western concept of rehabilitation takes hold. It can also encourage more clinics and hospitals to refer patients. It may also be able to expand services to people from other Republics. The key question that must be further analyzed is whether these patients will be able to pay a reasonable fee for the services. Project Hope has done some informal surveys on people's willingness to pay. A number of their patients advised they were willing to pay for superior quality service, but it has yet to be determined if they would be able to pay a fee based on the economic value of the service. There are also a number of related businesses such as the production of orthopedic shoes which could be developed to provide additional revenue for the clinic.

The orthotic clinic may have the potential to function as a viable, stand-alone entity, but a business plan would be required which views such factors such as market, demand, service fees, operations, and financial situation to determine the long-term viability of the clinic. However, the clinic is the strongest candidate for privatization in the short term.

b. World Rehabilitation Fund (WRF) Prosthetics and Orthotics Center

i. Description

The World Rehabilitation Fund received financing from A.I.D. to develop a training component at the World Rehabilitation Center in Yerevan for eight prosthetic/orthotic technicians in the fabrication of upper extremity limbs and braces and continue to further expand skills in the fabrication of lower limbs and braces. The grant also paid for the supplies and equipment needed for 1500 patient visits, the training of one Armenian M.D. in rehabilitation medicine and the recruiting of Armenian/Russian speaking physicians to conduct a one month orientation program in rehabilitation medicine for Armenian physicians. Training has been given in prosthetics and will begin in orthotics in early 1992. The World Rehabilitation Center has a major partner, the Lebanese Armenian Committee.

ii. Prospects for Privatization

It may be feasible to privatize the WRF Prosthetics/Orthotics Center in this time frame although it will require significantly more preparation work and analysis than the Project Hope clinic, which is further along in the preparation process. First, WRF must work to find local sources of supplies and obtain approval from the GOA and Center's partner, Lebanese Armenian Committee (LAC). In addition, given the absence of medical insurance, the ability and willingness of patients to pay the economic value for services needs to be determined.

Using the criteria outlined in the Introduction, the prospects for the privatization of the WRF clinic is analyzed below under the assumption that the energy crisis is resolved:

a. Political Will to Privatize

The WRF clinic falls under the Ministry of Social Welfare and Labor, as opposed to the Ministry of Health which is the counterpart for the other PVO orthotics/prosthetics projects. This makes it difficult to combine efforts to build political will for the orthotics/prosthetics projects as attempts to bring both Ministries together to discuss issues related to all of these projects have failed.

The Deputy Minister of Social Welfare and Labor expressed his view that the WRF Center was not an appropriate candidate for privatization. His main contention is that the people served by his Ministry, (the elderly, the handicapped, and the long-term unemployed) are

unable to pay for the services and therefore should not be charged. It is important to note, however, that the WRF Clinic also serves patients that are outside these categories. It is also likely that some of the elderly are able to pay and that others can be assisted by family members, as is likely the case with the handicapped and children. Many of the handicapped are not able to pay themselves because until only recently there were no efforts to rehabilitate handicapped patients in Armenia or to integrate them into society. As political will on the part of the government is critical to the success of this privatization, dialogue between the Ministry of Social Welfare and WRF on the potential benefits from privatization must continue to be a high priority. The Orthotics Specialist that has been working with the Project Hope Orthotics clinic will be moving over to WRF in March. He should make an effective contribution to the dialogue with the Ministry regarding the privatization alternative.

b. Support of PVO and Staff in Privatization Efforts

WRF headquarters and a number of the trained Armenian staff members at the WRF Prosthetics/Orthotics Center are in favor of privatization, as they share some of the same concerns regarding the viability of working for GOA salaries once financial support from the PVOs ceases. The current base salary level for a prosthetist at the center is 140 rubles per month and the Ministry has agreed to compensate them additionally for each lower limb or brace produced. But, the Ministry has not been able to pay the workers even this nominal amount to date and therefore WRF has been supplementing the staff in order that their salary is equivalent to \$25-30/month (1250-1500 rubles per month). Once the training period ends, and unless something is worked out with the Ministry, which is unlikely given its lack of funds and its reluctance to give special treatment to PVO trained specialists, the WRF staff at the Center will face a significant pay cut. The WRF's partner, the Lebanese Armenian Committee does not seem to support privatization.

c. Independence from Armenian State Facilities

The WRF clinic is not significantly integrated with the overall Armenian Health care system. Although doctors within the Armenian Health care system must refer patients to the clinic, and the clinic is housed in a state facility, it operated independently relative to other disciplines in the medical field. It has its own trained staff, procures its own supplies, and does not need to remain part of the state medical system to gain access to physicians and facilities.

d. The Ability to Finance and Obtain Supplies as a Private Entity

Currently over 95% of the supplies for the WRF Center are donated from overseas. WRF is taking inventory of its supplies in preparation for identifying local sources for these supplies. This is a critical step in the privatization process as the Center will not be sustainable as a private venture if it must rely heavily on imports for its supplies, unless it were able to earn

the necessary foreign exchange. It will most likely prove difficult to finance large amounts of hard currency supplies from the revenue generated by the clinic.

e. Potential for Sustainability as a Private Entity

Based on a preliminary assessment, The WRF Center merits further analysis to determine whether it can survive as a viable stand-alone entity. Further detailed analysis of the market, management capabilities, efficiency and productivity, legal framework, taxes, fees which can be charged for services, the rental rates and rates for leasing equipment, etc. is required to determine whether this center will be viable as a private operation.

The client base for these operations could be potentially increased by expanding the services to people from other Republics, encouraging more clinics and hospitals to refer patients, and developing a sideline business production of (orthopedic) shoes which could be developed to provide additional revenue for the clinic.

The most important issue to be resolved is whether, in the absence of health insurance, patients will be able to pay the economic value of the services. Although this determination will require further analysis beyond the scope of this preliminary visit, the concept of paying formally for prosthetic services has already been introduced by the German Red Cross. The German Red Cross charges patients from other Republics and those who they have determined are able to pay, although the fees charged currently do not cover costs. There remains a strong need to make health care more affordable through the National Insurance Plan. Until this plan is operational, people will continue to finance payments by receiving assistance from their families or the clinics themselves, if they make financing plans available. Other arrangements between the clinic and the GOA must be made in the interim for the most indigent patients.

The WRF clinic will also have significant competition from not only the state clinic whose services are free and the free prosthetics services sponsored by other donors. Other donors include the German Red Cross, which has a prosthetics clinic, and the GTZ, the donor agency of the German government, which is in the process of completing the training of its prosthetists. These prosthetists will work in the new center that the GTZ is currently building. This will force the clinic management to maintain a higher quality product as a basis for competition, but may impede its ability to survive as a stand-alone entity.

c. Armenian General Benevolent Union (AGBU) Plastic and Reconstructive Surgery Center (PRSC)

i. Description

The AGBU has developed a program in plastic and reconstructive surgery for Armenia, which includes training of doctors and nurses at the Yale-New Haven Hospital and Yale School of Medicine, renovation of space and equipment for a modern Plastic and

Reconstructive Surgery Unit (PRSC) at an Armenian surgical facility, utilization of the PRSC as a training operation and ongoing US technical supervision and training in plastic and reconstructive surgery. The surgeons and nurses returned from their training program in the fall of 1991. The shipment of supplies and equipment that will allow it to begin its operations should arrive in the spring of 1992. The facility that the center will be in was formerly run by the USSR Academy of Sciences, although it was due to shift to the Ministry of Health from the USSR Academy of Sciences in January 1992.

ii. Prospects for Privatization

Since the Center is not yet operational, it will not be possible to determine the feasibility of privatizing it without further study. It is unlikely that it will be feasible to privatize it by the end of the grant period, given the short time frame.

a. Political Will to Privatize

In order to gauge whether there was any political will for privatizing the center, PW/IPG raised this issue with the Minister of Health at the time of the assignment. He advised that he was not opposed to considering this option in the future, but it was difficult to make the decision to privatize at this juncture as the Center is not yet operational.

b. Support of PVO and Staff in Privatization Efforts

The AGBU does not feel that the privatization of the Center is feasible within the grant period. They felt that until the government had taken the decision to privatize hospitals and had expanded its program of charging for services to include inpatient services, and addressed the lack of a health insurance system, it would be difficult to privatize the AGBU Center. They also expressed a concern regarding finding suitable partners. The AGBU acknowledges the slight trend toward privatization on the part of the government and does see this as an option for the medium-term.

c. Independence from Armenia State Facilities

Because the Center is an inpatient service center, it will most likely be significantly integrated both physically and operationally into the state system, once it becomes operational.

d. The Ability to Finance and Obtain Supplies as a Private Entity

A major constraint to the Center's privatization within the grant period is the significant amount of foreign exchange that would be required to finance its current supply needs of the Center. A preliminary review of the equipment and consumables list for the PRSC indicates that ongoing foreign exchange expenditures will be relatively high, at least in the short to

medium term. The operation must either find ways to source the necessary supplies locally, or establish a source of hard currency to pay for these ongoing expenses.

e. Potential for Sustainability as a Private Entity

The concept of plastic surgery and reconstruction is not well-developed in Armenia, and therefore there is no established market. This Center has the potential, however, of eventually developing a sideline in cosmetic surgery, a new discipline in the former Soviet Union, that may enhance its revenue base. This side business may also attract patients from other former republics and abroad, which may generate foreign exchange. It is difficult to make this determination now as the center is not yet operational. Whether this Center can be sustainable as a private entity will require further study of the market, costs, operation, management and the demand for services based on their economic value.

d. Project Hope Children's Rehabilitation Center and Jewish Joint Distribution Committee (JDC) Rehabilitation Program

i. Description

Both rehabilitation programs are part of the Project Hope Consortium. Project Hope established the pediatric rehabilitation center in Yerevan and is in the process of developing a multi-disciplinary rehabilitation system which incorporates the most advanced practice techniques. The JDC is in the process of building a children's rehabilitation center in the earthquake zone at Gumri, which is intended to provide physical and occupational therapy to Armenian children and train 15 Armenian health workers in physical and occupational therapy.

As with most health care provision in the former Soviet republic, the salaries of trained physical therapists are low reducing the incentives to remain in the profession and to train the next generation of therapists.

ii. Prospects for Privatization

a. Political Will to Privatize

Privatization of these centers was not raised specifically as an issue as that these activities would not be sustainable as private ventures in the near term as described in Section e: Potential for Sustainability as a Private Entity.

b. Support of PVO and Staff in Privatization Efforts

The PVO headquarters and staff do not feel that these activities would be sustainable as private ventures until the concept of western style rehabilitation techniques are more accepted by the population and the medical community.

c. Independence from Armenian State Facilities

These Centers depend on referrals from the state system, but are relatively independent operationally from that system.

d. The Ability to Finance and Obtain Supplies as a Private Entity

Unlike the prosthetics and orthotics labs in the consortium, rehabilitation centers do not require a steady stream of imported supplies. The PVOs have also made efforts in finding and adapting local products to serve the rehabilitation needs. However, there is still a need to find locally produced, cost effective western-style wheelchairs and pressure cushions.

e. Potential for Sustainability as a Private Entity

Based on preliminary analysis, the rehabilitation centers do not appear viable as independent private entities within the grant period. Western rehabilitation techniques are not fully understood or accepted by Armenian doctors. Massage therapy is still the predominant form of treatment for the disabled. In the past year, the JDC clinic has been trying with only limited success to convince Municipal authorities to refer more patients to the Gumri clinic.

e. Red Cross Spinal Cord Injury (SCI) Rehabilitative Center

i. Description

The Red Cross is developing a comprehensive program for the treatment, care and rehabilitation of Spinal Cord Injury (SCI) patients. The Red Cross currently has an agreement with the Soviet Red Cross/Armenian Red Cross to turn over the facilities to these local entities once the International Red Cross leaves.

ii. Prospects for Privatization

a. Political Will to Privatize

It was clear from the International Red Cross that the facility would be turned over to its local counterpart, and therefore the privatization of this project was not raised with the government.

b. Support of PVO and Staff in Privatization Efforts

There does not seem to be significant potential for privatization of the International Red Cross Spinal Facility before the end of the grant period because this is counter to objectives of the League of Red Cross and Red Crescent Societies, which is based in Geneva and directs the overall Red Cross involvement. The League of Red Cross and the American Red

Cross (which receives A.I.D. Grant funding) currently have no present or future plans to privatize the new Spinal Cord Injury Center.

c. Independence from Armenian State Facilities

The Spinal Cord Injury Rehabilitation Facility offers both inpatient and outpatient services and the inpatient services are currently significantly integrated with the state medical system. The degree of integration may vary once they move into their new facility.

d. The Ability to Finance and Obtain Supplies as a Private Entity

The Red Cross has recently hired a logistician to inventory supplies and find local sources to fill the Center's supply needs to the extent possible. There seems to be an urgent demand for locally produced high quality wheelchairs and pressure cushions.

e. Potential for Sustainability as a Private Entity

Based on an initial assessment, it does not seem that the Red Cross Spinal Cord Facility would be sustainable as a private business in the near term, given the newness of this discipline and its lack of acceptance in Armenia. The demand of spinal cord injury patients alone may also not be enough to sustain a private center. The Red Cross is already examining possibilities for dedicating some of the bed space in the new center for other types of rehabilitation patients.

With regards to privatization in other areas, the International Red Cross is currently planning to implement a program aimed at encouraging and providing the necessary equipment, supplies, and training to rehabilitation patients in the earthquake zone so that they can form private cooperatives as a source of income.

B. Armenian Assembly Housing Project (AAHP) and Training Program

1. Overview of Housing Sector

As in the case of the health care sector, construction in Armenia has historically been centrally planned and controlled by the U.S.S.R. All industry requirements and standards were established by Soviet Agencies in Moscow, which were also the primary source of financing and procurement. Since independence, the Ministry of Construction of Armenia has assumed responsibility for these functions.

In addition to the state-run structure, there has always been an informal, unregulated component of housing construction which consisted basically of moonlighting state employees, often using state materials, to build country homes and other structures. Since

the legalization of private construction in May 1988, a number of private building cooperatives have been formed in Armenia.

The GOA has made the privatization of the construction industry, which includes housing construction, a high priority. Private ownership of housing is also a high priority. The President stated in his inaugural address that the entire construction and light industry sector would be privatized within one year. The Committee on Economic Reform of the Council of Ministers, which leads the privatization process, established a Housing and Economic Reform Committee for the specific purpose of developing an approach to the reform of those sectors.

The homeless population in Armenia is approximately 750,000 out of a total population of 3.5 million. The large number of homeless Armenians is primarily due to the combined effects of earthquake and the war between Azerbaijan and Nagorno-Karabagh which has brought a large number of refugees to Armenia. Following the earthquake, the Gorbachev administration promised to provide free housing to all earthquake victims. This goal has been assumed by GOA.

In addition, Armenians have only recently been able to own their own homes and apartments. Financing for the purchase of homes comes primarily from pooling family resources or from personal savings as long-term mortgage financing does not exist in Armenia.

2. *Armenian Assembly Housing Project and Prospects for Privatization*

a. Description

In response to the displacement of tens of thousands of Armenians by the earthquake, the Armenian Assembly has built a manufacturing complex to produce the materials needed for the production of earthquake-proof housing in the earthquake zone -- concrete blocks, roof trusses, doors and windows, and sheet metal roofing.

The Armenian Assembly Housing Complex does not, however, have a monopoly on housing in the earthquake zone. A number of other donors, including the Italians, the French, and the Swiss also have housing projects in that region. Huntsman Chemical of Utah has also built a concrete siding factory in Yerevan and is providing foreign management at no cost to the GOA. This plant also may produce concrete blocks in the near future.

Although the American Assembly Housing complex opened on October 26, 1991, it is not yet fully operational due to the scarcity of energy and raw material supplies. The Assembly is also providing assistance in the development of the design for the houses and the revision of building codes and will sponsor, with A.I.D. financing, a comprehensive training program in April aimed at teaching Armenian tradesmen how to build more earthquake resistant structures using modern building materials and techniques. The housing construction component has not yet begun. The Assembly's goal is to produce approximately 5,000 earthquake-proof houses per year, using the building components from the manufacturing

complex and the housing design developed in cooperation with the government. The houses will be given to the earthquake victims in accordance with a list that has been developed and there will be restrictions on the sale of these homes during a certain time period.

The manufacturing complex is experiencing a number of operational problems similar to those experienced in many state factories. Unless these issues are redressed, they will seriously affect the overall productivity of the complex and its ability to meet production goals and humanitarian objectives. The problems include:

- o **Salary/Wages:** The workers are being paid according to Ministry of Construction guidelines and have not been paid at all since October. The Ministry of Construction salary levels are very low and the Assembly Project has experienced problems with stealing, a common way for state factory workers to supplement low state salaries. Productivity has been low and there has been significant absenteeism.
- o **Supplies:** Given the blockade currently imposed on Armenia and the general shortage of materials in the former Soviet Union, many materials are simply not available and few at state prices.

These problems may become even more pressing as the economic crisis deepens. As the complex becomes fully operational, these problems are not likely to disappear. The Assembly is in the process of trying to rectify the situation through the issuance of a new protocol with the government, which explicitly gives the Housing Board, which is composed of Assembly-appointed and Government-appointed representatives, control over the pricing and distribution of all products and constructed houses, power to buy and sell equipment, hire and fire employees, set wages, and approve all site and building plans for the program. Making this authority more explicit than it has been in prior protocols should alleviate some of the operational difficulties in the future.

b. Prospects for Privatization

Privatization potential of the Armenian Assembly project must be considered at two levels: the privatization of the manufacturing complex itself and the privatization of housing construction.

i. Political Will to Privatize

The Ministry of Construction does not seem to be in favor of privatizing the complex until the earthquake zone needs are fulfilled. The Deputy Minister of Construction, who is responsible for all construction projects in the earthquake zone, has expressed this reluctance to privatize the complex, primarily because the government of the former Soviet Union under Gorbachev promised to provide free housing to earthquake victims and has not delivered. He feels that it is now the Government of Armenia's obligation to fulfill the promise. The

expectation of free housing on the part of earthquake victims would make it difficult politically for the government to begin to charge them for their houses, which would negatively affect the potential market for housing. The Deputy Minister was also resistant to privatizing the construction of the houses as he wanted it to remain under his jurisdiction.

The Vice-Chairman of the Committee on Economic Reform, however, was interested in exploring the privatization of housing construction and the feasibility of the Assembly project within the context of the overall reform of the housing sector and the privatization of the construction sector.

ii. Support of PVO and Staff in Privatization Efforts

There has been no final decision made by the Assembly regarding what to do with the manufacturing complex once the PVOs leave Armenia. The various staff members at PVO headquarters and in Armenia seemed open, however, to considering a number of forms of privatization for the future including sale, leasing, and management contracts and the privatization of housing construction in the present.

iii. Independence from Armenian State Facilities

The manufacturing complex is owned and managed by the Armenian Assembly and its goal is to manage this complex like an autonomous private business. At the present time, the GOA controls the resources, labor, materials, production, and salaries and wages. Supplies are still procured according to government norms. This may change once a new protocol is signed with GOA, which would give the Housing Board (Board of Directors) the powers required to properly manage the complex.

With regards to housing construction, there has existed since 1988 a number of independent private building cooperatives.

iv. The Ability to Finance and Obtain Supplies as a Private Entity

The complex is currently constrained by its overall inability to obtain raw materials and a steady source of energy due to the blockade by Azerbaijan and the general shortages of many supplies throughout the former Soviet Union. The Assembly on-site manager felt, however, that it would be able to obtain more of these materials if it could pay market, albeit higher, rates and was not subjected to government procurement policies.

The greatest challenge for the private building cooperatives is the difficulty in obtaining supplies, which in this case would be provided by the Armenian Assembly Manufacturing Complex.

v. Potential for Sustainability as a Private Entity

In order to make recommendations regarding the potential sustainability of the manufacturing complex, an assessment of the demand for the building materials based on their economic value and an analysis of the cost to produce the building material should be done. In the short run, given the difficulty in obtaining raw materials and a steady source of energy, it would be nearly impossible to sustain the complex as an independent private entity. In addition, Armenia does not have available long-term mortgage finance; in fact, the concept of longer-term mortgage financing is relatively new. The lack of mortgage financing will inhibit the overall development of a private housing market and consequently a demand for these building material.

Privatization of housing construction seems to offer greater potential in the short-term. Since May of 1988, building cooperatives have been legal and there are already a number of them in Yerevan. The A.I.D.- financed training program would train these cooperatives in earthquake-proof construction methods, and they could work on a contract basis to fulfill the government orders and purchase materials at market rates from the Assembly for any additional business they obtain. The biggest constraints to their sustainability would be obtaining payment on a timely basis from GOA, which lacks resources.

C. Solar and Wind Renewable Energy and Conservation Project (REP)

1. *Overview of Energy Sector*

The Armenian energy sector is limited by weak domestic infrastructure and dependence on outside sources. The border war with Azerbaizhan has cut off fuel supplies from Russia and the Ukraine. The country's only nuclear power plant has been shut down for safety reasons, and the largest hydroelectric station in Armenia is draining Lake Sevan at a rate highly detrimental to the local ecosystem. In most areas of Armenia there is neither heat nor hot water and there are frequent electrical blackouts. As a result, industrial activity has virtually ceased. The lack of heat and fuel is adversely affecting medical services in the disaster area and throughout the rest of Armenia.

Armenia has very limited exploitable coal and oil resources. Alternative sources have not been developed. However, solar, wind, and geothermal energy are very important potential sources of power. According to the Armenian Missionary Association of America (AMAA) reports, Armenia is naturally well situated to tap other sources of non-fossil fuel. Over 70% of Armenia's land surface has over 2500 hrs/year of solar exposure. Because four mountain passes dominate the Armenian landscape, annual average wind speeds exceed 12 miles per hour.

The energy problem is exacerbated by the fact that under the Soviet system, all utilities were heavily subsidized. Armenians, like all citizens of the former Soviet Union, are accustomed

to not having to pay the market price for energy consumption. The PW/IPG team noted that during the rolling electrical blackouts in Yerevan, little effort was made to conserve energy in the lighted sections of town.

2. *The Solar and Wind Renewable Energy and Conservation Project and Prospects for Privatization*

a. Description

A.I.D., in collaboration with the Armenian Missionary Association of America (AMAA), is currently sponsoring a program on energy conservation and the use of solar and wind energy in the Armenian disaster zone. The goals of the program are to facilitate education and vocational training of Armenians in energy conservation measures and the use of solar and wind energy for the earthquake zone. The program is also designed to help local authorities and health care administrators implement energy conservation measures and utilize solar and wind energy for hot water and electric power supply. The program tasks include: training of technical personnel, assessment of wind and solar resources in the earthquake zone, and evaluation of the ability of local industry to produce inputs for the solar and wind energy devices.

b. Prospects for Privatization

Of the three A.I.D. tasks described above, training of personnel holds the potential for becoming self-financing and/or privatized via joint venture within the grant period.

i. Political Will to Privatize

Political will to privatize via public private partnerships is high. This project in particular enjoys a high level political support from the GOA.

ii. Support of PVO and Staff in Privatization Efforts

The Yerevan Polytechnical Institute and the expatriate staff involved with the A.I.D. project have entrepreneurial attitudes and are very interested in establishing a training center. Although YPI itself is not privatizable, it has already proven its willingness and ability to participate as a part owner in commercial and/or self-financing ventures.

iii. Independence from Armenian State Facilities

Renewable energy is a new field in Armenia and there is no established bureaucracy with vested interests competing with it or resisting privatization. This coupled with the high level of political support the project enjoys allows the project to operate fairly autonomously.

iv. The Ability to Finance and Obtain Supplies as a Private Entity

Although the original solar and wind devices were donated, YPI has been successful in developing joint ventures with foreign producers to produce them in the future. Part of the mandate of this project is in fact determining sources for local production of these devices.

v. Potential for Sustainability as a Private Entity

The training component has the potential for being a sustainable self-financing entity and or a private-public joint venture. One possibility would be to create a training center as a joint venture or a self-financing joint entity, which would attract paying clients from the Commonwealth and abroad, and also operate as an energy consulting firm to generate additional revenue.

A YPI representative noted that at least one Russian organization has expressed an interest in being a partner in such a venture. Also, an American firm, the Fred Chase Company, already has an agreement with YPI to jointly operate a solar and wind energy farm in the city of Tzaghgahovid in the disaster area. This farm is a demonstration unit used as a training and data collection center for the A.I.D. program. Through its other joint ventures with other turbine manufacturing companies, YPI could have access to materials and hard currency needed for the training center.

In order to determine the viability of such a center, the demand for training based on the economic value involved in delivering the training program would have to be analyzed. Based on our preliminary analysis there seems to be a considerable demand both in Armenia and many of the other former republics for alternative energy expertise. Alternative energy sources are important as localized back-up systems for unreliable electricity supply, for isolated areas outside existing grids, and in general as a non-polluting form of energy. The market for design and installation services is potentially very large. The training center would be unique in the former Soviet republics, providing a higher level of technological training than is available in Russia's small scale wind and solar industry.

Part of the A.I.D. grant includes the evaluation of the capability of local industry to produce inputs for solar and wind energy devices. Another component of the project is to provide energy conservation retrofits for hospitals in the disaster zone. These devices have been selected based on their potential for reproduction by local industry. Both of these components provide additional opportunities for stimulating local private industry. Although not explicitly stated in the A.I.D. grant, the development of a solar and wind power industry in Armenia via joint venture with private American firms is already being accelerated as a by-product of this program. Two joint ventures are being established for production of wind and solar energy devices. The first is being negotiated with the Fred Chase Company, a US wind turbine manufacturer, and the Yerevan Polytechnic Institute (YPI), the pre-eminent Armenian engineering school. An agreement for the production and

installation of several 150 kilowatt wind turbines will probably be signed in January or February of 1992. The hard currency for local purchase of the joint ventures products is slated to come from a counter-trade arrangement with a Siberian partner who will provide lumber for sale to a Japanese customer. The second joint-venture is between YPI and the Wind Baron Company. Wind Baron is negotiating to produce its turbines in Armenia. Signing of an agreement is contingent on identifying an appropriate Armenia manufacturing partner, possibly a military plant converted for turbine production. This agreement may be ready in March of 1992.

IV. CONCLUSIONS AND RECOMMENDATIONS

A. Conclusions

In general, the environment for privatization is challenging under current macroeconomic conditions. Resolution of the energy situation remains a critical constraint on further privatization efforts in Armenia. Given this context, the Project Hope Orthotics Clinic and the World Rehabilitation Fund Center hold the greatest potential for privatization within the grant period. Detailed business plans, however, are required to determine whether these entities can be sustainable as private businesses. The other PVO activities will require further preparation and improved environmental conditions prior to privatization, and will probably require a time frame that extends beyond September 1993.

Table 1 presents an analytical matrix which ranks each project numerically by assigning a value to each criteria as it applies to the project. Each project is assigned and ranked by its observable average score. Each project can also be compared by category for its relative strengths and weaknesses in terms of its privatization potential. Although this procedure relies on assigning a numerical ranking to our analysis, it establishes a systematic summary of our findings. It is important to emphasize, however, that each criterium has different relevance in each activity. This is especially true of activities in different sectors.

PW/IPG has concluded that the Project Hope Orthotics Laboratory will be the easiest to privatize by the end of the grant period. The Project has an observable average score significantly higher than the other activities. In addition to its higher overall score, the project is better positioned to achieve privatization within the time constraints of the grant funding. The privatization of the WRF Center also deserves further consideration as it is in the same business as the Project Hope Clinic. In addition, privatizing these entities together could also create some synergies in the privatization process and provide competition in the local market. The other projects in the health care sector register lower scores over the same range of criteria. These scores also reflect a lower probability that the activity can be privatized in the grant period. In general, the numbers reflect the observation that outpatient services generally have fewer supply problems than inpatient services and are more independent from the state system.

The Armenian Assembly Housing Complex scores relatively low in each category. As a significantly larger operation than the health care facilities, it faces constraints typical of former Soviet facilities in its dependence on the state and shortage of supplies. Once the new protocols have been approved its overall ranking may improve. Although a more detailed analysis to support the financial viability of the complex as a private firm. It should also be noted that, the political will is weak because the GOA wants the project to remain state controlled and uninterrupted throughout the ongoing disaster relief effort.

The Solar and Wind Renewable Energy and Conservation Project has the second highest observable average. The project has significant potential for privatization via joint ventures

Humanitarian Assistance for Armenian Earthquake Victims Analytical Matrix of Projects		PRIVATIZATION			CRITERIA		Observable Average
PROJECT	Political Will to Privatize	PVO and Local Staff Support	Independence from State	Supply Situation	The Potential for Sustainability		
HEALTH CARE							
Project Hope							
Orthotics Laboratory	4	5	5	4	3*	4.2	
World Rehabilitation Fund (WRF) Prosthetics/Orthotics Center	2	3	4	2	3*	2.8	
Armenian General Benevolent Union (AGBU) Plastic and Reconstructive Surgery Center (PRSC)	3	3	1	2	No	2.3	
Project Hope Children's Rehabilitation Center Jewish Joint Distribution Committee (JDC) Rehabilitation Center	2	2	4	3	2	2.6	
Red Cross Spinal Cord Injury (SCI) Rehabilitation Center	2	2	2	3	2	2.2	
HOUSING							
Armenian Assembly Housing Complex and Training Program	2	3	2	3	3*	2.6	
ENERGY							
AMAA Solar Wind and Energy Conservation Program	4	4	2	4	3*	3.4	

2/10/98

Footnotes
* Needs further analysis

Criteria Rankings	
(5) Very Favorable	(2) Unfavorable
(4) Favorable	(1) Poor
(3) Fair	(NO) Not Observable

Table 1

in training and in local component production. A number of privatization joint ventures with foreign firms have already developed as a by-product of this project. As with the Housing Project, the basis for comparison with the health care activities differ somewhat. The activity to be privatized is a knowledge based business which intends to sell expertise. Although closely associated with a state facility, the involvement of YPI benefits the project because of the relative sophistication of the former Soviet educational system. The joint ventures provide the project with better assurances of supplies and potential for sustainability. Compared to health care and housing, the project managers are very entrepreneurial and enjoy high level political support. They also have encountered less resistance from other state structures because alternative energy production is new in Armenia and there are no competing bureaucracies.

Based on the calculated observable average, the project prospects for privatization within the grant period are ranked in the following order:

1. Project Hope Orthotics
2. AMAA Solar and Wind Renewable Energy and Conservation Program
3. World Rehabilitation Fund (WRF) Prosthetics/Orthotics Center
4. Project Hope Rehabilitation and Jewish Joint Distribution Committee (JDC)
5. Armenian Assembly Housing Project (AAHP) and Training Program
6. Red Cross Spinal Cord Injury (SCI) Rehabilitation Center

From this analysis, the following section provides recommendations for the privatization of the Project Hope orthotics clinic.

B. Recommendations for PVO activities with the strongest potential for privatization within the grant period.

1. Project Hope's Orthotics Clinic

a. Privatization Plan

Step 1: Carry out a feasibility study for the privatization of the clinic.

A feasibility study should be carried out in order to determine whether this clinic can survive as a stand-alone private business and under what conditions. If this analysis shows that survival as a completely private venture is not possible, alternatives for self-financing or at least the potential use of fees for increasing the remuneration of the staff should be identified. This study should include:

- o A market analysis, including an analysis of the competition.
- o An analysis of the demand for the services based on the economic value for the services provided

- o An examination of insurance and other financing options available to finance patient needs.
- o Financial assessment of the current operations and financial projections of the future operations based on alternate scenarios, (based on cost estimates for materials, base salaries, rent, lease payments, tax payments and other expenses and revenue projections).
- o An operational analysis of the clinic, which assesses the productive capacity, the productivity and efficiency of its operations.
- o An assessment of management capabilities of the staff and the areas in which it would be necessary to upgrade skills.

Step 2: Prepare a privatization/business plan.

Should the results of this feasibility study prove positive, the clinic staff should prepare a privatization/business plan.

This privatization/business plan will also serve as a basis for negotiation of rental and lease payments for equipment, or alternatives such as the exchange of these payments for service to indigent patients, with the Ministry. This proposal should include:

- o A proposed model for privatization (i.e. cooperative/ small business, joint stock company) based on the examination of alternatives available.
- o A definition of the post-privatization role for the government vis-a-vis the clinic.
- o A business plan including financial analysis and projections.
- o Based on the financial analysis, a proposal for reasonable rates for the rental of space and the leasing of equipment.
- o A proposed interim plan for dealing with indigent patients until the National Health Insurance Plan and National Health Fund are approved by Parliament and implemented.
- o Plans for the expansion of the level of service to segments of the population currently not being served.
- o A plan for accessing supplies.
- o A work plan and timetable for privatization.

Step 3: Obtain approval from the Ministry of Health of the privatization proposal.

Dialogue needs to be initiated immediately between Project Hope and the new Minister of Health regarding the possibility of privatizing the clinic. The Minister and Deputy Minister should be encouraged to visit the facility and be briefed directly by the orthotics specialist so they are familiar with the entity. Once the privatization proposal/business plan is completed it should be presented and discussed with the Minister and Deputy Minister in an attempt to gain their approval.

Step 4: Identify local sources for supplies and negotiate supply contracts.

A key factor in the ability of the Project Hope clinic to sustain itself as private venture is its ability to identify local or regional sources for supplies. All but one input, thermoplastics, are currently available through the local market. Because of the overall shortage of thermoplastics in the former Soviet Union, it may be necessary for the clinic to take extra measures to induce the producer to ship the product to Armenia. One possible solution, worth further examination is to arrange a deal where products produced either by the clinic in a side business, or acquired through special arrangement with a local supplier, are bartered for plastics. This kind of arrangement is common practice in the former Union.

Step 5: Begin charging fees for services as an interim measure in preparation for privatization.

The clinic should obtain authorization from the Ministry, as soon as possible, to begin charging at least a nominal fee for services. Initially, the money collected should be directed towards covering the salaries of the staff and then toward the purchase of local materials. The immediate introduction of fees for services will acclimate patients to the concept of "above board" payments for health care services and will support the analysis of whether patients can pay the economic value for the services.

Step 6: Negotiate the terms of privatization set forth in the proposal and begin the process of implementation.

The specific terms of privatization must be negotiated and agreed upon between the GOA, the PVOs and the buyers, who in this case will most likely be the clinic's staff. Once this agreement is reached, steps such as establishing a Board of Directors and setting prices should be taken to implement the chosen privatization model. The timing of the implementation should take into account the need for a steady energy source.

Step 7: Provide management and business training to staff.

It is recommended that staff at the Project Hope clinic begin to orient and involve staff in issues related to the operation and management of the Center. This will be an important part of staff training and contribute to the sustainability of the privatized clinic. Formal training in business management (finance, accounting, management, and program and human resource development) will also be necessary for the future managers of this operation.

b. Technical Assistance Recommended for the Privatization of the Project Hope Orthotics Clinic.

- i. A privatization specialist, a financial analyst with experience in privatization and a local lawyer are required to assist the staff in preparing the feasibility study and the privatization/business plan, as required.

The privatization specialist and financial analyst would work with the orthotics specialist and the clinic's staff to carry out the feasibility study for privatization and to prepare the privatization proposal/business plan, as required. This specialist would carry out a feasibility study for the privatization of the clinic and, if the results are positive, proceed with preparing a privatization proposal and business plan. For the privatization proposal, the team will conduct the background research with the assistance of a local lawyer on the regulation and tax structure for cooperatives/small businesses in Armenia and other available private models (see Appendix F for a general description of various models for privatization), financial analyses and cash flow projections for the unit, and preparation of the privatization proposal. The privatization specialist and financial analyst would also provide technical back-up in the negotiations with the government. This assistance should begin as soon as possible.

- ii. Provide assistance to identify the required supplies and negotiate with local suppliers.

The least costly and most effective way of providing this technical assistance is to develop a global program carried out in coordination with all of the prosthetics/orthotics clinics currently being operated by the international donors. This assistance is especially critical for Project Hope in the area of thermoplastics. We recommend a two-person team, with one of the team members experienced in conducting research on Soviet industry and assisting U.S. firms in doing business in the former Soviet Union, as well as having a knowledge of Russian; and the other team member should have experience in the orthotics/prosthetics industry as either a practitioner or supplier. It may also be useful to have a local bilingual counterpart experienced in conducting business in the Soviet Union to accompany the team during the field work. The team will review supply lists and conduct background research in the U.S. using Soviet technical journals to identify Soviet factories which might be able to produce these plastics based on the required technical specifications. In order to make this technical assistance cost effective, consideration should be given to developing a joint

comprehensive program for identifying local sources for the supplies required by all of the prosthetics/orthotics clinics being financed by the international donors.

- iii. The Project Hope Orthotics Specialist should be actively involved in the implementation of the privatization of the clinic and continue to serve as an intermittent advisor for post-privatization follow-up stage.

This would entail a significant involvement of the Orthotics Specialist during the development of the privatization plan, the implementation of privatization and visits to the clinic and WRF center at least twice a year for several weeks each, after the privatization has been completed, to provide any needed follow-up or technical assistance.

2. *The WRF Center*

a. Privatization Action Plan

The steps toward the privatization and the technical assistance needs for the WRF clinic are similar to those presented for the Project Hope Orthotics Clinic above. We note below the principle differences.

Step 1: Identify local sources for supplies and negotiate supply contracts.

A key factor in the ability of the WRF Center to sustain itself as a private venture is its ability to identify local or regional sources for supplies. The WRF Center is currently receiving over 95% of its supplies from overseas. A substantial effort is required on its part to begin to identify local suppliers. The Center is currently taking inventory of its supply list in preparation for identifying local sources for these supplies. Until this exercise is completed, no further steps towards privatization should be considered.

Step 2: Carry out a study of the feasibility of the privatization of the WRF Center.

Step 3: Prepare a privatization/business plan if privatization is determined to be feasible.

Step 4: Obtain approval from the LAC and the Ministry of Social Welfare and Labor of the privatization business proposal for the WRF Center.

The Minister of Social Welfare and Labor needs to be consulted by the WRF Center regarding the potential for privatization and the potential positive effects of privatization on ensuring the sustainability of the clinic after WRF funds have been exhausted. WRF must also gain the support of the Lebanese Armenian Committee, who is their partner on the project.

Points which should be raised with the Ministry in addition to the presentation of a privatization proposal, include:

- o Privatization will decrease the cost to the GOA of delivering this service, since the center would be self-financing. The funds saved could be directed toward meeting other high priority social needs or assisting in the financing of indigent patients.
- o Additional revenue opportunities for the GOA in the form of taxes, lease payments for equipment, and rental of the space, could be channeled into a fund that could finance the care of indigent patients. This concept was already introduced by the President when he stated in his inaugural address that the proceeds from privatization would be utilized to fulfill the social needs of the republic's population, and fund special projects and refugee assistance in the earthquake zone.
- o A privatization plan would include an interim policy for covering indigent patients. This could include waiving of taxes or lease payments for the facility, or cheap rent in exchange for treating those who are unable to pay without charge. Once the National Health Insurance/Health Fund is in place, this policy could be revised.
- o The issue of current salaries being insufficient to retain staff should be addressed as well as its impact on the sustainability of the clinic.

Step 5: Begin charging fees for services as an interim measure in preparation for privatization.

Step 6: Negotiate the terms of privatization set forth in the proposal and begin the process of implementation.

Step 7: Provide management and business training to staff.

- a. Technical Assistance Recommended for the Privatization of the WRF Center.

Assistance recommended for Project Hope's Orthotics Clinic would also apply for the WRF Center.

C. Recommendations for PVO activities that are not ready for privatization within the grant period.

1. *AGBU Plastic Surgery and Reconstructive Center*

a. Address the supply constraint.

As a first step towards possible future privatization, we recommend addressing the supply constraint by establishing local supply sources and/or finding a mechanism for meeting foreign exchange needs. The ability to obtain supplies will be an important factor in the future sustainability of the Center, whether or not it is privatized. The first step in this process is to evaluate the minimum amount of hard currency required for support of annual operations, keeping in mind the potential for local sourcing and substitution. For example, the BioCor medical cooperative we visited was buying many of its consumables locally. Once the hard currency need has been established, it will be necessary to investigate and evaluate potential sources for generating hard currency, including attracting patients from outside Armenia, or establishing a barter arrangement or joint venture with a foreign firm.

Technical Assistance may be required to assist the AGBU in addressing the supply issues.

b. Address the salary issue

We also suggest developing a strategy to improve compensation of the trainees. This will be critical to retaining the core team. As with all of the medical operations examined, keeping the team together will require identifying and establishing appropriate pay scales. In the case of AGBU, the situation is complicated by the fact that in the current period -- after training has been completed, but before start-up of the operations--the Yale-trained team is being paid at a rate that far exceeds what the Ministry of Health will be willing or able to offer. (For example, the physicians are being paid \$184 a month, which converted into rubles at the rate of 47 to 1 comes out to 8648 rubles--more than 20 times the average monthly Armenian salary for medical personnel.) Thus, once the team actually starts working, and is subject to Ministry of Health pay scales, its members will experience sharp pay cuts unless salaries are re-negotiated.

2. *Red Cross Spinal Cord Injury Center.*

In order to make the Spinal facility sustainable over time and/or to prepare it for a future privatization, both the supply and salary issues must also be addressed.

a. Address the supply issue.

With regards to finding local sources for supplies which are currently being imported, the Red Cross has recently hired a logistician to assist in inventorying and identifying local

supplies for their operations. The Red Cross expressed a particular need for locally produced, western-style wheelchairs and pressure cushions.

b. Address the salary issue.

With regards to salary, the Red Cross has recently negotiated an increase to cover inflation for the Armenian doctors and nurses who staff their rehabilitation unit. Unfortunately, this represents no real increase in salaries and the Red Cross is likely to continue to have problems retaining trained staff based on wages. The new Team Leader for the Spinal Cord Injury facility is preparing a paper for the Ministry of Health arguing for an upgraded salary for nurses dealing with rehabilitation patients, based on their comparatively greater work responsibilities. Further efforts to address the level of real wages must be made in order to retain trained staff.

c. Consider a management contract as an option for sustainability.

It is recommended that, at a minimum, the Red Cross consider the possibility of privatizing the management of the facility if they determine that their local counterparts (The Armenian Red Cross or Sovcross) who will take over the facility once the International Red Cross leaves are not capable of properly running the facility by the time the League must withdraw.

3. ***Project Hope Children's Rehabilitation Center in Yerevan/JDC Rehabilitation Program in Gumri.***

a. Consider the possibility of obtaining additional donor resources to train physical and occupational therapists.

There is a great need for physical and occupational therapists in Armenia and throughout the former Soviet Union. Another source of demand are the donor-funded orthotics/prosthetics clinics which also require further complementary rehabilitation services. Additional donor resources dedicated to training more physical/occupational therapists and expanding these services and promoting western concepts of rehabilitation would be extremely useful.

We recommend that any donor funds provided for the expansion of physical therapy be contingent upon the institutionalization of this training. Once the concept of western style rehabilitation is better accepted in Armenia, the pool of trained physical and occupational therapists expanded, and the National Health Insurance Plan/National Health Fund implemented, the political will and potential of these rehabilitation centers for privatization should be considered.

b. Address the salary issue.

In the interim, the salaries of physical therapists must be competitive enough to retain the therapists who have been trained, as an inducement to keep them in the profession and train the next generation of therapists.

c. Address the supply issue.

Find cost-effective local sources for the production, repair and maintenance of rehabilitation equipment and the production of western style wheelchairs and pressure cushions.

4. *Armenian Assembly Housing Project*

a. Recommendations.

- i. Continue to negotiate protocols, including the provisions for third party arbitration to resolve disputes with the GOA, and giving the powers of the Housing Board to hire and fire employees for the complex, set wages, procure supplies, and set prices.

The aim of the Assembly in the short-term is to continue managing the facility like a private business, while maintaining its non-profit status. It is in the process of negotiating a new protocol with the government that will specify explicitly the rights and responsibilities (right to hire and fire workers, set prices and wages, etc.) of the Housing Board (Board of Directors) and the Project Manager. Closure on this agreement will allow the complex to improve productivity, maintain quality, and discourage stealing. These agreements should be as explicit as possible and should include a third party resolution mechanism to ensure compliance in practice with the protocols and settle any disputes that cannot be resolved by the two parties involved. Reaching closure on this protocol will be an important step toward making the complex more efficient and preparing it for possible privatization in the future.

- ii. The Armenian Assembly should conduct a study of options, including privatization, for sustainability of the complex so that it may continue to contribute to easing the housing crunch once they leave Armenia.

This feasibility study would require a major sectoral review of the housing sector and a comprehensive financial and operational analysis of the complex. The majority of the funding for this complex has come from private donations, and therefore tax considerations for the Assembly must be taken into account in this analysis.

- iii. Privatization should also be encouraged at the level of housing construction.

Building cooperatives that already exist should be encouraged to participate in the A.I.D.-sponsored earthquake-proof construction training. In addition, tradesmen trained by the Assembly should be encouraged to form cooperatives. Their training should be supplemented with training in management and accounting, as well as how to set up a small business. This would provide a core group of private building cooperatives that would compete with each other to keep prices down and improve quality. The government could regulate the work of these building cooperatives via certification and inspection processes.

b. Technical Assistance Required

Examining feasibility for privatization as a means of maintaining the efficiency, quality and productivity of the complex once the Assembly leaves will require detailed analysis. We recommend providing the Armenian Assembly with the following technical assistance:

- i. A housing specialist, a financial analyst, and a local bilingual counterpart with experience in the Soviet construction sector to assist GOA and the Armenian Assembly in their analysis of a number of options for the future of the complex including privatization.

This study should involve a major sectoral review of the housing sector, a financial and operational appraisal of the complex and provide preliminary privatization options, taking into account the specific needs of the earthquake zone, the need for competition and reform of the overall sector. The housing specialist could also serve as an advisor to the Committee on Housing and Construction Reform of the Council of Ministers.

- ii. A housing finance specialist to study the options for financing housing in Armenia and to provide recommendations for mechanisms that would provide additional options for private housing finance.

There is currently no long-term mortgage financing available in Armenia, and loans have a maximum term of one year. The only financing options for most prospective home buyers are family loans or personal savings, which makes the purchase of homes or apartments out of reach for most Armenians.

- iii. A training specialist with experience in small business training to provide supplementary training for building cooperatives.

This specialist, who would ideally speak Russian or Armenian, would provide the supplementary business training that would assist individuals receiving training in earthquake proof housing construction in forming their own cooperative.

1. *Recommendations for the Solar and Wind Renewable Energy and Conservation Project*

- a. Promote the production of solar and wind energy devices and energy conservation retrofits by private local industry, as required by the Solar and Wind Renewable Energy and Conservation Project, to the extent possible.

As part of this project, research is currently underway to identify local production facilities capable of producing inputs for the solar and wind energy devices and energy conservation retrofits. We recommend that the inclusion of private cooperatives/businesses be emphasized and promoted, to the extent possible.

- b. Carry out a feasibility study for establishing self-financing entity or a joint venture between YPI and a private firm to provide training and consulting services.

This study would include:

- o Analysis of demand for training and consulting services in alternative energy techniques based on the ability to pay for the economic value for these services in the Commonwealth
- o Identification and evaluation of current sources of energy-related expertise
- o Evaluation of equipment needs, local and non-local
- o Development of a strategy for procurement of non-local inputs
- o Identification of potential partners and recommendation of an appropriate business form.
- o Consideration of a special policy for Armenian trainees.
- o A business plan.

D. Recommendations for A.I.D.

PW/IPG recommends the following priority technical assistance be considered by A.I.D. to support the privatization of PVO activities and the overall privatization process in Armenia.

1. *Orthotic and Prosthetic Clinics*

- a. Provide a privatization specialist, a financial analyst with experience in privatization, and a local lawyer to assist Project Hope Orthotics Clinic and World Rehabilitation Center staff in preparing a feasibility study for the privatization of the clinic and a privatization/business plan, as required.
- b. Provide the technical assistance of the Orthotics Specialist to serve as advisor to the clinic in the implementation of privatization and for two weeks twice a year for post-privatization follow-up as needed.

2. *Rehabilitation*

Consider providing additional funds for the training of physical and occupational therapists as there is an urgent need for therapists to support PVO projects and in general in Armenia. Currently most of the therapists trained by the PVOs are focussing on children as they do not currently have the resources to expand to the adult population. This funding should be contingent upon the institutionalization of this training. Western methods of rehabilitation are still not fully accepted in Armenia and therefore the GOA is unlikely to make this a priority on its own. Moreover, these specialists would continue to promote these concepts, which as they gain acceptance would open up possibilities for future privatization in this field.

3. *All Health Care PVOs*

Provide technical assistance to Project Hope, WRF, and other PVOs as needed to identify local sources of supplies and/or develop mechanisms for the generation of foreign exchange. This would include a specialist in research on Soviet industrial capability and assisting U.S. firms in doing business in the former Soviet Union, a specialist in the medical supply industry who carries the specific product lines, and a bilingual

counterpart experienced in conducting business in the former Soviet Union.

4. *Housing and Construction*

- a. Provide technical assistance to the Armenian Assembly to prepare a feasibility study for future options for the complex once the Assembly leaves Armenia, including the privatization of the manufacturing complex. This study would require the services of a housing specialist, a financial analyst, and a local bilingual counterpart who has experience in the Soviet construction sector.
- b. Provide a program for small business training, which includes how to set up and operate a business, to complement the training that will be provided in earthquake-proof housing construction under the Assembly contract. This training should be given in Armenian or Russian.

5. *Solar and Wind Renewable Energy and Conservation Project*

- a. Due to the success of the wind energy components in generating joint ventures for the production of wind turbines, funding for the project development in mini-hydro plant proposal currently under preparation by YPI, would make a significant impact on the energy situation in Armenia and has a high probability of leading to joint ventures that will promote local production of these plants.

6. *Overall GOA Privatization Program*

- a. Provide a long-term advisor to serve as a senior level privatization advisor to the Commission on Economic Reform Commission and to support the privatization of PVO activities. The government of Armenia has a significant amount of political will to privatize but would benefit from expanding its experience and technical expertise. This advisor could assist the Committee in establishing the institutional framework for privatization, formulation of privatization policy, establishing privatization procedures that ensure transparency and effectiveness of the process, selecting and prioritizing the companies for privatization, monitoring the process and defining additional technical assistance and training needs. This advisor could also promote the privatization of the PVO projects with government

officials as appropriate. The long-term advisor should have privatization experience and both macro as well as a micro-economic financial background in order to be able to deal with both aspects of privatization.

- b. Provide technical assistance to the Committee on Construction and Housing Reform of the Council of Ministers for the preparation of a privatization plan for the construction and housing sectors. The Vice-Chairman of the Committee on Economic Reform expressed the urgent need for this technical assistance to the IPG team during their visit to Armenia in November 1991. This would be high impact technical assistance as it supports one of the GOA's key policies. A housing specialist, a housing finance specialist, a construction industry specialist, and a local bilingual counterpart with experience in the Armenian construction and housing industry would be required.

APPENDIX A

ARTICLE I TITLE

Armenian Humanitarian Assistance (155-0001)

ARTICLE II OBJECTIVE/BACKGROUND

A. BACKGROUND

Following a severe earthquake in Armenia in 1989 in which thousands were killed and left homeless, A.I.D. channeled nearly \$7 million in disaster relief to Armenia through its Office of U.S. Foreign Disaster Assistance. Subsequently, funds were made available to A.I.D. to undertake a direct assistance program in Armenia resulting in a humanitarian assistance project which was initiated in September, 1990. Three grants to private voluntary organizations were awarded for a total of \$9.8 million dollars. The grants provide medical treatment and fund vocational and rehabilitation training of earthquake victims as well as training in earthquake proof construction methods.

A.I.D. is providing assistance through the Project Hope Consortium (Project Hope, Armenian Assembly, American Red Cross and American Jewish Joint Distribution Committee); Armenian General Benevolent Union/Armenian Relief Society (AGBU/ARS) and World Rehabilitation Fund. The notion of "private sector" is new to Armenia. Therefore, although the assistance being provided is currently coordinated through the Government of Armenia (GOA), A.I.D. would like to see all activities converted to private sector functions by the end of the Grant period (September 30, 1993). The Grants also encourage the privatization of other health sector activities in which the grantees are working. The GOA Ministry of Health has, in response, begun to initiate privatization of selected health activities, but privatization efforts of the U.S. PVO's has proven to be more difficult. Assistance to the GOA and the U.S. PVO's in those efforts is now required.

B. OBJECTIVE

The objective of this Delivery Order is to provide a short-term privatization advisor who will assist the Project Grantees (listed above) in preparing plans to privatize their respective activities in Armenia.

ARTICLE III SCOPE OF WORK

Provision of one (1) short term advisor with experience in macro-economics and /or economic restructuring and working in an overseas environment is needed to provide the technical assistance required for this effort. Experience in health administration and in advising foreign governments or U.S. firms in foreign operations is desirable. The advisor will work collaboratively with the U.S. PVO groups and the GOA. To the extent possible, the advisor will also work with non-governmental organizations or individuals which comprise the emerging private sector.

For those activities where privatization is possible, the advisor will develop guidance to the GOA and to each PVO on the steps involved to undertake and sustain the privatization; for those activities where privatization is not possible at all (or within the established activity time frame) the advisor will identify the constraints and possible solutions. The advisor will also make a recommendation as to whether or not a longer term privatization advisor is needed and, if that advisor is needed, provide a general scope of work for that individual.

Activities to be reviewed include the following:

Project Hope Consortium: prothetics laboratory, provision of rehabilitation services;

AGBU/ARS: provision of alternative energy (solar wind); provision of health care; plastic and reconstructive surgery training.

TIME FRAME: Prior to his/her departure for Armenia, the advisor will meet with the representatives of Project Hope, World Rehabilitation Fund and the AGBU/ARS to lay the ground work for the trip. The advisor is requested to begin work no later than September 30, 1991 and to arrive in Yerevan, Armenia no later than October 15, 1991 for a period of up to three weeks. Upon returning to the U.S., and in consultation with the PVO's, the Contractor will identify one or two activities/projects easiest to privatize within the life of the project (9/30/93). Upon his/her return to the U.S., it will be adviseable for the consultant to meet with representatives of all the PVOs involved to answer last minute questions and provide initial findings. The estimated completion date for this Delivery Order is December 15, 1991.

REPORTS: The advisor will be required to submit a report of no more than thirty-five (35) pages in length within three (3) weeks after return from Armenia. The report shall contain, at a minimum, the advisor's findings, recommendations including the advisability of continued longer term privatization assistance, and conclusions. Concurrently, and within five (5) weeks after returning from Armenia; the advisor will, in consultation with the PVO's and the Project Officer, draft a privatization plan for those one or two activities identified which can be implemented during the remaining life of the activity/project. This plan will be used as a model for the remaining project activities. These reports shall be submitted to the Project Officer listed in Block 5 of the Delivery Order.

MISCELLANEOUS: The advisor's "host sponsor" will be Project Hope which will be responsible for making hotel reservations in Armenia, providing local transportation where possible and, arranging meeting with appropriate Ministry of Health and other government officials. The advisor is requested to provide his/her own lap-top or other appropriate computer as such facilities will be unavailable in Armenia. Secretarial services will not be provided by the PVOs in Armenia or the U.S..

SPECIAL REQUIREMENTS: The advisor shall have Russian or Armenian language capability and previous experience in the USSR. In addition, the advisor shall have previous privatization experience in the social services sector.

ARTICLE IV TECHNICAL DIRECTIONS

Technical directions during the performance of this Delivery Order will be provided by ENE/EUR, Elisabeth Kvitashvili, Telephone No.: (202) 647-6362.

ARTICLE V TERM OF PERFORMANCE

- A. The effective date of this delivery order is the date of the Contracting Officer signature and the estimated completion date is December 15, 1991.
- B. Subject to the prior written approval of the Project Manager (see block no. 5 on the cover page), Contractor is authorized to extend the estimated completion date, provided that such extension does not cause the elapsed time for completion of the work, including furnishing of all deliverables, to extend beyond 30 calendar days from the original estimated completion date. The Contractor shall attach a copy of the Project Manager's approval for any extension of the term of this delivery order to the final voucher submitted for the payment.

APPENDIX B

Agency for International Development
Washington, D.C. 20523

HUMANITARIAN ASSISTANCE FOR ARMENIAN EARTHQUAKE VICTIMS
Project No. 155-0001

Three cooperative agreements were awarded on September 26, 1991 under Project No. 155-0001 to provide humanitarian relief, medical treatment, education, and vocational training for victims of the Armenian Earthquake of December 7, 1988.

I. **PROJECT HOPE/ARMENIA CONSORTIUM** (American Jewish Joint Distribution Committee, The American Red Cross, and the Armenian Assembly)

Project Hope

- * Train health workers from various disciplines to provide pediatric rehabilitation treatment and services for both in-patients and out-patients, in hospitals as well as in community-based settings.
- * Provide pediatric rehabilitation treatment and services.
- * Develop a multi-disciplinary rehabilitation system which incorporates "state-of-practices" techniques.

American Red Cross/League of Red Cross/Red Crescent Societies

- * Train medical staff in Armenia to deal with the special needs and care of Spinal Cord Injury (SCI) persons.
- * Provide community-based SCI care both in homes and in out-patient clinics.
- * Train Armenian psycho-social professionals by building awareness of psycho-social care of SCI persons.
- * Attempt to increase Armenian caregivers' awareness of the needs and capabilities of SCI persons.
- * Attempt to improve community integration of disabled Armenian persons.
- * Reduce physical barriers and attempt to enhance the quality of life for handicapped Armenians. Provide a supply of adaptive equipment for the disabled.
- * Develop computerized system to track SCI persons.

Armenian Assembly of America Relief Fund, Inc.

- * Design and implement training programs to develop local expertise in the construction of earthquake resistant structures based upon Western-style building and management principles in the areas most severely damaged by the earthquake.
- * Expand existing Western-style housing manufacturing complex in Armenia that will serve as a manufacturing training center and produce materials for the construction of residential units and other public structures, adaptable for handicapped access.

Jewish Joint Distribution Committee (JDC)

- * Build the JDC Children's Rehabilitation Center in Kumairi which will provide out-patient physical and occupational therapy to Armenian children disabled as a result of the earthquake.
- * Develop and implement a treatment program to provide Armenian children with immediate physical and occupational therapy while development of the Center is underway.
- * Develop and implement a training program to provide on-the-job practical and theoretical training for 15 Armenian health workers to become physical and occupational therapists. Selected graduates will staff the JDC Center.

II. WORLD REHABILITATION FUND, INC.

- * Develop a training component at the World Rehabilitation Fund Center in Yerevan for eight prosthetic/orthotist technicians in fabrication of upper extremity limbs and braces; and continue to upgrade existing skills in lower limbs and braces.
- * Provide a physical therapist supplemented by volunteer physical therapists.
- * Identify and select an Armenian M.D. for a three month U.S. orientation program in rehabilitation medicine.
- * Provide needed supplies and equipment for 1500 patient visits in the first year, including 300 disabled people who require new, refitted or repairs of artificial limbs and braces.
- * Recruit Armenian/Russian speaking physicians to conduct one month orientation programs in rehabilitation medicine for Armenian physicians.

III. ARMENIAN GENERAL BENEVOLENT UNION (AGBU)/ARMENIAN RELIEF SOCIETY OF NORTH AMERICA (ARS)

- * Develop a Plastic and Reconstructive Surgery Center at Mikaelyan Institute in Yerevan, Armenia. Train necessary staff at Yale University Hospital.
- * Develop and implement Leninakan Nurse-Physician Exchange and Training program.
- * Develop a mental health and psychological outreach program.
- * Develop a multi-level health support and training program.
- * Develop and implement a solar and wind energy program for the disaster zone.

Drafted: AID/ENE/EUR: SAlexander: 3/8/51

APPENDIX C

List of Persons Interviewed/Contacted

PVO's-US

Pat Dvonch, Coordinator, Armenian Project, World Rehabilitation Fund, New York

James Garret, Jr., Administrator, World Rehabilitation Fund

Dr. Warren E. Grupe, Vice President, Division of Medical and Health Sciences Education, Project Hope

Thomas Kirby, Program Manager, Armenian Consortium, Project Hope

Robert Krikorian, former PVO worker in the earthquake zone

Dr. Lawrence, World Rehabilitation Fund, Rehabilitation Specialist, Rush Institute, New York University

Christopher J. Mehley, Project Manager, International Services, American Red Cross

Regina Ohanyan, Project Director, Armenian Benevolent Union (AGBU)

John Pasly, AID/Armenian Project Manager, Armenian Assembly

Laura Petrosian, Desk Officer for the USSR, Project Hope

Dr. Lewis Pierce, D.D.S., Director, International Management Division, Project Hope

Howard Rusk, President, World Rehabilitation Fund, New York

Louise Simone, President, Armenian General Benevolent Union (AGBU)

Kenell J. Touryan, Project Manager, Solar and Wind Renewable Energy Project

PVOs-Armenia

Dr. Raffi Bayat, Doctor, Project Hope Rehabilitation Center (also met with nursing staff)

Linda Bedeian, Office Director, Armenian Assembly

Francis De la Roche, Head of Delegation in Armenia, League of Red Cross and Red Crescent Societies

Matthew der Manuelian, Team leader, Project Hope

Garen M. Galustian, Vice Rector for Research, Yerevan Polytechnic Institute

Stella Grigorian, JDC, Gumri

Yuriy Hairapetian, Deputy Vice-Rector for Research of Yerevan Polytechnic Institute
(Solar/wind project)

Brian Kamajian, Office Director, American University of Armenia (AGBU)

Local Staff, Project Hope's Orthotic's Clinic, Yerevan

Dr. Lutz, Prosthetist, German Red Cross Prosthetics Clinic

Yusuf Mian, Manufacturing Superintendent, Armenian Assembly Housing Project,
Gyumri

Gagik Monougian, Doctor, ARS Psychology Clinic

Ray Marvin, Orthotist, Project Hope

Sabina Quarder, Therapist, International Red Cross Spinal Cord Facility

Aram Saghrian, Representative, Lebanon-Armenian Committee (Co-sponsor of the WRF
center)

Dr. Armen Sarkisian, WRF Director, Yerevan.

Dr. Rudi Van Mechelen, Medical Team Leader, International Red Cross Spinal
Rehabilitation Clinic

US and Foreign Businessmen in Armenia

Roger Doxey, Huntsman Chemical

Michael Minasian, Garfield Financial Corporation (and director of US-Armenian joint
venture "Goldex")

Vartan Ozinian, Director General, GAMMA Institute, Paris

Steve Lazarian, President, Electric Service and Supply Company, Pasadena, California
(Solar/Wind Energy Project)

Business community-Armenia

Levon A. Arakelian, Director, BiocorARM (Medical Diagnostic Cooperative), and BiocorARM staff

Olga Dzuharian, Professor of Ecology, Armenia Academy of Sciences (Is trying to start up a program in Spitak for rehabilitation of children)

Gran R. Poghossian, Professor, Business College of the Haigazian University Graduate School of Management, Yerevan

Hermione Nakhdalian, Director, Union of Cooperatives, Yerevan

Yuriy Popov, Director, Yerevan Experimental Production Prosthetic-Orthotic Enterprise (his building houses the WRF center)

GOA

Gagik Bleian, Deputy Minister for Social Welfare and Labor, Republic of Armenia

Mr. Demerchian, Deputy Minister of Health, Republic of Armenia

Rouben Derian, Deputy Minister for Construction, Republic of Armenia

Mihran K. Nazaretian, Minister of Health, Republic of Armenia

Tigran Sarkisian, Chairman of the Parliamentary Commission for Finance and Budget, Republic of Armenia

Armen Yeghiazarian, Vice Chairman of the Commission for Economic Reform of the Council of Ministers of Armenia

Banking and Insurance Institutions-Armenia

Vanya V. Atyan, President, Bank "Yerevan"

Grigor Konjeyan, Director, MENUA Insurance Agency, Yerevan

Alexander Vartanev, Chairman, Promstroybank (Ardshinbank)

Armenian Medical Institute (Private medical university)

Levon Andriasyan, Director

Levon Asatryan, Director

Mouseg Astabatyán, Director

Gagik Mkhoyan, Director

Rouben Yegishyan, Director

USAID

Donna Frago, Project Manager, Armenian Project

Elizabeth Kvitashvili, Desk Officer, Armenia, Office of Soviet Affairs

Paul O'Farrell, Director, Office of Soviet Affairs

John Wiles, Program Development, Office of Soviet Affairs

Richard Sheppard, Program Officer, Armenia Project, Office of Soviet Affairs

APPENDIX D

DOCUMENTS REVIEWED

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Armenian Relief Society

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Project Number 3

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Project Number 4

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Cowan, L. Gray, Privatization in the Developing World, November 1989

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First Year Work Plan and Flow Chart

APPENDIX E

Resolution of the Supreme Soviet of the Republic of Armenia

50 On the Bases of Privatization in the Armenian Republic
 Bulletin of the Supreme Soviet of the Republic of Armenia,
 No. 3(983) Feb. 15, 1991.

1. Approved principles presented by Council of Ministers
2. Ordered preparation of draft of law on privatization by the Committee for Economic Self-Sufficiency and Economic Development of Council of Ministers, to be presented within 30 days.

I. Bases and Goals of Privatization in the Republic of Armenia

Privatization is the transfer of the republic's property to the citizens, individually or in groups, by sale, exchange, or free transfer.

The goals are

- (a) the expansion of freedom of citizens and free enterprise
- (b) awakening of the creative power of the masses
- (c) formation of market economy
- (d) increase productivity

II. Principles of Privatization

1. Privatization will take place gradually, in stages.
2. Privatization forms the infrastructure for market relations
3. Privatization will be undertaken in different economic spheres: agriculture, services, construction, light industry, manufacturing, public institutions
4. Armenian citizens will be given preference in privatization
5. In the privatization process equal rights are guaranteed to all Armenian citizens by the Armenian Republic
6. Privatization will take place parallel to the creation of a new social order
7. Based on the kinds of entities and the needs of the country, privatization will take place
 - by sale for lump sums or in installments
 - by stock
 - free transfer
 - leasing
8. Privatization will take place consistent with the environmental and cultural values of the country.

III. Course of Privatization

1. A list of entities will be prepared
2. Large enterprises will be down-sized
3. Specialists will assess the value of each enterprise based on the market
4. The privatization process is conditioned upon the adopted of an appropriate legal framework: laws on antitrust, banking, corporations, labor, social security, stock, investment, insurance, stock exchanges, as well as administrative regulations.
5. Given the exceptional nature of the process, the government will have the authority to exercise regulatory control for the general welfare.

6. The Council of Ministers will establish the schedule for privatization as well as the selection of enterprises to be privatized. At least a month must elapse between the announcement of the privatization schedule and its execution.
7. The first stage of privatization is land, agricultural equipment, services, trade, construction, transportation, processing of agricultural products, technical instruments.
8. The second stage is the privatization of industrial property, processing of raw materials, completion of the privatization of trade and services, privatization of industrial and public infrastructure.
9. Privatization will be overseen by the State Committee for Privatization under the Council of Ministers.

IV. Owners

1. The citizens, groups of citizens, and legal persons under the Republic of Armenia.
Citizens of other countries, foreign entities
2. Among citizens of Armenia, special permits will be issued to collectives. Current tenants will be given preference in the privatization of housing.

V. Objects of Privatization

VI. Forms of Privatization

1. Small entities will be privatized by sale to individuals or groups for cash or check, with the approval of the Council of Ministers
The purchaser may be a private enterprise or organization.
2. Collectives will be given the option of leasing small enterprises where they work in a lease-purchase arrangement.
3. Large enterprises will issue stock and bonds. The stock and bonds will be negotiable.

VII. Sources of Funds for Purchasing Privatized Property

1. Funds may come from individuals or groups and may be raised through stock offerings or other instruments.
2. The state will issue shares for individuals or small groups without means to purchase an entire enterprise.

VIII. Use of Funds Raised by Privatization

1. Funds raised through privatization of state property shall be used for
 - development of public institutions and the market economy
 - assistance for industrial development
 - creation of infrastructure for market economy
 - if funds are available, stabilization of the finances of the country
2. The allocation of funds will be proposed by the Council of Ministers for approval by the Supreme Soviet

IX. Privatization of Agriculture

See law on land.

X. Small Enterprises

1. Shall be sold either by assessment and contract or by auction

2. Private owners shall procure necessary materials in the market, outside the state supply system.
- XI. Large State Enterprises
1. Shall be acquired by shareholders, corporations, citizens, or workers' collectives.
 2. Shares may be issued on margin or on installment for workers, retirees, and management.
 3. Especially important enterprises shall be dealt with individually by the Council of Ministers

Resolutions of the Council of Ministers of Armenia

No. 60 - On the privatization of small enterprises engaged in trade, food services, other services. (March 5, 1991)

1. Assessment of property
2. Auctions
3. Partnership Law - formation and registration procedures

No. 162 Stock-holding and Limited Liability Companies
(March 5, 1991)

No. 555 - Stock and Commodity Exchanges (Sept. 12, 1991)

also issued in spring 1991, banking law and tax law.

APPENDIX F

SELECTED PRIVATIZATION TECHNIQUES

There are a variety of privatization techniques that can assist a government in meeting the objectives of its privatization program. These techniques fall into three broad categories: the outright sale of assets or shares, leasing or contract management. The choice of privatization techniques is generally a function of the government's priorities, the state-owned enterprise (SOE) conditions and sector of activity, and the country's economic and political environments.

A. Cash Sale/Direct Purchase

The most straightforward and attractive method of divestiture is the all-cash sale. After following the prescribed methods for publicly announcing the sale and soliciting bids, this mechanism reduces decisions to evaluating and choosing the highest price. Once sold, the responsibilities of the government are concluded. The cash sale, or direct purchase of an enterprise, is also more complex than selling an asset because there are a number of contracts that must be negotiated between the buyer and seller. The issues involve asset disposal, the treatment of trade and other liabilities, as well as pension and employee obligations and rights. There will also be contingent liabilities which may or may not be known and disclosed as part of the investor's evaluation process.

Assets and liabilities of the enterprise can be transferred from one party to another. Sale or purchase of select assets and liabilities transfers the economic essence of an enterprise into a new legal ownership structure leaving the original ownership shares and residual assets and liabilities in the hands of the original owners.

B. Common Stock Offering

A sale or purchase can occur with respect to the ownership shares of a given enterprise. In the case of ownership shares or stock, the new shareholders accept the business as a going concern with all its assets, liabilities, employees and legal framework. Shares of SOE common stocks can be sold to investors or the workers directly or through the stock market. Because there is currently no stock market in Armenia, direct sale of stock to investors would be the relevant method. Employee Stock Ownership Plans (ESOPs) are popular in many countries, and can be effective in providing efficiency incentives to the workers. Shares can be distributed free to the workers, or sold at a discount and/or with financing assistance. Management can also buy out the SOE with the workers' participation.

Employee ownership can be a good indication of commitment to the betterment of the SOE after privatization and, after privatization, provide an incentive for higher productivity as profits are shared among the owners at the end of the year. ESOPs are generally made accessible to both management and workers. Issues such as the pricing of shares and percentage allocations require enterprise analysis and valuation using a wide variety of measures.

To finance share acquisition, the privatization fund and/or a private bank can provide loans to workers and others without adequate funds in the initial stages of the program. Loan repayments can be made over time with deductions from monthly salaries, as is the practice under the social security system. At the end of the year, a predetermined portion of the dividend could also be used to amortize the loan.

C. Management Contracts and Leasing

Two privatization techniques which allow the transfer of enterprise management without ownership transfer are management contracts and leasing. These privatization options allow the government to reap the benefits of improved efficiency associated with private management when ownership transfer is not desired or when sale is not possible under existing conditions. For management contracts, the government pays the contractor a fee for the management services. The contract may or may not stipulate a performance guarantee. For lease contracts, the lessor pays the government a royalty and takes all proceeds of the operation.

D. Build-Operate-Transfer (BOT)

To develop new infrastructure or expand existing facilities, BOT can be an innovative approach to conducting and financing privatization. Groups of venture capital investors participate in the initial funding, construction, and running of the project for a number of years. At the end of the contracted period, the plants are transferred to the government. This method of financing provides speed and availability of funding which normally is not accessible to a country, particularly when its alternative is to deal with the international capital markets.

In return, investors receive a government guarantee for the full purchase of the product at an agreed price which includes a premium for assuming the initial risk on the project. Guarantees, insurance, liquidated damages and compensations are also provided and enforced during the execution stage to cover the investor's financial exposure due to delays, non-completion, and termination. At the end of the concession period, the property is typically transferred back to the government at no cost.

E. Equity Dilution

Privatization can also be accomplished without ownership transfer by issuing new common stock shares to private investors, thus diluting state ownership over time. This technique is most effective with SOEs which are profitable and can attract equity investors. Although this option would not be feasible at the present time in Armenia, it can be employed in the latter phases of the program as the financial sector develops.

F. Liquidation

This technique consists of sales of assets to private buyers. Since this method implies the termination of the enterprise's operations, it is generally applied to SOEs which are not socially sensitive.

G. Fragmentation

When it is necessary to streamline the enterprise but ownership of certain lines of business is desired, the fragmentation method can be employed. Unlike equity dilution or management contracting or leasing, full control of selected operations is retained by the government, while the others are sold to private investors. This option is most appropriate for SOEs engaged in diversified and unrelated lines of business.

APPENDIX G

SOURCES OF FINANCING FOR PRIVATIZATION

The government's technique of privatization must be chosen with full consideration of the possible sources of financing available for the privatization transaction. Experience in other countries has shown that the failure of privatization programs is often due to the inefficient management of financing in the privatization process. Inadequate financing limits the ability of the government to implement SOE restructuring programs in preparation for privatization, to prepare the redundant labor force for orderly relocation with appropriate training and compensation, to obtain expert services for the valuation of SOEs, and to obtain representation in the negotiation with buyers.

A. Traditional Sources of Financing

1. *International Assistance*

Coordination among development programs and international sources of assistance will allow for the most efficient usage of this type of funding. As privatization covers a wide spectrum of sectors, financing could be coordinated by incorporating a discrete budget for privatization itself. For example, privatization financing can be incorporated into foreign investment and export promotion programs since some SOEs have export potential and the privatization of most SOEs will require foreign investment participation. International assistance can also cover other important areas which touch privatization such as 1) assistance funding for the revision of the investment and commercial codes, 2) financial institution and financial market development, 3) SOE restructuring, 4) feasibility studies for new private investment opportunities, 5) training in privatization specifically and in management development in general, and 6) initial venture capital participation in BOT financing of infrastructure development projects.

2. *International Investors*

Armenia is fortunate to enjoy the support of a large emigrant community. Many of these emigrants contributed to the post-earthquake relief efforts and have invested or are now interested in exploring investment opportunities in Armenia despite the significant challenges posed by the investment environment. The effective mobilization of the investment interest of this group can provide an important source of financing for the privatization program. Various incentive schemes can be created to encourage investment, including attractive rates on time deposits and foreign exchange deposit options in local banks.

B. Innovative Sources of Financing

1. *Privatization Fund*

The creation of a privatization fund would help budget financing requirements and secure sources of funding needed to achieve the objectives set by the GOA. The creation of a

privatization fund would force the privatization committee to plan systematically for various privatization activities and be accountable for financing implementation. Finally, any deviations from the budget should be explained and appropriate adjustments made.

The initial funding of the privatization fund could come from the donor community and the GOA. Proceeds from the privatized SOEs would then replenish the fund and be used to finance further privatization activities. As Armenia's financial sector at this time is extremely limited, the privatization fund could be created to include an investment division which would handle the distribution and placement of securities, such as stocks and bonds, for privatization. Such an investment division could very well spin-off into a full scale private investment holding company and a government supervisory agency to oversee the newly privatized firms. Over time, such a government agency could evolve into an institution similar to a securities and exchange commission when the capital market in Armenia requires such regulation.

Another option that may be served by the privatization fund is the creation of a mutual fund of securities for several privatized SOEs to provide a diversified risk portfolio option to risk averse investors who do not know very much about investment or who do not have the time to follow their holdings all the time.

2. *Innovative Financial Instruments*

a. Working Capital Financial Instruments

Short-term financing instruments need to be introduced to supplement bank loans to enhance the likelihood of successful post privatization periods. Commercial paper is one possibility which has been used successfully in several countries. One example is the Muqarda Bond used in Pakistan.

b. Capital Market Instruments

Beside common stocks, convertible securities such as convertible preferred stocks and convertible bonds can be attractive investment instruments for investors. The convertibility feature of convertible securities, which have fixed income payment features like time deposits, can be a good transition tool to develop the culture of investing in securities. The attractiveness to investors is that they have the option of converting these instruments into common stock if the privatized enterprise proves profitable while minimizing their exposure to loss.

As mentioned earlier, SOE shares can also be grouped together in a large diversified portfolio and distributed as mutual fund shares. Mutual funds are professionally managed to diversify risk while assuring a marginal real return. This option can be very attractive to emigrant investors who are already familiar with this investment instrument. Mutual fund shares can also attract institutional investors, as demonstrated by the successful experiences of the Mexico Fund and the Thai Fund among the emerging market funds.