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Assessment of Disaster Relief Activities/Needs in Armenia in the wake of the December, 1988, earthquake. This report provides information on the post-earthquake situation on the ground in Armenia and on the work being carried out there by local and US PVOs/NGOs. Needs in Education, Housing and Health were assessed.

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NEEDS ASSESSMENT FOR DISASTER
RELIEF ACTIVITIES IN ARMENIA

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EXECUTIVE SUMMARY

A. Purpose, Scope and Procedure

The purpose of this report is to provide A.I.D. with additional information about the post earthquake situation on the ground in Armenia and the work being carried out by local and US PVOs and NGOs. The three main objectives of the assessment undertaken in Armenia were:

- o To assess the effectiveness of the current US PVO/NGO's currently working in Armenia with earthquake victims;
- o To determine priorities for assistance in medical relief, education, vocational training, and housing in the earthquake area; and
- o To determine the most effective means to manage and coordinate PVO/NGO activities on the ground during the next two years.

A detailed scope of work is included in Annex 1.

A team of three specialists, one in education, one in housing and one in medicine carried out the assessment. In Washington, the team planned their assessment activities together, visited with A.I.D. and US State Department personnel, and met with representatives of US PVO/NGOs currently working in Armenia. In the USSR, the team met with American officials in Moscow and with Soviet officials, PVO/NGOs and many private citizens in Armenia. The team traveled to and observed the earthquake area and discussed all aspects of its assessment with a wide variety of people in Armenia.

B. Conclusions

1. General

- o The Armenian Assembly of America is the most effective American PVO working in Armenia at this time. The reasons for this are several:
 - It has the largest number of professional staff in Armenia working in a coordinating capacity in its own offices.
 - It can coordinate the efforts of other PVOs and NGOs in Armenia. All of the PVOs and NGOs contacted had already collaborated with the Armenian Assembly or had used some of their services.
 - It has the largest U.S. project in Armenia at present (in the area of housing).

- It provides coordination and communication capabilities for the other PVOs, especially the smaller ones who do not have their own logistical capabilities.
- It includes representatives of many Armenian groups.
- o Both the Armenian General Benevolent Union and the Armenian Relief Society have been active in relief work and educational activities since the beginning of the century in the United States and in Armenia. However, at present, neither PVO has offices and staff in place in Armenia. Most of AGBU's activities (most of which are at the planning stage) are coordinated and facilitated by the Armenian Church, mainly the Bishop of Yerevan, his office and the group of volunteers associated with his office. ARS has one professional working on one of its projects (construction work) intermittently. The health related projects of the ARS are being coordinated by a senior professional at the Health Ministry in Armenia.
- o With the exception of Project Hope which is well-organized to carry out health activities already in place, the other PVOs in Armenia are either too limited in scope or too small or too international to be able to act as a "lead" American PVO.
- o The PVOs working in Armenia tend to be relief oriented and have little experience in the implementation of development projects which require longer term involvement, particular project management skills and systems, etc.
- o Foreign PVOs operating in Armenia are generally effective in meeting many earthquake-related needs. They have been instrumental in providing immediate earthquake related relief and some of the training, technology transfer and new equipment requirements of Armenia. Because many foreign PVOs are working in Armenia, coordination of their activities is essential to ensure efficient use of the resources made available to and through them by U.S.A.I.D.
- o There is not much detailed information available from the Armenia offices and representatives of the PVOs about their planned programs in Armenia for the next two years. Therefore, the Technical Team could not provide U.S.A.I.D. with accurate statistics about the number of personnel needed or the funds needed to realize some of these planned programs.
- o A general constraint under which all PVOs operate is the lack of an adequate communication network with each other, with the different Ministries and with other foreign PVOs.

This results sometimes in unnecessary duplication of efforts or loss of precious time;

- o It is important that PVO programs leave something tangible that will enable the people of Armenia to continue the reconstruction work and the development process after the PVO leaves Armenia;
- o The severe short-term crisis caused by the earthquake in Armenia is past. Whatever could be done in the immediate aftermath of the earthquake has already been done. However, the devastation and impact of the earthquake will cause serious problems in Armenia for many years. It is these longer lasting problems stemming from the earthquake that now deserve the attention of those seeking to assist Armenia;
- o One longer-term problem is to enhance Armenian capability to deal effectively with all the detrimental impacts of the earthquake. In the process of rebuilding its productive resources as well as its housing, social and recreational infrastructure, Armenia has an opportunity to update its manufacturing technology, better protect its buildings from earthquake, upgrade its medical facilities and improve its educational system. Armenia also needs to deal with the earthquake's toll on its human resources through strengthening sanitary and related systems, training additional specialists of all kinds, providing counseling services and otherwise absorbing those injured in the earthquake. Achieving improvements on all these fronts will require advanced training and equipment in many specialty areas such as seismic safety technology, health care, agriculture, manufacturing techniques and so forth;
- o A related longer-term issue is Armenia's new exposure to outside influences, both because of the influx of PVOs and other outside assistance for earthquake relief and because of the USSR's increasing openness to international markets and interchange. Armenians will need assistance in dealing effectively with these new forces. They must learn and implement new principles of management, marketing, technology, information systems, education and medical practice. Some of the skills and experiences needed are not available from sources in the Soviet Union;
- o An opportunity for US assistance resides in the desire of many Armenians to obtain and apply American information, training and technology to its economic and social rebuilding process;
- o Armenia, at the official level, at every local level and via local and foreign PVOs, readily voices earthquake related

needs that US funding can help meet. A widespread local community aspiration is to be given access to American technology and training in virtually every substantive area. Foreign PVOs want direct financial support for their programs in education, health, agriculture and other areas;

2. Education

- o The educational system is back in operation in the earthquake area although all educational structures are temporary ones barely adequate to hold classes on a regular basis. The refugee population places pressure for increased classroom space and resources on the educational system and will do so during the next several years;
- o Qualified teachers at all levels will be required to make the best use of the planned advanced technology to be introduced in the new schools. All educational institutions need general and specialized equipment, laboratories, and books;
- o New curricula are needed for Armenia's schools and institutes of higher education with modern educational orientations. Training in new and high technology areas is also needed (e.g., seismic safety technology). New job creation programs will require in-service, vocational and continuing education programs;
- o Earthquake relief and preparedness efforts have created new areas of training which are not available at present in Armenia or the Soviet Union, e.g., physiotherapy, occupational therapy, plastic surgery, etc.;
- o Coordination of the many new educational programs resulting from the involvement of foreign countries and PVOs in Armenia since the earthquake is important to avoid duplication and to ensure long-term accreditation and development efforts in education;
- o Present PVO capabilities and channels can be used as well as Ministry of Education services extended to these PVO's to invest in the training of specialists who in turn will be able to train the middle level professionals needed to cope with the effects of the earthquake;
- o Immersion education programs in English are important to facilitate the technical training programs and the introduction of new technologies and equipment.

3. Housing

- o The emergency relief phase of the earthquake disaster is over. Further involvement in temporary construction or isolated imported structures is not appropriate. Consideration must now be directed to inputs which will address the improvement of overall efficiency and quality enhancement in the permanent reconstruction effort and reduce vulnerability to future earthquakes;
- o At present, one of the most pressing priorities is to provide permanent housing in the earthquake area to deal with the needs of earthquake victims, the long-standing housing deficit and the needs of a new refugee population.
- o The massive failure of new construction in the earthquake region has led to serious reconsideration of fundamental practices in siting, design and construction in Armenia. This reappraisal of the building process has contributed to the slowdown of the reconstruction effort.
- o Organizations operating in Armenia must recognize the unique conditions which pertain in the Soviet Union. There is no local NGO sector. At this time it is still imperative that any program initiated in Soviet Armenia must have the full acknowledgement and support of the Government and its appropriate sectoral agencies;
- o Soviet Armenia has suffered from social, economic, and technical isolation over the past 70 years. Particularly evident is the lack of local familiarity with the international state of the art in seismology, earthquake engineering, construction management, construction quality control, and manufactured housing. There is a very strong desire on the part of all professionals in all technical disciplines to obtain access to, and understanding of, U.S. technology and methods in the above mentioned field;
- o There is a strong interest in using U.S. government funds to provide access to uniquely American resources, i.e., technology, equipment, and educational practices which cannot be obtained elsewhere. U.S. training for design, construction, technical and field personnel is desired and needed;
- o The highest priority of all local officials and most Ministry officials is placed on long-term economic development. Unemployment is currently the most serious handicap facing the earthquake area. Reconstruction of industry and the employment base is critical to the

continued recovery of the area. Potential generation of foreign exchange is also given very high priority;

- o The reported contributions of foreign assistance organizations do not always correlate with experience on the ground. A great deal of "assistance" has, in fact, been spent on expensive and unnecessary air transport costs for construction materials.
- o In spite of the rhetoric of economic planning and the centralized structure of Government, there does not appear to be any effective strategic planning for long-term economic development in Soviet Armenia. Most investment priorities have been developed in isolation and reflect limited regional or organizational interests.
- o The most expeditious way for a foreign organization to work on construction in Armenia is the "self-contained" format where all material and manpower is provided from external sources.

4. Health

- o The current needs for health services in the earthquake devastated areas are massive. These needs have to be addressed from both a morbidity and a health services perspective. The programs to be implemented need to go beyond the delivery of services for the physically and psychologically handicapped. These latter represent only the tip of the iceberg of problems faced by the health sector in the earthquake devastated areas;
- o Within the framework of proposed U.S. funding, it is difficult to project that any major changes in the health delivery system could be achieved. However, programs that focus on training to improve health care systems will gradually introduce needed changes in the system.
- o There is a need to develop a solid database for appropriate decision-making at all levels of the health care infrastructure;
- o The disruption of health services in the earthquake region has markedly affected the ability of the Government to respond to the health care needs of the disaster affected population.
- o Few steps have been taken since the earthquake to improve disaster preparedness. The development of local capability to cope with disasters is imperative.

C. Recommendations

1. General

- o The Armenian Assembly of America should serve as the "lead" PVO in coordinating U.S.A.I.D.-supported projects in Armenia.

2. Education

- o Fund short-term (1 month to 2 years) training programs in Armenia and the United States in construction related areas;
- o Fund short-term (1 month to 2 years) training programs in Armenia and the United States in health related areas;
- o Fund the purchase of specialized equipment needed in the training programs related to construction and health;
- o Fund English language training programs to facilitate the instruction/learning/training/information management process.

3. Housing

- o Focus on the provision of technical training and education related to post-earthquake reconstruction.
- o Provide specialized educational and scientific equipment and instrumentation related to earthquake engineering and seismic hazard assessment to complement the proposed training.

4. Health

- o Improve the information and communication capability of the health services system, including the provision of equipment and training.
- o Establish training programs for disaster preparedness for the earthquake region including the procurement of appropriate emergency and rescue equipment.
- o Support a faculty development program for the School of Nursing in Leninakan.

Table A presents a schematic overview of the Assessment Team's priorities for technical assistance.

Table A: Assessment Teams's Priorities for U.S.A.I.D. Technical Assistance

| Activity | Health | Construction |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Training | <ul style="list-style-type: none"> o Faculty development in nursing o Disaster preparedness o Health information and management systems o English language instruction | <ul style="list-style-type: none"> o Seismic standard development o Construction management o Earthquake engineering o Housing production techniques |
| Procurement | <ul style="list-style-type: none"> o Computer and communication equipment o Emergency and rescue equipment | <ul style="list-style-type: none"> o Specialized equipment for technical schools related to new construction techniques o Seismic instrumentation |

I. INTRODUCTION

A. Background to Assessment

The earthquake in Armenia on December 7, 1988, left thousands homeless and suffering. The number of confirmed dead was 24,944 according to official Soviet estimates; the number of homeless was 514,000; 12,000 victims were hospitalized; 14,832 victims were extricated alive from debris; 113,921 were evacuated as of January 1, 1989. According to Soviet sources, the earthquake leveled over 50 cities and villages and damaged 100 other villages. The cities of Spitak, Leninakan, Stepanavan, and Kirovakan were among those most affected. Thousands of residences and hundreds of public buildings and stores were destroyed and damaged. Physical damage is estimated at 8.5 billion rubles (\$ 13.3 billion US dollars), mainly due to the destruction of housing and industrial enterprises. Extensive damage to agriculture included the loss of thousands of cattle and other farm animals as well as hundreds of barns. A great number of those evacuated have now returned to their homes in the areas most affected.

The earthquake, registering 6.9 on the Richter scale, hit the northern part of the Armenian Republic of the Soviet Union at 11:41 a.m. (local time) on December 7, 1988. The preliminary epicenter was 41.2° N latitude and 44.1° E longitude, near the Armenian-Georgian border. The quake, felt throughout the Caucasus, is reported to be the strongest in that region in more than 80 years.

The US Congress passed legislation on November 9, 1989 appropriating not less than US \$5 million to fund humanitarian and medical relief, education, and vocational training to benefit the earthquake victims. These funds are all to be channeled through US PVOs and NGOs which have been operating in Armenia.

The exact language found on page 26 of House Report No. 101-344 to accompany H.R. 2030 reads as follows:

"Amendment No. 67: Reported in technical disagreement. The managers on the part of the House will offer a motion to recede and concur in the amendment of the Senate which provides not less than \$5,000,000 for humanitarian relief, medical treatment, education and vocational training for victims of the Armenian earthquake of December 7, 1988. These funds will be channeled through private and voluntary organizations and non-governmental organizations from the United States."

The US \$5 million fund will be administered by the Egypt/East European Affairs Office (EE) of the Asia/Near East Europe Bureau of the United States Agency for International Development. Because of limited staff resources, however, the EE Office intends to award a grant or contract to a US PVO to manage and coordinate this activity in Armenia.

B. Purpose, Procedure, and Scope of Assessment Team's Mission

A.I.D. needed more information about the post-earthquake situation on the ground in Armenia and the work currently being carried out by local and US PVOs/NGOs in order to make decisions about the future management of US-funded activities in that region. A.I.D. contracted the services of Devres, Inc., a US-based international development consulting firm, to provide three technical specialists in the fields of public health, education and vocational training and housing to undertake a needs assessment.

The team convened in Washington D.C. on March 2, 1990. As part of the general background, and to understand the nature of the assignment, the team met with A.I.D. staff from the ANE Bureau Office of Egypt and European Affairs (Ms. Christine Adamczyk), the ANE Bureau Office of Technical Resources (Mr. Stephen Grant, PVO Grant Officer), the Food and Voluntary Assistance Bureau Office of Private and Voluntary (Ms. Donna Frago), and the State Department's Soviet Union Affairs Office (Ms. Nancy Pettit).

In collaboration with A.I.D. and Devres, Inc., the team also met with US representatives of the PVOs and NGOs presently working in Armenia to inform them of A.I.D.'s intention to have one or more US PVOs manage the project; to apprise PVOs of the Needs Assessment mission; to gather information about the ongoing activities of US PVOs, the resources available and those still needed by local groups in Armenia, and the working conditions and general context of future activities in Armenia. (See the Scope of Work attached as Appendix 1).

The team left for Moscow on March 3, 1990 and was welcomed by an official delegation of the permanent representative of the Armenian SSR in Moscow. The team met with two US Embassy officials (Mr. John Blaney and Mr. Ross Wilson) in Moscow on March 4, 1990 to brief them on the scope of the assessment mission, discuss Embassy views, and obtain names of Armenian contacts prior to travel to Yerevan.

The team arrived in Yerevan the night of March 5/6, 1990 and was met by representatives of the Ministry of Foreign Affairs of the Armenian SSR. During their stay in Armenia, the team members met as a group and also individually with appropriate government officials at the republic and local levels as well as representatives of the Armenian Apostolic Church, with private organizations and PVOs/NGOs involved in relief and reconstruction activities in Armenia.

After three days in Yerevan, the Team left to visit Leninakan (1 day), Stepanavan and Kirovakan (1 day), and Spitak (1 day). In each case, after general briefing sessions with local authorities (party secretaries and mayors) the team members divided up by technical specialty and met individually with the PVOs/NGOs undertaking similar technical activities. Dr. F. Krimgold returned to the area on March 13, 1990 to complete the survey on the housing section.

On Sunday, March 11, 1990, the team convened a general briefing session for all American PVOs/NGOs working in Armenia to brief them as a group and to ensure that all PVOs/NGOs knew of the Team's schedule and could meet with appropriate team members. The following days were spent in individual meetings with representatives of US PVOs and NGOs, with officials of the Armenian SSR, and in visits to project sites.

The team left Yerevan on March 16, 1990 for Moscow. Since Mr. John Blaney was absent from Moscow and Mr. Ross Wilson was extremely busy, the team did not meet with them to provide its debriefing. Instead, Dr. Frederick Krimgold conducted a debriefing by telephone. The team left Moscow for the US on March 17, 1990.

C. The Team's Working Conditions in the Field

1. Opportunities

The Team was welcomed at the Moscow and Yerevan airports by representatives of the Ministry of Foreign Affairs of the Armenian SSR. This Ministry provided the Team with Transportation and Protocol service during the mission in Armenia and Moscow. Furthermore, competent translators were made available when needed. Provisions for food were made by the Ministry during the tour of the earthquake area where it is not easy to find such services. Furthermore, the representative of the Ministry facilitated needed contacts and interviews with groups and individuals upon request by the Team Leader. This special attention cut down on time spent on logistical arrangements.

To facilitate meetings with individuals and the Team members, the Team rented an extra room at Hotel Armenia and used it as an office.

March 8 is an official holiday in the Soviet Union. Therefore, the Team decided to start the visit to the earthquake area on this date since most services and offices were closed in Yerevan. The Minister of Education personally accompanied the Team with his own car to Leninakan and spent the whole day with the Team members.

All Ministries and officials impressed upon us their special gratitude to the US Congress for making the \$5 million appropriation both for its dollar value and for its symbolic value. It was pointed out that, the \$5 million may not seem much of a contribution in comparison to the billions of dollars damage suffered. However, it is an important sum compared to the \$20 million in cash actually available (by official estimates) to the Government at this time. Furthermore, the symbolic value was emphasized again and again. The \$5 million represents a direct interest by the American Government in the people of Armenia. All Ministries and officials insisted on transmitting this message to US Officials.

2. Constraints

Although representatives of all Ministries, other Government officials, and groups contacted were extremely eager to meet with us and to discuss their problems and projects, very few had actual documents and statistics that could be made available to the Team.

- o At the Council of Ministries, we saw several bound volumes of statistics and information about the damages, the reconstruction programs and the contributions received from different sources. However, it was not possible to get copies of any of these documents. We were told that we were welcome to consult the documents, but they would not like any of the information circulated since it may offend sensitivities of donor groups and governments because of inaccuracies and lack of implementation of most of the promises.
- o We were shown several maps for reconstruction plans, but once again, we were told that it is not advisable to use these as evidence, since they keep changing. It was also pointed out to us that a reality gap existed between promises made and implementation capabilities of governments and donors.
- o All officials said that it was a mistake to declare that reconstruction will be completed and normal life will resume in two years. They admit that under ideal conditions, reconstruction plans can only be realized within approximately 6 years. Even the likelihood of this happening is poor, however, given changing political conditions, the blockade by Azerbaijan and the influx of a huge number of refugees from Azerbaijan and Karabagh. These constraints resulted in first year plans being realized at only 9% to 17% of expectations. Statistics obtained or available are not reliable since they may be inflated or inaccurate to save face.
- o The Supreme Soviet was convened during our visit to the Soviet Union. Some key officials such as Markariantz were not in Yerevan during our visit.

D. The Political Context and the Factor of Time

1. The Political Context

In addition to the efforts to cope with the aftermath of the earthquake, Armenians are faced with political emergencies arising from the influx of refugees from the Karabagh and Azerbaijan regions. There were 150,000 such refugees in Armenia before the earthquake. Their numbers are estimated to reach 300,000 by the end of 1990.

Furthermore, the political situation in the Soviet Union is in constant flux. This means that the worker squads from the other Soviet Republics are anxious to return to their home republics without too many delays.

The decision-making authorities and bodies are also changing very frequently due to recent political structural changes happening in the Soviet Union. Although there is a semblance of free circulation and laissez-faire for most of the PVOs operating in the Armenian SSR, it should not be forgotten that the central control is still very important although not very efficient in its organizational capability. Thus, the PVOs have to obtain special permission from the appropriate authorities to operate efficiently and effectively. Furthermore, depending on the area of intervention, the control will be at different levels. Thus, there are some areas of jurisdiction that are purely regional-local; there are others that are centralized at the Republic level and still others that are centralized and coordinated at the level of the Central Committee of the Communist Party, the Council of Ministers of the Soviet Union or that are jointly controlled programs by the USSR and the ASSR. To give just one such example, Project Hope has a five year tri-partite agreement signed by the Ministry of Health of the Soviet Union, the Ministry of Health of Armenia, and Project Hope.

Therefore, all PVOs come under the direct jurisdiction of local officials at one level or another. It is thus very important to take into consideration the special provisions and priorities established by the local authorities competent in the area of a foreign PVO's operations.

2. The Factor of Time

The visit of the Devres team took place fifteen months after the earthquake. It was really amazing to see the amount of work accomplished during this period in spite of all the problems of self-blame and apology about the low efficiency of the organization of the reconstruction effort.

The rubble is cleared, the construction work is proceeding at a large scale, the initial treatment of the severe cases is taken care of, the dead are buried and cemeteries are well organized. In Spitak, the first church to be built in Armenia for over 70 years stands on top of the hill overlooking the cemetery. It is an aluminum and wood structure that was built by the contribution of the Italians. What is most admirable is the resilience of the people who have survived a major disaster, the death of loved ones, and the open and free encounter with multiple ethnic groups and donor agencies after many years of almost complete isolation. The local and central authorities are also very well organized in spite of the heavy psychological and official burden and responsibility on their shoulders. They are all trying to deal with the every day needs and to also look forward to a brighter future.

Although there are several permanent housing units completed, there are very few that are actually occupied due to the lack of basic infrastructure hook ups such as sewers and running water. However, most people are now installed in temporary housing. At the beginning of the winter there were many problems due to lack of insulation and heating in hundreds of these units, but now most of these problems seem to be resolved on a temporary basis. The provision of food and basic necessities as well as the required medical supplies seem to be available without too much hardship.

Everyone encountered during this visit, from the simple villager to the highest government official and almost all the PVO volunteers and directors encountered were in agreement with the following points: The relief phase is over, food and clothing are now available for everyone, construction of housing units can be taken care of by local means. What is needed is the revival of the economy since many thousands of jobs were lost with the destruction of the factories and the industrial and agricultural production centers. By the time the money appropriated by the Congress reaches Armenia, it will be almost two years (September is a reasonable target and is 21 months after the earthquake) after the earthquake. Therefore, the projects to be financed should be of such a nature that they will have long-term effects and make a continuing contribution to the restructuring efforts of Armenia.

E. Actors in the Relief and Reconstruction Efforts

1. USSR and ASSR Government agencies

All the republics of the USSR responded immediately after the earthquake to the relief efforts. In March 1990 several of these republics were continuing their help in the reconstruction phase according to each Republic's and the Soviet Central Committee's plans. The most important contribution of the other Soviet Republics and the USSR Central Committee is in the area of construction of homes and apartment buildings. Several thousand workers are found in each of the disaster areas: For example, there are at present 20,000 plus construction workers in Leninakan from the different parts of the Soviet Union and there are over 4,000 construction workers in Stepanavan, just to give a few examples.

Although the construction effort deployed by these republics is very impressive, the efficiency rate is not very high. This varies from 9% to 23% of original plans for the first year of reconstruction. Several reasons are advanced: The transient nature of the workforce, the blockade imposed by Azerbaijan on supply routes, and general disorganization of the reconstruction effort. It is also acknowledged that the original predictions of completing the reconstruction work in two years were utterly utopian even under the most ideal conditions possible.

The USSR continues its commitment to the planning of the reconstruction phase. However, the political context is quite variable

and Union-level, urgent day-to-day crises divert attention from the reconstruction plans.

The ASSR and its different agencies, Ministries and departments have realized the importance of self-reliance. They are extremely grateful for all the help received, both financial, in kind or moral support. However, they acknowledge that the more permanent and persistent effort will be the one pursued by the local population and the local government.

To the first-time visitor of the earthquake area, fifteen months after the disaster, the reconstruction effort is very impressive. Furthermore, the rubble is cleared from most of the city streets. However, there are obvious differences that strike the visitor. Thus, the effort of construction in Leninakan is the most intense among the four cities visited. In Spitak the construction effort is present but is being done at a much slower rate and at a much smaller scale, in spite of the fact that Spitak is the city that lost 21 percent of its total population.

The ministers consulted all underlined the importance of the effort deployed, but they all acknowledged the fact that in the most ideal circumstances, the reconstruction will only be completed in six or seven years.

All Ministries consulted were unanimous in suggesting that hard dollars not be spent in building construction. We were told that the government has the capability of building the physical plants and the building structures in rubles. What was more important for them was the better technology and design capabilities that computers and modern architectural planning in the United States could provide.

2. The Armenian Apostolic Church

His Holiness Vasken I, the head of the Armenian Apostolic Church with headquarters in Etchmiadzin, was quick to act after the earthquake. He mobilized his entire personnel and the membership of all the parishes to work for the relief effort. Later on, through his contacts with the members of the World Council of Churches and other religious organizations around the world, he mobilized technical help for the reconstruction effort. All the Armenian Churches in the Diaspora were also mobilized and joined forces in the rescue effort. These churches now continue their contribution in reconstruction programs. Thus, both the Armenian Prelacy and the Armenian Diocese in North America have embarked on housing projects in the earthquake area.

The Catholicos used his influence with the Soviet Union Authorities and with the officials of the Armenian SSR to facilitate the influx of supplies and their distribution through hundreds of volunteers provided by the parishes.

At present the guest quarters at Etchmiadzin provide housing for foreign experts who work on church sponsored projects there and around Etchmiadzin and Yerevan.

Furthermore, it is important to note that many higher educational institutes, Polytechnics and Universities have started courses in Armenian Church history and religious instruction. The Catholicos has been invited to deliver the inaugural addresses in each case.

3. Foreign governments

Several governments around the world responded directly to the earthquake relief appeal. Among these were: Algeria, Australia, Austria, Bangladesh, Belgium, Bulgaria, Canada, Chile, China, Cuba, Cyprus, Czechoslovakia, Denmark, Egypt, Finland, France, Democratic Republic of Germany, Federal Republic of Germany, Greece, Guyana, Hong Kong, Hungary, Iceland, India, Indonesia, Ireland, Israel, Italy, Japan, Kenya, Republic of Korea, Luxemburg, Madagascar, Mongolia, Morocco, Netherlands, New Zealand, Norway, Pakistan, Poland, Romania, Saudi Arabia, Singapore, Spain, Sri Lanka, Sweden, Switzerland, Syria, Turkey, Uganda, United Arab Emirates, United Kingdom, Vatican, and Yugoslavia.

Most of these foreign governments still do have some direct or indirect presence in Armenia. Several, like Italy, Germany, Norway, United Kingdom, and Austria are involved in building projects of schools, model villages, polyclinics or hospitals. While these building projects are very much appreciated by the Armenian SSR authorities, the ruble budgets will allow them to continue the building effort. The Norwegian Hospital in Spitak or the British school in Leninakan are symbols of the helping hand these governments have extended to the people of Armenia. As such, they are more important in their symbolic value than in their actual contribution to the total reconstruction effort.

On several occasions, the officials of the Armenian SSR emphasized the symbolic, political importance of the appropriation by the U.S. Congress. The fact that the American government and the representatives of the American people directly focused on the tragedy and the need of the Armenian people is of utmost importance to these authorities.

The political importance of the direct action by governments of different countries was underlined over and over again for us by the authorities.

4. Local PVOs

As a result of the earthquake several local Armenian PVOs have emerged in the Armenian SSR. Most of these PVOs have their official printed press and special constitution. Most of them are related with one ministry or other more or less officially. We met two of these PVOs, Veratzenoont (Rebirth) and Mayroutian Fond (Motherhood Fund).

There are tens of similar organizations. All of them have raised funds and contribute to the effort of the reconstruction in their own way.

While the authorities acknowledge the existence of these PVOs, they said to us on several occasions that the government has its own agencies and structures for cooperation in the reconstruction effort and that foreign PVOs and governments should pass by the officially sanctioned channels.

To give an example of the activities of these local Armenian PVOs, the Motherhood Fund assists single and widowed mothers who are in need of extra financial and moral help or who need an extra helping hand from time-to-time to cope with their household and parenthood responsibilities.

The local PVOs have sometimes provided sources of volunteers for foreign PVOs. However, most of the time, they have their own agendas and operate independently from foreign PVOs and donors.

5. Foreign PVOs

Several foreign PVOs from around the world rushed to come to the rescue of the Armenian survivors of the earthquake zone in the days, weeks and months following the earthquake. Once the relief efforts were streamlined and became less urgent, these PVOs engaged in program development activities geared to the reconstruction efforts. Thus, most of the PVOs operating in the Armenian SSR as of March 1990 have definite, targeted programs and goals in the area of vocational training related to construction (housing technology) and health (prosthesis, public health, psychological intervention, etc.).

Several of these foreign PVOs are very visible in the earthquake zone during the weekdays and they all congregate in Yerevan in the Hotel Armenia during the weekends. Thus, we could easily meet representatives of Caritas, Medecins sans Frontieres, Medecins du Monde and Equilibre. Equilibre is a French PVO working in the area of health and psychological counseling and will branch into building of polyclinics. Their most important contribution acknowledged by the other foreign PVOs is the transportation service that their trucks provide to all those who need such services.

There are many sectarian and church groups representing a spectrum of organized and popular religious movements as well as meditation centers and utopian organizations. They all seem to operate quite freely within their own boundaries.

One important fact is the relationship of these foreign PVOs with the local authorities. All the PVOs have to sign some kind of a memorandum of understanding with the appropriate ministry under whose jurisdiction area they operate. Those PVOs who have successfully managed the signature of such memoranda are the most effective. Several American PVOs are among the number of those successful PVOs. It is also

important to hire a number of local staff members to facilitate communication.

6. American PVOs

There are several American PVOs operating in Soviet Armenia. Many of them have been in Armenia since the earthquake and others claim long standing working relationships in Armenia dating back to the turn of the century such as the Armenian Relief Society of America (ARS) and the Armenian General Benevolent Union of America (AGBU). Twenty-three such PVOs were identified in U.S. Department of State documents and in the field by the Technical Team. At least ten of these PVOs/NGOs are Armenian- American organizations. (See Annex 2)

II. SECTORAL ASSESSMENTS

A. Education and Vocational Training

1. Introduction

All educational institutions and buildings (kindergartens, schools-general and specialized, technical institutes of higher education) were destroyed completely in the four main areas affected by the earthquake: Leninakan, Kirovakan, Stepanavan, Spitak and surrounding villages. Thousands of the teaching staff members and students were also killed during the earthquake. Several hundreds were displaced and found shelter away from home in the earthquake area.

2. Overview of earthquake damage

Overall, one hundred ninety-eight kindergarten sites for 29,730 students were damaged; 34 sites for 5,525 students were destroyed during earthquake; 53 sites for 6,945 students had to be pulled down; 111 sites for 17,120 students to be reinforced. One hundred forty-five school sites for 102,246 students were damaged; 33 sites for 5,525 students were destroyed during earthquake; 56 sites for 39,612 students had to be pulled down; 50 sites for 34,052 students to be reinforced. The damage in each city visited is described in the paragraphs below.

a. Leninakan

In Leninakan 50 schools that served 36,000 students were destroyed. Four schools were reinforced to date and six schools are planned to be reinforced.

Sixty-three kindergartens were destroyed that used to serve 10,000 students. Five kindergartens are now operating and 10 others may be repaired.

The rest of the students are housed in wooden shacks. At present, there are 28,000 students in school. Two thousand have died and six thousand have moved away.

All higher educational institutions were completely destroyed. The Leninakan Technical Institute is now operating in wooden shacks. During the winter, these shacks were not heated and therefore, classes were disrupted regularly.

b. Stepanavan and surrounding 18 villages

Schools and Kindergartens were 100 percent lost. Some of these are slated for reconstruction and reinforcement. However, there are no plans for the rebuilding of the three music schools and the one fine arts school for the next year.

The Technical Institute for Veterinary Sciences was completely destroyed. This Institute serves 300 students a year and caters to the needs of the region including students from the Soviet Georgian Republic.

A new complex is planned for construction. The curriculum is being revised to better respond to perceived needs. The economics specialization is being replaced by a specialized curriculum to prepare agricultural economists with a more interdisciplinary orientation. To understand the importance of this institution, it is necessary to remember that Armenia produced 30 percent of the Swiss Cheese for the Soviet Union. To revitalize the dairy industry, it is important to have a sound technical preparation of professionals. To this end, a well equipped veterinary clinic is a major requirement for the new Institute Complex.

c. Kirovakan

Twenty-eight schools and 31 kindergartens were completely destroyed in Kirovakan. Twenty-five thousand students used to be served by these schools.

Reconstruction of new schools is planned but is proceeding at a very slow pace.

d. Spitak

Thirty-two schools catering to 10,000 students were destroyed. Temporary schools are now serving 6,000 students. Two thousand students died and 2000 others were taken to Moscow.

By January 1990, most of the displaced teachers and students were back in their original localities and back to school. The local authorities and the Minister of Education did their best to start a normal school year in the fall of 1989. However, full attendance has not yet been attained, although since mid-January 1990 there is a normal routine established. Most schools are back in operation on a full-time basis, housed in wooden shacks and temporary structures of all sorts (mobile homes, wagons, etc.). The disruptions to the normal school/higher education activities were caused mainly during the winter months because of lack of proper heating, appropriate housing and illness due to the difficult living conditions as well as post earthquake traumas both physical and psychological.

The situation is exacerbated by the lack of appropriate teaching equipment and books, as well as the lack of laboratories and other specialized facilities. Only make-shift classrooms are available for instruction and learning purposes.

To add to the difficulties, most Armenian refugees from Azerbaijan and the Karabagh region are being settled in the earthquake area. The estimated number to date is 240,000 people, and it is expected that the number of refugees in the area will reach 300,000 people by the end of 1990. The presence of this new refugee population puts added pressures on the educational structures of the area. Their needs are very specific. Few speak

Armenian. To give an example, in the Spitak region alone, there are two villages constituted of almost one hundred percent refugees. There are three thousand refugees in one village and four thousand refugees in another.

Most of the people living in the earthquake zone earn their living in the construction industry since most other industrial and economic life was disrupted suddenly due to the earthquake. The first priority has been the construction of temporary and permanent housing for the people. Several chemical factories have been shut down permanently and therefore the workers need retraining for reintegration into the economic life of the country. Similarly the large numbers of handicapped children and adults need occupational therapy in addition to physical and psychological therapy.

3. Situation Analysis

The educational and vocational training services in Armenia are facing a large number of problems created not only by the December 7, 1988 earthquake but also by the large number of refugees pouring into Armenia in general and the earthquake area in particular as well as the new environment of "Perestroika" and open access to the area by many groups from outside the Soviet Union which have more modern technologies and educational programs have also had a marked impact on the system.

The educational planner and policy maker is faced not only with the problem of replacing what was lost during the earthquake but also by the tremendous changes being introduced in a system that was isolated for a number of decades. Furthermore, new disciplines are being introduced in the area of engineering, health and agriculture due to the special effects of the earthquake. These disciplines--such as occupational therapy or a generalized degree in agronomy--are not only new to Armenia but also to the Soviet Union. There are no models to emulate or adapt within the system.

The educational and vocational training task faced by the authorities is a difficult one with many facets:

- o Hundreds of schools and kindergartens to be rebuilt;
- o At least four major higher educational institutions must be rebuilt in Leninakan, Kirovakan, and Stepanavan;
- o Equipment is needed for hundreds of schools and higher educational institutions that reflects the changes in the curriculum;
- o Some donor countries are introducing complete schools with specialized equipment such as The British school being built in Leninakan. The problem of providing comparable facilities and selecting students to attend the special schools is a major one faced by the ministry. To give just one example, English emphasis schools existed in Leninakan prior to the earthquake. Do the pupils attending these schools get priority for the new facilities?;

- o Hundreds of teachers died in the earthquake. Many others lost their own children or have handicapped children that they are caring for and therefore cannot return to teaching in the near future. A real shortage of teachers exists;
- o With the introduction of new technology in schools and higher educational institutions, the provision of specialized training for the teachers is a problem. To give an example, teachers need to be trained in computer applications to the classroom and to teaching and learning;
- o A large number of refugee children is going to attend the schools. This will create problems in terms of language and integration. Most refugee children do not speak Armenian and are not familiar with local customs and traditions. Problems similar to the ones experienced in the U.S. schools in areas of high concentration of refugees are emerging in Armenia. Teachers need training in second language teaching, and multicultural education;
- o There will be large numbers of handicapped students who will need to be reintegrated in the classrooms. Teachers will need special education skills and skills in integrating handicapped kids in normal classrooms. Furthermore, schools and classrooms have to be equipped specially to meet the needs of these students.

Based on the analysis of the situation, the following needs were identified by the assessment team:

- o Construction of appropriate schools, kindergartens and higher educational institutions;
- o Provision of equipment for these schools--appropriate furniture, materials and laboratories;
- o Provision of in-service training of teachers to facilitate return to normalcy in the schools and kindergartens;
- o Provision of schools with facilities and counseling services to accommodate the large numbers of handicapped students and teachers;
- o Revision of curriculum for the higher educational institutes in the area to provide the necessary training for human resources for the new industrial developments in the area as well as for occupational therapy and the revitalization of the agricultural life of the villages;
- o Provision of enhanced teacher training to prepare new teachers for the area to meet the needs of regular schools and to meet the needs of the new refugees in the area;

- o Provision of new certification programs and accreditation of the health and construction related specialized training going on intensively in the area;
- o Provision of specialized training in educational policy and educational technology as well as extension education and instructional design to meet the needs of new higher educational programs being planned for the area and to strengthen the policy development capabilities of the Ministry of Education. This is an area of immediate need to help the Ministry cope with the variety of educational innovations and technologies being introduced directly and indirectly by different groups.

4. Different Actors and Their Roles

Government agencies, foreign governments and PVOs, and the American Government and PVOs have directly or indirectly acted in the educational sector in the aftermath of the earthquake and most still continue their involvement in one way or another.

a. The Armenian Government

The Technical Team visited the Minister of Public Education to discuss the progress in the efforts of reconstruction in this sector. He acknowledged the complexity of the situation he is facing. He emphasized his willingness to cut all administrative red tape to have direct access to technical and professional input in increasing the policy making and implementing capabilities of his ministry and related bodies.

The Minister acknowledges the need for a major restructuring of services in addition to the provision of new programs. The construction needs are pressing and huge, but he wants to rely mainly on ruble budgets and local capabilities (including help from the Soviet Republics) to meet the physical plant needs. He is acutely aware of the need of specialized laboratories and clinics (veterinary sciences in particular and sciences in general) to train the new specialists. However, he would like to have the emphasis placed on the training of specialized academics to provide the on-going technical and vocational training needed at the technical school level as well as in the higher educational institutes. These specially trained professionals will be able to provide a pool of planners and implementers to the Ministry and will facilitate the planning of the new educational system to meet the special needs of the earthquake zone and the new society emerging due to reconstruction and exposure to the world outside the Soviet Union.

It is to the credit of the Minister of Education and the local authorities that all school and university students are back in classrooms since early 1990 on a regular basis. Wherever long-term arrangements are not possible, short-term teacher replacement and rotations have been arranged to meet the needs. Even specialized schools such as music schools and fine arts schools are back in operation even though in wooden shacks. There are plans to provide temporary concert hall facilities for some of these schools

All other ministries visited--Health, Planning and Construction, Social Security and the Council of Ministers--were in agreement with the urgency and priority for educational and vocational training programs in targeted areas related to earthquake recovery. Even the Ministry of Health with the priority project of a baby food factory was placing emphasis on the provision of the specialized sterile food processing and packaging technology and the training needed to properly operate such a facility.

It has to be noted that most of the training in the area of health and construction come under the jurisdiction of other ministries than the Minister of Public Education. However, although initiative and programmatic decisions may lie with other ministries, the Ministry of Public Education is charged with the accreditation of the graduates from most of these programs. Therefore, a close coordination of efforts is necessary to ensure that the specialized on-the-job training provided by the different PVOs and NGOs in the field of health and construction technology are properly accredited to be of long term use and value both to those being trained and to the system in general.

b. Foreign Governments and PVOs

The educational efforts of foreign governments and PVOs are in the following two areas:

- o Construction of new school buildings: An example is the British school of Leninakan. There are about ten other schools being built by foreign governments and PVOs;
- o The vocational training of mid-level professionals in the field of health sciences (rehabilitation, physiotherapy, counseling, community nursing care, etc.) and construction (technicians to work on design, specialized equipment, quality control, etc.).

The training programs implemented in the field at present are small, involving from one to 20 trainees at most. There are, however, plans to increase these numbers over the next three to five years to provide sufficient local capability to continue development in these areas locally.

There is a need to provide coordination to these efforts at the Ministry level. The approaches are different (Soviet, European, American, etc.) and may not be comparable from one program to the other. Duplication of effort may also result from the lack of coordination at a central level.

c. American PVOs

Like most other foreign PVOs, the American PVOs working in Armenia are in agreement about the immediate need of specialized vocational and technical training in the areas of their operation. All American PVOs who have filled out questionnaires for A.I.D. have an important element of training as part of their present operations and as part of their proposals

for funding from A.I.D. Table 1 shows the training provided by U.S. PVOs and training they plan to provide. Highlights of the Table 1 are:

- o Eleven of the sixteen PVOs have housing and construction related training programs;
- o Twelve of the sixteen PVOs have health related training programs;
- o Four of the sixteen PVOs have agriculture related training programs.

AGBU is planning a University with Six Faculties in Leninakan.

- o Four of the sixteen PVOs are proposing training programs related to construction;
- o Nine of the sixteen PVOs are proposing training programs related to health;
- o Eight of the sixteen PVOs are proposing training on specialized equipments related to construction, engineering or health sciences.

Many PVOs have brought in specialized trainers to provide lower and middle level training in health and construction related fields (with direct impact on earthquake relief needs). They are sending out advanced or promising students for specialized training outside of the Soviet Union. However, all the PVO's contacted agreed that there is a great need to provide the advanced specialized training capability locally, and therefore they emphasized the need to train the trainers of these middle level professionals.

It should be noted that among the proposals by the U.S.-based PVOs, three are focused on centralized educational programs related to earth sciences and engineering: One such proposal is the AGBU university in Leninakan. University of California-Davis is looking into a faculty of agriculture in the earthquake zone. AESA proposes coordinated programs with the Academy of Sciences of Armenia for a seismic instrumentation and a technical training center. These programs are currently in the planning stages.

All Ministries visited and all PVOs contacted are in agreement that English language training is a priority to facilitate exchanges of specialists and the introduction of new and advanced technology to Armenia.

Table 1: Current or Planned Foreign Projects Involving Training for the Earthquake Area Registered with the Ministry of Construction

Current Envolvement of American PVOs
by Sector of Activity

| PVO Name | Housing and Construction | Health Sciences | Agriculture |
|----------|--------------------------|-----------------|-------------|
| ADRA | X | X | X |
| ARS | X | X | X |
| AGBU | X | X | X |
| AAA | X | indirect | indirect |
| ARC | indirect | X | indirect |
| CWS | X | indirect | indirect |
| AJJDC | X | X | - |
| CRS | X | - | - |
| AC | - | - | - |
| Sch | - | X | - |
| AESA | X | - | - |
| AEC | X | - | - |
| MOA | - | X | - |
| ERFA | - | X | - |
| APS-mass | X | X | X |
| Hope | - | X | - |

Training Planned by American PVOs
by Sector of Activity

| PVO Name | Construction Training | Health Training | Equipment Training |
|----------|-----------------------|-----------------|--------------------|
| ADRA | X | X | - |
| ARS | - | - | X |
| AGEU | - | X | X |
| AAA | X | - | - |
| ARC | - | X | - |
| CWS | - | - | - |
| AJJDC | X | X | X |
| CRS | - | - | - |
| AC | - | - | - |
| Sch | - | X | - |
| AESA | - | - | X |
| AEC | - | - | X |
| MOA | - | X | X |
| ERFA | - | X | X |
| ARS-mass | X | X | X |
| Hope | X | X | - |

5. Findings and Conclusions

- o The educational system is back in operation in the earthquake area;
- o All educational structures are temporary ones and are barely adequate to hold classes on a regular basis;
- o The Ministry is planning to rebuild all educational buildings in rubble budgets over the next two to three years;
- o All educational institutions need general and specialized equipment, laboratories, books and libraries (over the next two to five years);
- o The refugee population places a special pressure for increased classroom space and resources (over the next several years);
- o New job creation programs will necessitate in-service training and continuing education training needs (over the next six to eight years);
- o Earthquake relief and preparedness efforts have created new areas of training which are not available at present in Armenia or the Soviet Union: physiotherapy, occupational therapy, plastic surgery, etc.
- o Since many countries and foreign PVOs are involved in training, a proliferation of new educational programs has resulted. There is a need for coordination to avoid duplication and to ensure long-term accreditation and development efforts in education. (This need should be addressed immediately and the capability should be provided to the Ministry);
- o The differential quality of school buildings and furnishings as well as programs offered will create a selection and allocation problem in a system which was more or less homogeneous traditionally;
- o There is a need for qualified teachers at all levels to make the best use of the planned advanced technology to be introduced in the new schools;
- o There will be several schools with immersion education provisions in foreign languages, especially English;
- o The classrooms will be less homogeneous due to the movement of the population in and out of the area and the flux of refugees from Karabagh and Azerbaijan;

- o There will be large numbers of handicapped students in the schools as a result of physical damage suffered during the earthquake;
- o There will be many students, teachers, professors, and professionals suffering from post-earthquake traumas of all sorts, especially psychological;
- o New curricula will be needed for the new schools and institutes of higher education with modern educational orientations;
- o Training in new and high technology areas will be needed as related to seismology and earthquake engineering.

6. Recommendations

There are four recommendations for priority consideration by U.S.A.I.D. in the area of Education and Vocational Training. These are:

- o Fund short-term (1 month to 2 years) training programs in Armenia and the United States in construction related areas;
- o Fund short-term (1 month to 2 years) training programs in Armenia and the United States in health related areas;
- o Fund the purchase of specialized equipment needed in the training programs related to construction and health;
- o Fund English language training programs to facilitate the instruction/learning/training/information management process.

The Team identified additional programs that could be funded by other bilateral or multilateral donors. These include:

- o Teacher training;
- o Occupational counseling and rehabilitation programs;
- o Training in technical specialties that lead to job creation and fulfill the needs of the new industrial development of the earthquake area;
- o Educational programs to enhance educational policy, educational technology, and educational administration capabilities (e.g., centralized information systems) for local authorities and the Ministry of Education;
- o Educational programs to prepare curriculum and instructional specialists;

B. Housing

1. Introduction

The primary impact of the Northern Armenia earthquake of December 7, 1988 was damage to buildings and physical infrastructure. Of the 700,000 inhabitants in the affected area, approximately 510,000 were rendered homeless by the earthquake. Officially 24,944 people were killed in collapsed residential, industrial, commercial, and institutional buildings.

Roughly one third of Armenia was destroyed by the earthquake. A total of 7,693,400 m² of residential buildings were damaged in the earthquake. Of this area, 1,250,100 m² were totally destroyed; 2,144,400 m² had to be demolished after the earthquake; 4,125,700 m² needed to be repaired and structurally reinforced.

Projected reconstruction (new buildings) by Soviet and Armenian authorities call for provision of 5,400,000 m² of residential buildings to be completed by the end of 1990. Of this amount, it is now estimated that 17 percent has been completed as of March 1, 1990. The slowdown is in part due to the Azerbaijani blockade of building materials and to the economic difficulties of the other Soviet republics which had contracted to carry out the construction program.

The two year program goal is generally considered to have been unrealistic. It is estimated by responsible officials of the Ministry of Construction that under "ideal" conditions the projected two year plan may be completed in five years.

However, even with the difficulties experienced, housing for 120,000 people is nearing completion (expected completion by September 1990) north of Leninakan and significant construction programs are under way in Kirovakan and Stepanavan. For the time being, Spitak remains an exception in that its reconstruction plan was only approved by the Soviet Council of Ministers on February 25, 1990. It's anticipated that construction will commence in Spitak this summer (1990).

Shelter needs following an earthquake are generally differentiated in terms of time:

- o Emergency shelter, 0-3 months;
- o Temporary shelter, 3 months - 5 years;
- o Permanent shelter.

The Armenian earthquake occurred in early December in a harsh climate. The requirement for emergency shelter was acute. Because such shelter was not readily available, 120,000 people were evacuated from the

earthquake area to other parts of Armenia and the Soviet Union. Many others were forced to double up in buildings which remained usable after the earthquake. During the six months following the earthquake, a great volume of construction huts, containers, and other forms of prefabricated temporary shelter were delivered to the earthquake area. Now, most of the population of Leninakan, Spitak, Kirovakan, and Stepanavan have returned to be housed in these temporary shelters. (The population of Leninakan is now estimated at 200,000 from a pre-earthquake estimate of 230-250,000.)

The temporary accommodation is rustic and uncomfortable. While most containers have electricity and many have television, they do not have running water or toilets. These services are provided in shared public facilities. There is considerable discontent with life in these containers, but effort is now placed on rapid construction of permanent housing rather than refinement of temporary shelter conditions.

It is important to realize that a shortage of housing is not new to Armenia. Before this earthquake, there was a severe housing shortage (which in part led to the hasty, inadequate construction which cost many lives in the earthquake). Also, prior to the earthquake, the cities of northern Armenia were facing the added burden of 180-200,000 refugees from Azerbaijan who were specifically directed to the north to limit population growth in Yerevan.

Following the earthquake, most residents have returned to the earthquake area to live in temporary shelters. New immigrants from Azerbaijan and other parts of the Soviet Union have already joined them to live in similar temporary shelters.

Typically, the focus of traditional disaster assistance programs is on the rapid provision of emergency shelter. In Armenia, the emergency phase was cut short by the evacuation. Contributions of temporary shelters have been made by the Italian government and by the League of Red Cross Societies. The Italian village is now occupied but many of the Red Cross temporary shelters are not yet occupied.

At the present time, the relevant problem is one of provision of permanent housing in the earthquake area to deal with the needs of earthquake victims, the background housing deficit, and a new refugee population. A massive reconstruction program is underway and the housing deficit created by the earthquake will eventually be filled. However, housing standards still need to be improved, as does the efficiency of the housing industry.

2. Situation Analysis

The massive failure of new construction in the earthquake has led to serious reconsideration of fundamental practices in siting, design and construction in Armenia and throughout the Soviet Union. This reappraisal of the building process has in some cases contributed to the slowdown of the reconstruction effort. For example, in Spitak plan approval has been held up by site analysis and debate over design and construction principals. In general, reconstruction is being carried out with old (pre-earthquake)

building technology. However, care is being taken to avoid obviously unsafe practices, i.e., building height is limited to five stories and no precast frame construction is being used.

a. Leninakan

Seventy percent of the earthquake damage was in Leninakan. Party First Secretary Sarkisian reported that 15,000 people had been killed from a population of 235,000. A total of 1,500,000 m² of housing were lost and 80 percent of the city was destroyed. Fifty schools (for 36,000 students) were lost. Four schools have been reconstructed and six are under construction. There are now 28,000 students (2,000 were killed, 6,000 injured or evacuated) in temporary facilities -- containers. Of 63 kindergartens, all were lost. Five have been reopened and another ten can be repaired. All hospitals were destroyed. Both the Pedagogical Institute and the Technological Institute were destroyed. They have been reopened in wooden shacks. All transport and communications facilities were destroyed. All trade and service buildings were destroyed. All cultural facilities aside from one cinema were lost. Also, importantly, the local construction industry -- precasting plants, were destroyed.

Reconstruction is now well underway. As planned, 2,000,000,000 m² of housing are being built. There are two principal problems in Leninakan. First is the "new" city for replacement housing. That is the responsibility of the Soviet Government and it is well underway. The second problem is that of the old city. The renovation of the old city is the responsibility of the local government. The city desperately needs assistance in evaluation of existing buildings and advice on the strengthening of old buildings to make them safe for the recently elevated estimates of seismic risk of the area. The city also wants help in the restoration of specific cultural buildings. These cultural buildings include the church on the central square of the city which was a replica of the 10th century cathedral at Ani and served as the concert hall for the city. The following priorities were listed for the restoration of Leninakan :

- o Permanent reconstruction of schools and kindergartens;
- o Restoration of cultural facilities;
- o Reconstruction of health facilities;
- o Reconstruction of sports facilities;
- o Reconstruction of the telephone system;
- o Renovation and strengthening of the remaining hotel (12 stories);
- o Technical/Educational equipment for institutes;
- o Reconstruction of Seismological Institute.

b. Stepanavan

The city of Stepanavan had a population of 20,000. Since the earthquake it has gained 4,000 refugees and has an added temporary population of 4,000 construction workers. Party First secretary Uri Dzhmaritian reported that while the rate of collapse was low and the resulting loss of life was low in Stepanavan, there was still very extensive damage. All deaths (91) and injuries (230) occurred in public buildings and public housing. The District of Stepanavan, including the city and the 18 surrounding villages suffered losses in excess of 500 million rubles. 160,000 m² of housing was lost. That includes all public housing and roughly 80 percent of private housing. While some of this damaged housing is still occupied, it must be replaced. All the schools and kindergartens of Stepanavan have been abandoned as unsafe. Eighty percent of all agricultural buildings were damaged. Of 300 agricultural compounds 200 were completely destroyed.

Currently, 80 percent of the population of Stepanavan (7,000 families) are without permanent housing. Seventeen thousand people in the surrounding villages are also without permanent housing. Stepanavan also lost its hospital and its hotel. The city was a recognized resort area for Armenia and Georgia but the sanatorium has been seriously damaged and is not usable.

Two regions of the Soviet Union have assisted in village reconstruction and the All Union Petroleum Ministry has assisted Stepanavan in the reconstruction of permanent, wooden, multi-unit housing. As of March 1, 1990, 40,000 m² of the 160,000 m² deficit has been replaced. It is expected that 70,000 m² will be completed in the coming year. A total of three years will be needed to complete the housing reconstruction plan.

Stepanavan is most concerned with the reconstruction of its economic base. In the earthquake, it lost eleven factories including a milk and cheese processing plant which provides cheese to the rest of the Soviet Union. Stepanavan has to rebuild its tourist industry, to exploit its natural setting. It must also rebuild its industrial and agricultural base.

Leading priorities for Stepanavan are:

- o Provision of equipment for schools. The structures are coming from local resources. They want computers and technical education equipment;
- o Equipping of private houses with plumbing and fixtures;
- o Replacement of hospitals (promised by Germans but not yet begun);
- o Restaffing of one of the three music schools and one fine arts school lost;
- o Contributing to the preparedness planning; especially earthquake hazard mitigation planning. This was a high

priority of the First Secretary. Currently, there is no emergency response capability in Armenia and there is no hazard mitigation program;

- o Rebuilding of the resort hotel in Stepanavan for employment and income.

c. Kirovakan

Kirovakan had a population of 172,000 before the earthquake. It suffered a life loss of 670. Most of the evacuated population has returned and the population is again 172,000 with an added temporary population of 20,000 Ukrainian and Russian construction workers.

First Party Secretary Karagezian reported that 70 percent of housing capacity was lost in Kirovakan. Of a pre-earthquake total of 2,100,000 m², 1,700,000 m² were lost. All factories in the city were lost. These included a machine tool and precision instrument industry, textile plants, and a very large chemical plant which produced 50 percent of the fertilizer used in Armenia.

The reconstruction effort is underway, but few buildings are completed. As of March 1, 1990, 40 buildings have been completed to provide housing for five hundred families. Without the blockade, it was planned that 310,000 m² of housing would be completed. Instead, because of the blockade, only 20,000 m² have been completed. Roughly 100,000 people are living in 20,000 temporary shelters. All schools (28) for 28,000 students and all kindergartens (31) are open in temporary shelters.

If housing production can continue at a rate of 300,000 m² per year, the reconstruction may be completed in five years. ("The two year deadline was a fantasy.") The Armenian Government planned to build 1,500,000 m² and 870,000 m² was to be constructed by the other republics. This means that in the next five years, Kirovakan is expecting to rebuild 300,000 m² more than the entire pre-earthquake city.

The remaining reconstruction priorities for Kirovakan are the following:

- o Construction of a modern medical technical diagnostic center;
- o Building of a garbage processing plant -- multi-use, fertilizer production;
- o Completion of a technology production line for re-establishment of industry;
- o Provision of computers for schools;
- o Reconstruction of a sports facility.

d. Spitak

Spitak was a city of 30,000 inhabitants at the time of the earthquake. Of the four cities effected by the earthquake, Spitak was the closest to the epicenter and suffered almost total destruction. Virtually, no buildings remained intact in Spitak following the earthquake.

First Party Secretary Muradian reported that Spitak had received considerable media attention at the time of the earthquake and some of the earliest foreign assistance (Italian village, temporary housing, and Norwegian Red Cross Hospital). However, Spitak has done very poorly in reconstruction. The formal plan for reconstruction of Spitak was only approved by the Council of Ministers on February 25, 1990. This slow approval has held up large scale reconstruction of housing and investment in industrial reconstruction.

Spitak suffered 5,000 dead, of which 1,948 were children. It also experienced 100 percent loss of its building stock estimated at 1,000,000 m². The area lost housing for 12,700 families. Spitak also lost its four factories including food processing, light industry, a plastic feed stock plant, and an elevator factory. The city lost its 32 schools, including an art school and a music school. There are now 6,000 children in temporary schools. Currently, there are 3,000 unemployed workers and 2,500 orphans in Spitak.

Following the earthquake, cash payments of up to 3,000 rubles per person were provided by the government. Nearly every family suffered loss of family members. Cemetery monuments have been the highest construction priority. The new cemetery is very extensive. It includes many monuments which cost considerably more than the government provided survivors compensation. Two hundred sixty cars were also provided to particularly severely impacted families and individuals. The cars were intended to facilitate employment outside the earthquake area.

Ten thousand units of temporary shelter have been delivered to Spitak. They provide crowded, interim shelter for the population. Some permanent reconstruction is underway. Construction units from the Russian Republic, Uzbekistan and Estonia, are at work in the area. The Uzbeks have completed 2,000 m² of large permanent masonry houses in a development of about fifty houses which is nearing completion. The Russians have provided a number of large prefabricated, permanent wooden houses which are distributed around the city.

The priorities expressed by the local leadership in Spitak include: Providing local employment; producing housing; developing a roof tile industry to use local river sand and rail transport facility; rebuilding local agriculture.

3. Roles and activities of the Armenian Government, foreign governments, and PVOs

a. Armenian Government

Immediately following the earthquake, a task force of the Council of Ministers was dispatched to Yerevan to take charge of the planning for reconstruction of the principal cities of the earthquake area. On December 22, 1988, the initial master plans for reconstruction of Leninakan were approved and construction completion was projected for December 1990.

The reconstruction effort is divided between fourteen (Azerbaijan is not included) republics of the Soviet Union. Each republic (and some major cities) has contracted for a part of the reconstruction project. These contracts appear to be proportioned to the population and construction resources of the various republics. The Russian republic has major responsibilities in Leninakan and the Ukraine has major responsibility in Kirovakan. Each republic has been responsible for its own construction labor force, equipment, and building materials. They have also used their own design and planning bureaus for detailed site planning. At present, this work is coordinated by the Armenian Gosstroy (Ministry of Construction). Fifteen billion rubles have been appropriated by the Soviet government for the reconstruction.

There have been problems with the non-Armenian construction labor force. Many left during the blockade. Many non-Armenians are being paid a premium to work in the reconstruction while Armenian workers are not. It is estimated that there will be 40-60,000 non-Armenian construction workers during the construction season.

The first job of reconstruction has been debris removal, now completed in all the principal cities. This work was carried out by engineer battalions of the Soviet Army. The first job of the republic construction crews was to provide temporary shelter for themselves and the general population.

The reconstruction activity is led by the Minister of Construction, Mr. Oganaisian. The construction activity is overseen by the first deputy minister for construction, Levon Shahbazian. The design and planning activity is overseen by Ahsot Alexainian, Chairman of the State Architectural Committee.

The Armenian Gosstroy, Ministry of Construction is in charge of design and construction of residential, commercial and institutional facilities in the four principal cities of the earthquake area. The Ministry of Agriculture, Armgossagroprom is in charge of rural development and the reconstruction of the 300+ villages of the earthquake effected area. At the city level, reconstruction questions are dealt with by the First Secretary of the Local Party and to a lesser extent by the mayor. Each city reported on its own losses and reconstruction priorities.

b. Foreign government and PVO housing and construction activities in the earthquake-affected area

The Soviet Government has appropriated 15 billion rubles for the reconstruction effort in the earthquake effected area. While this

government effort is the overwhelming factor in the reconstruction, foreign contributions are highly visible for both government officials and the general public. Foreign projects are seen as tangible evidence of continued interest and friendship from abroad. The early visible projects of the Norwegian Red Cross, the Italian Government in Spitak, an Austrian NGO, and the British Government in Leninakan have made a profound impression on local people.

The reported contributions of foreign assistance organizations do not always correlate with evidence or experience of assistance on the ground. A great deal of the "assistance" is in fact spent on what is often extremely expensive and unnecessary air transport costs. Air transport of construction material typically represents 300 percent of the value of the material transported. Much of the relief material received (particularly medicine and clothing) was virtually useless in the context of the disaster. The significant expenditure of donors resulted in little tangible advantage for the intended beneficiaries. Of the \$165 million of assistance reported by donors, only \$20 million is actually registered as the value of international contribution on the ground.

The experience of other international responders in the provision of housing and related structures is useful in the evaluation of proposals for further involvement in construction. There have been essentially three approaches to construction:

- o Self-contained--All material and manpower from abroad; examples are: Norwegian Hospital in Spitak; Italian Village in Spitak; British School in Leninakan;
- o Reliance on Armenian Agencies--Foreign Design, Local material, Local labor; examples are JDC's Rehab units, Church World Service/Caritas Housing Factory.
- o Full involvement in local housing industry--Using foreign process and equipment but local facility, local labor, and local raw material; examples are the Armenia Assembly factories in Leninakan.

The fastest and most expeditious way for a foreign organization to work is in the self-contained format. This is characteristic of the facilities which are now completed. The British school, for example, has been designed and entirely fabricated in the United Kingdom. Since November 1989, there has been a work force of 60 British construction workers on site. The school will be completed by the end of May in time to be opened by Mrs. Thatcher, who is a very popular figure in Leninakan. While this project will win acclaim for the British, it does not affect any technology transfer or any residual benefit to the local construction industry. It also represents a great expenditure of hard currency which might better have been spent on procurement which could not be accomplished in rubles. Construction (while probably not of the same quality) is still readily available from local resources. Had the \$7 million spent on the British School in Leninakan gone to the purchase of personal computers, for instance, it might have made a much greater contribution to

education and long-term economic and intellectual development than the replacement of one of over 80 schools lost in the earthquake.

It is also instructive to review the experience of the League of Red Cross Societies in the provision of temporary housing. Recognizing the severe shortage of temporary housing after the earthquake, the League set about to provide shelter. Various studies were undertaken. Commitments were negotiated from various national societies. A project was designed and a contract was put out to bid. By the time this process was completed, the emergency phase had passed. Provision had been made for temporary shelter and all local attention was placed appropriately on permanent reconstruction.

As of March 1990, fifteen months after the earthquake, the League has completed 315 units which would have been very valuable a year ago but now represent a burden to local authorities. These structures, manufactured in the Netherlands and the Federal Republic of Germany are not large enough for permanent accommodation and are not appropriately sited for permanent occupancy. Nonetheless, they require the allocation of local resources for the provision of infrastructure hook ups. At this point, this housing is resented by local authorities and the local population.

Post earthquake reconstruction is a dynamic process. Inputs must coincide with the actual state of development. The US resources now under consideration for allocation will most probably not reach the field in the form of construction before the summer of 1991. By that time, the housing demand will be considerably different from what was seen in March 1990. While progress over that period may be subject to further delay, it is certain that temporary construction will not be appropriate. Any construction input will necessarily be in the context of long-term government planning and the development of long-term housing production capacity.

Table 2 lists the currently active and planned foreign construction projects for the earthquake area which are registered with the Ministry of Construction.

4. Findings and conclusions

- o The emergency relief phase of the earthquake disaster is over. Further involvement in temporary construction or isolated imported structures is not appropriate. Consideration must now be directed to inputs which will address improvement of overall efficiency and quality enhancement in the permanent reconstruction effort and reduce vulnerability to future earthquakes.
- o Soviet Armenia has suffered from social, economic, and technical isolation over the past 70 years. Particularly evident is lack of local familiarity with the international state of the art in seismology, earthquake engineering, construction management, construction quality control, building materials manufacturing technology, building

Table 2: Current or Planned Foreign Construction Projects for the Earthquake Area Registered with the Ministry of Construction

LENINAKAN

| <u>Country</u> | <u>Agency</u> | <u>Project</u> |
|-------------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 1. United Kingdom | British Government | English School (400 students) |
| 2. Poland | Polish Government | Polyclinic (24 doctors) |
| 3. GDR - Berlin | City Government | Polyclinic (600 patients/day) |
| 4. Italy | NGO | Polyclinic (330 patients/day) |
| 5. Switzerland | NGO Caritas Medecin Sans Frontiere | Diagnostic Center and Kindergarten (90 children) |
| 6. Austria | NGO - Rogner Construction Co. and "Curier" (newspaper) | "Austrian Village" (90 houses) |
| 7. Austria | NGO | Children's Hospital (120 beds) |
| 8. Hungary | Hungarian Government | School (360 children) |
| 9. Denmark | NGO | 24 houses and a kindergarten |
| 10. USA | NGO/Armenian Assembly | Housing factory: - Block Plant - Roof Truss Plant - Window and Door Plant |

SPITAK

| <u>Country</u> | <u>Agency</u> | <u>Project</u> |
|-------------------|---------------------|-----------------------------------------------------------|
| 1. Italy | Italian Government | Italian Village 200 Temporary Houses and Polyclinic |
| 2. Norway | Norwegian Red Cross | Hospital building (200 beds) |
| 3. Czechoslovakia | Popular Front | School (840 students) |
| 4. Italy | Italian Government | School (200 students) |

KIROVAKAN

| <u>Country</u> | <u>Agency</u> | <u>Project</u> |
|-------------------|-----------------|-----------------------------------|
| 1. France | NGO | 28 Medical Clinics |
| 2. Bulgaria | Red Cross | 300 Houses |
| 3. United Kingdom | NGO/AID Armenia | Children's Hospital (150 beds) |
| 4. Czechoslovakia | Popular Front | School (480 students) |

STEPANAVAN

| <u>Country</u> | <u>Agency</u> | <u>Project</u> |
|----------------|---------------------|-------------------|
| 1. FRG | NGO/Red Cross | Hospital Complex |
| 2. USA | NGO/Armenian Church | 600 Housing Units |

ELSEWHERE IN ARMENIA

| <u>Country/Society</u> | <u>Agency</u> | <u>Project</u> |
|----------------------------------|------------------------|--------------------------------------------------------------------------------------|
| 1. League of Red Cross Societies | | Spinal Cord Injury Center in Yerevan |
| 2. League of Red Cross Societies | | 315 temporary houses in various villages |
| 3. FRG | NGO | Prosthesis center in Yerevan |
| 4. Austria | NGO (SOS Armenia) | Housing in the village of Kotaik |
| 5. The Netherlands | Private Enterprise | Europolis Urban Development (as yet no location) |
| 6. Outer Mongolia | Government of Mongolia | School (420 students) Kindergarten (140 children) in the town of Talin |
| 7. World Council of Churches | NGO | Prefabricated housing plant near Echmeadzin - 100 units to be completed for villages |

evaluation and restoration technology, and manufactured housing. There is a very strong desire on the part of all technical disciplines to obtain access to and understanding of US technology and methods in the above mentioned field.

- o There is a strong interest in using the US government appropriation to provide access to uniquely American resources, i.e., technology, equipment, and educational practices which cannot be obtained elsewhere. US training for design, construction, technical and field personnel is also needed. For example, there is consensus as to the need for specialized U.S. equipment such as seismic instrumentation, computer based geographic information systems, and computer aided design.

- o The highest priority of all local officials and most ministry officials is placed on long-term economic development. Republics within the Soviet Union are now in the process of being decoupled from the command economy. They face the prospect of independent competition for markets and resources. Every locality is anxious to develop efficient, high value added, competitive industry. Unemployment is currently the most serious handicap facing the earthquake area. Reconstruction of industry and the employment base is critical to the continued recovery of the area. Potential generation of foreign exchange is also given very high priority.

- o In spite of the rhetoric of economic planning and the centralized structure of government, there does not appear to be any effective strategic planning for long-term economic development in Soviet Armenia. Most investment priorities have been developed in isolation and reflect limited regional or organizational interests. Only one request, the baby food factory, seems to represent multi-agency consideration. There is a need for comprehensive economic development planning which is consistent with the prospect of a more open market economy or at least interaction with market economies.

- o Organizations operating in Armenia must recognize the unique conditions which pertain in the Soviet Union. There is no local NGO sector. Even the Church and the Red Cross work in close collaboration with the government. While there are dynamic changes under way in the Soviet Union, at this time it is still imperative that any program to be initiated in Soviet Armenia have

the full acknowledgement and support of the government of the republic and appropriate sectoral agencies.

- o The establishment of seismic instrument arrays in Armenia is critical to improving the understanding of earthquake risk in the area, to safe siting of future development, and to the establishment of realistic seismic design standards.

5. Recommendations

The recommendations for priority consideration by U.S.A.I.D. in the area of housing and construction are as follows:

- o Focus on the provision of technical training and education related to post-earthquake reconstruction.

Training should be provided to three levels of technical personnel. Senior construction and planning officials need short-term exposure to American construction and planning practices in the U.S. Mid-level professionals in the planning, design, and construction professions need "in-service" training and enhancement courses delivered by Armenian speaking U.S. professionals in Armenia. Students in Technical schools need access to U.S. educational materials and visiting faculty in construction related discipline. Training at the above described three levels should be provided in the following disciplines:

- Seismology and earthquake hazard estimation: Seismology and geological field studies must be established and carried out in the region to accurately determine proper seismic zonation for development of appropriate seismic design standards. U.S. oriented training for current professionals and technical students is very important to the successful accomplishment of this critical element of earthquake hazard mitigation.
- Earthquake engineering: Structural engineers, and architects must be trained to design buildings which will withstand earthquake loads. Current curricula in Armenian technical schools are inadequate. Reference must be established to current U.S. levels of professional education in these fields. This is critical for the safe reconstruction of the earthquake effected region and for the evaluation of partially damaged structures in need of repair.

- Housing production: Several international assistance efforts are introducing a range of housing production schemes. Training will be for the local takeover and eventual self-sufficiency of these operations. Training will have to include operation and maintenance of production facilities and management of housing enterprises.
- Construction Management: There is a massive construction program currently underway but its organization gives evidence of serious deficiencies. Exposure to current U.S. practices including computer applications may significantly improve the efficiency of the reconstruction effort. Quality control methods for construction are particularly needed in the reconstruction effort.
- o Provide specialized educational and scientific equipment and instrumentation related to earthquake engineering and seismic hazard assessment to complement the proposed training.

The specialized equipment for training at the polytechnic institutes in the disciplines of seismology and earthquake engineering, should include computers for computer aided design and geographic information systems. Seizure instrumentation for the development of appropriate arrays and experimental work is also important.

Other recommendations for housing and construction activities are listed below. These are important to consider in preparing the scope of work and evaluating proposals for U.S.A.I.D.-supported projects.

- o No hard currency should be spent on construction which can be accomplished with rubles. The US hard currency contributions should not be squandered on generalized materials. Nor should they be used on facilities which can be provided within Armenia for rubles, i.e., any construction other than instructive and innovative prototypes.
- o Transport expenditures should be minimized. No air transport of construction materials is justified.
- o Urban housing is under the control of Armgosstroy. Rural housing is under the control of Armgossagroprom. Intervention in the housing sector should have the support and approval of these agencies as well as relevant local government agencies.

- o Introduction of new technology in construction must be sustainable, i.e., raw materials must be available without continued subsidy. Spare parts, and maintenance for both the manufacturing process and the product should be readily available on a long-term basis.
- o Design, manufacturing, and construction should meet international standards. Particular attention must be paid to the earthquake resistance of structures.
- o A limited number of senior professionals in planning, design, and construction should be brought to the US to see the state-of-the-art of the US construction industry and to gain an understanding of how an alternative high-tech system works. Mid-level planning, design, and construction professionals should be provided with "in-service" training and short courses provided by American (Armenian speaking when possible) professionals. This training should be delivered in Armenia.
- o Technical assistance and specialized equipment should be provided to assist in the evaluation and reinforcement of existing buildings. There is particular interest in the preservation of historic buildings in the earthquake area and in the evaluation of buildings in areas like Yerevan at risk of future earthquakes.

C. Health Services

1. Introduction

The December 7, 1988 earthquake resulted in some 16,000 hospitalized injuries and 115,000 non-hospitalized injuries. These injuries presented a load of morbidity that was impossible for virtually any health services system to deal with immediately after the acute event. The health services in Armenia dealt with the acute phase of the disaster remarkably well considering some of its chronic problems and its lack of any major experience with disaster preparedness. For example, just during the first night following the disaster it is estimated that some 1,500 injured patients were evacuated by helicopter alone from the disaster area to Yerevan. Table 3 presents some of the statistics regarding the direct impact of the disaster.

As in other disaster situations, there are both direct and indirect effects of the acute event. Thus, the effects on health of the earthquake in Armenia go beyond the injuries and fatalities directly caused by the disaster. The following is a categorization of earthquake related morbidity and mortality:

- o Direct Effects Resulting from the Trauma;
 - Deaths;

Table 3 -- Some Reported Statistics Concerning the Impact of the Earthquake on the Health Sector in Armenia

| | |
|-------------------------------------------|-------------|
| Official Death Estimate | 24,944 |
| Estimated Injuries | 130,000 |
| Injuries Requiring Hospitalization | 12-16,000 |
| Homeless | 500-700,000 |
| Crush Syndrome | 2,500 |
| Crush Syndrome Requiring Dialysis | 500 - 600 |
| Amputations | 400 |
| Spinal Injuries with Neurological Deficit | 300 |
| Hospitals Destroyed | 84 |

Nature of Injuries Resulting from the Earthquake
(In Percentages)

| | % |
|-------------------------------|------|
| Skull & Facial Fracture | 02.7 |
| Brain Concussion | 03.6 |
| Other Internal Head Trauma | 03.6 |
| Open Head Facial Wounds | 06.6 |
| Upper Extremity Fracture | 05.5 |
| Traumatic Amputations of Arms | 04.1 |
| Elective Amputations of Arms | 00.3 |
| Lower Extremity Fracture | 12.1 |
| Open Wounds - Leg | 02.1 |
| Traumatic Amputation of Legs | 03.6 |
| Elective Amputation of Legs | 01.2 |
| Superficial Trauma | 24.9 |
| Crush Syndrome | 11.0 |
| Other | 13.1 |

- Injuries;
- Crush syndrome and other complications;
- o Indirect Effects due to the Stressors;
 - Psychiatric morbidity;
 - Psychosomatic morbidity;
 - Somatic illnesses, both short term and long term;
- o Exacerbation of Baseline Health Problems;
 - Secondary to worsening environmental health;
 - As a result of the disruption of health services.

The primary focus of attention of most relief programs, as is the case in the Armenia earthquake, has been on the direct effects. Beyond the alleviation of the effects of the direct impact are the more important indirect and baseline short- and long-term health problems that need to be addressed. In this context the direct mortality and morbidity related to the trauma of the earthquake in Armenia has to be seen as the tip of an iceberg. Actually, the bulk of the problem will be in indirect effects and due to an exacerbation of the existing set of health problems. For example, although the estimates of the physically handicapped due to injuries related to the earthquake may be few thousand persons, there are over a half a million people in need of various components of the health care system and whose problems are not being taken care of as a result of the disruption of health services.

Most relief programs and health services delivery to the victims of the earthquake are also characterized by such a narrow focus. The issues addressed by these efforts are those resulting from the direct trauma of the earthquake. Attention tends to be placed on the rehabilitation of the amputees and the illnesses at the severe end of the spectrum and little attention is focused on the more common but less severe forms of morbidity. It is essential that under such circumstances a comprehensive program be implemented that addresses the broader needs of the total population affected by the disaster. The framework for such a program would include:

- o Preventive education addressing the general health problems faced by the population;
- o Preventive engineering with the appropriate design and structural changes to the buildings;
- o Disaster preparedness of the total population and the health services; and
- o Provision of baseline health services.

It is important that such programs be developed not on the basis of the mortality and morbidity statistics, but with a perspective on the

ability of the available health services to cope with the massive set of health problems created by the disaster. Such a capability will dictate the success of a rescue and long-term relief operation.

With the magnitude of the health problems developed by the earthquake, attention is primarily focused on relief of suffering rather than preventive measures projecting into the future. Thus, preventive strategies need to be part and parcel of any health program in an earthquake-prone zone such as Armenia.

In sum, in a massive disaster situation such as occurred in Armenia in December 1988, the challenge of program development is how to strengthen the health services and improve its ability to cope with the situation in both the short and long term with a primary concern on preventive care and disaster preparedness.

2. Situation Analysis

The health services in Armenia are facing a large number of problems created not only by the December 7 earthquake but also by the new environment of *Perestroika*. Seventy years of Soviet socialized medicine have started with "noble purpose and grand design", but have ended up with "flawed execution and mixed results." ' Thus, one is continually faced with the necessity of not only replacing what has been lost in the earthquake, but also of introducing changes in a system that has been isolated for a number of decades. In addition to these problems, the health services have also had to respond to the acute needs created by the conflict with Azerbaïdjan and the 300,000 refugees that this conflict has brought to Armenia. For the purposes of the current report, the main providers of care are the government and the PVOs.

a. The role of Government

Two Ministries are primarily concerned with the delivery of health services within the context of earthquake relief. These are the Ministry of Health and the Ministry of Social Security.

Since the December 7, 1988 earthquake, the Ministry of Health has been able to re-supply the earthquake affected regions with a number of hospital beds that is comparable with the available beds prior to the disaster. However, most of these hospital beds are available in makeshift facilities and very temporary arrangements. The exception is the hospital built by the Norwegian Red Cross in Spitak. The main issue is that most of the problems previously affecting the delivery of medical care still exist in the new facilities. Thus, a major restructuring of services is needed in addition to the provision of new facilities.

' reference Field MG, AJPB 80(2):144, 1990

The provision of hospital beds and the massive assistance in medical supplies has led one non-health professional to comment that "in Armenia we have got so many hospitals and syringes that we can all afford to be sick". Considering Armenia's current state of flux, it is very difficult to make projections from the current situation to the future with any reasonably valid process. For example, the previously accepted Soviet standards are for 14.5 hospital beds per 1,000 population, which is too high by any Western standards. This issue has led to questions regarding whether the Ministry of Health should follow the old standard or adopt a new one. This uncertainty regarding standards affects the efficient planning and operation of services. The health sector is still run as a crisis operation fifteen months after the earthquake. For example, four deaths in the nursery of a hospital commanded almost the total attention of the Ministry for months.

The Ministry of Social Security had some responsibility in rehabilitation prior to the earthquake and it has continued providing such services after the disaster. According to this Ministry there are over 5,000 handicapped persons due to the earthquake in Armenia. Of these 2,000 are traumatic, 2,000 due to physical illnesses and a similar number due to psychoneurotic conditions. Overall the country has a total of 5,000 persons with physical defects and deformities according to this same source.

The Minister of Health, Asnavorian and the Vice Prime Minister both presented the assessment team with the Armenian government's proposal for the allocation of the USG contribution. The Government of Armenia proposes that the money be applied to the development of a baby food processing and packaging plant. It was reported that infant mortality and infant health in the earthquake area is a grave concern for the population. After the great loss of life, particularly children, the health of the future generation is very important. Armenia has the raw material and even unique processes (licensed to the Japanese) for baby food. What is needed from abroad is food processing technology; both equipment and training. There is particular interest in packaging technology. This project would provide employment in Armenia and could provide a useful product through out the region. The Minister of Health added that the package label might carry a message to parents and children that this nutritious product was provided by the American people. Supporting data on infant health and nutrition in the earthquake area was requested but not provided. Both the Minister of Health and the Vice Prime Minister were informed that the appropriation was intended to support US based PVO activities. However, this proposal is forcefully advocated by the Government of Armenia and should be considered.

b. The four major regions affected by the earthquake

During our stay in Armenia, we visited all four major regions affected by the earthquake. The following is a brief description of the problems with the health sector in each of these areas:

1) Leninakan

From an original pre-earthquake population of 235,000, Leninakan has recuperated a population of about 200,000 currently. It is estimated that close to 15,000 persons died in this city as a result of the earthquake.

All hospitals and polyclinics were destroyed and most of the city's population was made homeless. At present the three hospitals in operation are in makeshift arrangements either in prefabricated units or in partially damaged buildings. The medical and nursing staff have important problems of lack of logistic support, non-availability of appropriate specialized services and equipment and supplies. Morale is very poor and there is mistrust of the leadership at the local level. The Feldscher School of Leninakan has long been closed and the only training facility for health professionals is the local nursing school that has a 22-month training program. Currently there are about 500 students in this school. As in other areas of the country, the training of the nurses is a responsibility of medical professionals and as such it diverges completely from Western models.

In addition to the major problems of the delivery of health services for the 200,000 persons living in this city there are important problems of environmental sanitation such as inadequate liquid and solid waste disposal that need to be addressed.

2) Stepanavan

The pre-earthquake population of Stepanavan of 20,000 has increased to 24,000 with the inflow of Armenian refugees from Azerbaijan and construction workers. Although, only 91 deaths were caused by the earthquake in this township of Alpine natural beauty, close to 70% of the population were left homeless as a result of extensive damage and destruction. Since this was a resort town its population would normally increase by 10,000 persons during the summer.

As in other fields, the health sector has suffered extensive damage and its facilities had to be improvised. Currently the main hospital of the town is made of 20 small prefabricated units with some 50 beds. A new prefab hospital has been donated by the Federal Republic of Germany and it has been set up about one mile from the current hospital. This new hospital is made up of about 100 prefabricated units but is still not furnished or equipped. It is expected that with this new unit Stepanavan will have some 150 beds, which will provide a bed-to-population ratio which is lower than the previously established standards. The Ministry of Health has about 600 employees in this region, including approximately 90 physicians and 300 nurses. Most of these health professionals are natives of the region. There is a weekly conference for all physicians. The estimated infant mortality for 1989

was 13 per 1,000 while before the earthquake it was 15.2 in this region.

3) Kirovakan

The pre-earthquake population of Kirovakan was 172,000. Currently with some 20,000 foreign workers involved in the reconstruction, this city has about the same population figure as in the pre-earthquake period.

Prior to the disaster there were some 15 hospital inpatient facilities with 1,115 beds as well as 23 ambulatory care units. Although compared to Leninagan and Spitak the death toll was much lower in Kirovakan (670 deaths), the destruction and damage to institutions and facilities was very serious. The city currently has its previous staffing pattern of about 350 physicians and 1,500 midlevel health workers. In addition to the need for rebuilding and restructuring its medical care facilities, Kirovakan needs important inputs in modernizing its garbage disposal system as well as cleaning up the effects of the pollution caused by years of industrial misuse of its natural resources.

4) Spitak and Surrounding Villages

This region is where the toll has been worst--the area closest to the epicenter. The total destruction of the city and many of the surrounding villages with several thousands of deaths continues to permeate all activity and all aspects of life fifteen months after the earthquake. Although the earthquake was at its worse here, there is little reconstruction. According to the mayor, 500 families are still living in tents in this region compared to almost none in Leninagan.

The destruction in the health sector has been as pervasive as that of the housing. Some 25% of the medical and nursing resources disappeared and none of the institutional buildings survived. Currently, there are 80 physicians working in the area with an adequate complement of nursing staff. The major development in the health care sector in this region is the newly built Fridjoff Nansen Hospital of the Norwegian Red Cross. With some 200 beds this is a modern facility unique in the whole country. With an American trained new administrator, this facility has the potential of providing a better quality of health care than the rest of the hospital system in the country. However, there is an important need for adequately equipping this hospital before raising expectations very high. One of the busiest sections of this hospital has been the maternity unit. Births have increased by 70% since the earthquake and many women in their forties have been giving birth in this hospital. Recently, an epidemic in the nursery caused a few deaths among newborn babies. This had led to the closure of this unit for sterilization purposes during our visit there. The two villages visited, Sarametch and Tchrashen, had the same problems of Spitak but on a smaller scale. With the amount of destruction in the urban areas one wonders whether the needs of rural health will ever be adequately responded to.

c. The foreign PVOs

Most foreign PVOs have operated in an environment that is very different from what they have faced in other parts of the world. It is impressive as to how much has been achieved with the joint efforts of these PVOs and the people of Armenia in such a short period of time. The initial efforts of most of these PVOs was focused on getting relief and humanitarian aid to the earthquake victims in the fastest way possible.

Following the acute phase, the PVOs that decided to stay and continue their much needed assistance had to make a quick transition from emergency relief to program development. These programs had to be defined in a rather short period of time with inappropriate intelligence about the real needs and lack of experience about the system and the country. Thus, under such circumstances decisions had to be influenced by the advice and direction given locally. Such advice about priorities was sometimes routinely restated to all the organizations with the ensuing duplication of effort by the PVOs.

Currently, most PVOs operating in the health sector have made the transition from primarily distributing medicines and equipment to that of program involvement and rehabilitation. At present, the primary focus in the health sector of most of these foreign PVOs is the provision of rehabilitation services. Six out of eight US PVOs working in this sector in Armenia have a program emphasis in rehabilitation. Thus, this will be one area where the health services in Armenia will be able to be self sufficient within the next couple of years, particularly now that most of these programs have a well defined manpower development component.

The need for a more preventive perspective in the delivery of health services is not adequately emphasized by most PVOs. Areas of the health care system in the earthquake zone that need to be addressed urgently are not being tackled. One gets the impression, for example, that disaster preparedness is a secondary priority. Except for the Red Cross program in Spitak, nobody has talked about this critically important prevention activity.

One of the important characteristics of the health care system of Armenia is that it has the right anatomy but lacks an effective physiology. The services exist at all levels of the system and have a well defined logical structure. But the process fails at various points. One of the ways to improve the efficiency and effectiveness of the system is by improving its information processing capability or its nervous subsystem. The database project for the earthquake region funded by the Armenian Relief Society with the Republican Information and Computer Center of the Ministry of Health and the Johns Hopkins University serves such a purpose. Such efforts at improving the process of the health care system will have both immediate and long term impact. The three components of a successful assistance in this framework

include training, modern equipment capability and willingness to change by the recipient group.

A more detailed discussion of the work of PVOs can be found in Chapter 3.

3. Findings and Conclusions

- o The current needs for the health services in the earthquake devastated areas are massive. These needs have to be addressed from both a morbidity and a health services perspective. The programs to be implemented need to go beyond the delivery of services for the physically and psychologically handicapped. These latter concerns represent only the tip of the iceberg of problems faced by the health sector in the earthquake devastated areas.
- o Within the framework of the proposed current US funding, it is difficult to project that any major system changes could be achieved. However, one can focus on simple programs that aim at manpower development and train people to introduce the needed changes in the system. It is also important to foresee the need for a solid database for appropriate decision-making at all levels of the health care infrastructure.
- o It is extremely difficult to set program priorities within such an environment of massive need. Decisions under such circumstances have to be based on feasibility and potential for permanence. Thus, training that is incorporated within a context of development of improved systems for health care, will have both short term and long term impact.
- o The disruption of the health services in the earthquake region has markedly affected the ability of the Government to respond to the health care needs of the disaster affected population. An important element in the disruption of the health services and at times the lack of appropriate decision-making is the absence of an information/communication network for these services. The Ministry of Health has a good core unit at the central level that leads the information activity across the country, but the lack of proper communication equipment as well as access to modern management and health surveillance expertise, leads to an inadequate decision process regarding the needs of the earthquake affected population. These needs are dynamic and are

changing continuously. Thus, one can not be satisfied with ad-hoc assessments and surveys.

- o As noted from our brief survey of activities and facilities, very little has been done since December 1988 to improve disaster preparedness. Considering the proneness of the region to earthquakes and a high probability of similar disasters affecting this regions, it is imperative to develop local capability to respond to such a calamity in the future.
- o Private individuals and government officials have given considerable thought to the type of assistance they need in the health sector. Table 4 lists project ideas that were proposed to team members during this assessment.

4. Recommendations

The priority recommendations for USAID in the area of health are as follows:

- o Improve the information and communication capability of the health services system, including the provision of equipment and training.

The development of a solid database about the earthquake survivors will improve the Government's decision-making capability with regards to the health services delivery for this population. An improved records and information system will also have a significant impact on the provision of medical care to the individual patients in the earthquake zone. The core elements of such a program would involve:

-- Training of district health officers in health information skills and modern epidemiological techniques;

-- The development of a surveillance program regarding the health problems of the earthquake zone; and,

-- A quality assurance program involving the primary and intermediate levels of health services with an emphasis on continuing education and on the job training of health professionals at all levels.

- o Establish training programs for disaster preparedness for the earthquake region including the procurement of appropriate emergency and rescue equipment.

Table 4: Health Project Ideas Provided To Team Members

A. LARGE SCALE PROJECTS

1. Baby food factory & training
2. Technical college of health sciences
3. Strengthening of current programs. (more of the same)

B. SMALLER SCALE PROJECTS

1. Music therapy. Supporting the activities of the Philharmonic
2. Vocational assessment & training of earthquake victims (people)
3. Education of relatives of disabled children (Hope)
4. Exchange - US residents in rehabilitation in Yerevan (Hope)
5. Comprehensive Pediatric Rehabilitation Center of excellence (Hope)
6. Directory of US assistance & projects in Armenia
7. Supply & training of Spítak Hospital Laboratory
8. Medical equipment maintenance & training program
9. Waste disposal - Leninakan - Kirovakan
10. Diagnostic center - Kirovakan
11. Development of earthquake survivors database
12. Disaster preparedness (Red Cross)
13. Nuclear Magnetic Resonance Diagnostic Unit

Source: Devres team conversations with individuals and officials of public and private organizations in Armenia.

Such a program would include a planning component, an organizational framework, and training at all levels for emergency health services response. While many of the resources for this program should be generated in Armenia, U.S.A.I.D. funds could provide the expertise in planning and training as well as equipping the emergency health services and the local disaster relief teams.

- o Support a faculty development program for the School of Nursing in Leninakan.

Considering that the core of the health care personnel in the country is made up of nurses, such a program will have lasting impact on the health services in the earthquake region. This program will need to be carried on primarily in Armenia with a small component of short-term training in the U.S. with involvement of faculty from U.S. schools of nursing.

III. CURRENT ACTIVITIES OF US-BASED PVOs IN ARMENIA¹

A. Overview

The Assessment Team examined PVO program activities in the sectors of housing, health, and training. Because training programs were typically related to either the health sector or the housing sector, this chapter treats the programs of the PVOs under the headings of housing and health. Training programs are included under these two headings.

The 19 PVOs visited operate at different levels of complexity and scope of programs. The Team was impressed by the amount of work achieved in each case which far exceeded the expectations from a mere accounting of available resources both financial and human. The dedication and sense of urgency that drive the individuals involved in these programs are the only explanations for this high success rate. Furthermore, in its own way, each PVO has been successful in establishing contact with local personnel, paid or voluntary, and has arrived at some kind of understanding with the local and republic level authorities under whose jurisdiction they provide their services. Some of the PVOs like Project Hope and the American Red Cross have also obtained the official approval of the Central Soviet authorities concerned.

The PVOs have varying degrees of representation and logistical capabilities in Armenia. The Armenian Assembly of America, the Armenian General Benevolent Union, Project Hope and the American Red Cross as well as the Adventist Development and Relief Agency International have permanent representation in Armenia with established offices and the ability to provide logistical support.

Other groups, including The Armenian Relief Society, the Mennonite Central Committee, the American Jewish Joint Distribution Committee, Americare, Save the Children, the Earthquake Relief Fund for Armenia of the Armenian Relief Society and the Prelacy and the American Friends Service Committee, have only a designated representative in the field. These individuals are contact persons in Armenia for these American-based PVOs.

Both branches of the Armenian Relief Society, Church World Service, Catholic Relief Service, the Armenian Missionary Association, the

¹The contents of this chapter are based on the Devres Team's field observations and discussions with field personnel. While every effort was made to accomplish comprehensive first hand contact with PVO projects and personnel, some people were not in Armenia at the time of the team visit and in some cases comprehensive project data was not available. This chapter describes the current status of projects in the field as of March 15, 1990.

Armenian Educational Council, Inc., Medical Outreach for Armenians, Inc., the Diocese and the Prelacy have research, work or professional/confessional associations with local institutions of higher education, ministry, research services or local churches and church organizations. Several of the PVOs have wide international networks and support in administrative staff and logistical capabilities such as the American Red Cross, the Armenian General Benevolent Union, the Armenian Relief Society, the Adventist Development and Relief Agency International, Church World Service, Save the Children, Americares, the Mennonite Central Committee and the Armenian Assembly of America.

The different areas of outreach and service of these PVOs have been discussed in Chapter II. It is worthwhile to repeat, however, that within the limits set by their resources, each one of these organizations has managed to run important operations during the relief phase. All of them are now in a period of transformation of goals and programs geared towards the reconstruction effort.

The government authorities and officials had only positive comments for all these organizations although each Ministry seemed to be more familiar with the operations of the PVOs working within their own jurisdiction. Most of the PVOs have worked themselves out of the relief jobs they were performing.

In planning for new programmatic activities, each PVO is working on a different time schedule depending on the type of activity being proposed. All PVOs are in agreement, however, that they are seeking to transmit to local specialists and institutions the capability to be self sufficient in the area of their specialization. Their highest priority is now the development of skills which will afford long-term development to the Armenians and the Armenian Republic in the areas of disaster preparedness and reconstruction capabilities in science, technology and the economy of the country.

B. US Based PVOs with Activities in Construction

1. Armenian Relief Society (ARS)

In its Permanent Prefabricated Housing project, ARS has contracted with a Yugoslav construction firm (Machinocommercexport) to build housing at two sites, Akhourian (near Leninakan) and Grashen (a village between Leninakan and Spitak). The project goal is to construct 190 Yugoslav prefabricated houses. These houses are estimated to cost \$ 245/m² exclusive of transportation and site preparation. The houses are of good quality, and their construction was supervised by the Yugoslavian contractor. Mr. Vahig Khachatourian is the site representative for the ARS project. He has established a good working relationship with the Gossagroprom (the rural development agency of the Ministry of Agriculture) and the project appears to be successful.

One hundred of the houses are being paid for by ARS (West Coast), 40 houses are being provided by ARS (East Coast), and 50 houses are underwritten by Blue Cross (a French Armenian organization). The project also includes two elementary schools and a kindergarten. As of March 1990, 42 houses, one school, and one kindergarten have been completed in Grashen and the foundations were under construction for the 35 houses and school in Akhourian. One million dollars has been provided by ARS for this project; as of March 1, 1990, \$875,000 of this amount has been disbursed.

2. American Jewish Joint Distribution Committee

The JDC has designed a children's Rehabilitation Center for Leninakan. The estimated cost of the Center construction is \$450,000 but the actual construction is to be provided by Armgosstroy (Ministry of Construction). As of March 1990, the Ministry of Construction has not yet signed a protocol for the construction of the Center. Ms. Lilly Bouldoukian, the JDC representative (seconded by Save the Children) in Leninakan was working actively to gain Ministry of Construction commitment. Mrs. Boudoukian noted the added priority of building a day care facility in conjunction with the rehab center. To date no construction has been initiated.

3. American Red Cross

The American Red Cross has been active in Armenia through the League of Red Cross Societies. The ARC has contributed to the League Construction program along with other national societies. The construction program has included 315 temporary housing units, 3 kindergartens, 2 schools, 2 clinics, and 2 district hospitals. The League construction was carried out by German and Dutch contractors. The housing is in villages in the area of Spitak. It is generally unserviced and unoccupied as of March 1990. The 315 units were built at a cost of \$1,100,00 (\$150/m²).

Although the Norwegian Red Cross Hospital has not had the support of the League or ARC, it is one of the most successful assistance efforts in the area. Construction was completed on September 7, 1989 by the Norwegian Contractor OPAK nine months after the earthquake. It contains 8,200 m² of usable floor area and provides 200 beds. It was built at a cost of 49,000,000 Norwegian Kroner.

Aside from the Norwegian Red Cross Hospital, the League construction projects have received local criticism as being too late and inappropriate.

Future League construction efforts are to be focused on a building for the Spinal Cord Rehabilitation Center in Yerevan. This should be carried out by the Armgosstroy at local expense.

4. Armenian Assembly

The Armenian Assembly has targeted long-term, permanent housing as a priority in the earthquake zones. The Assembly is erecting and equipping three factories to produce concrete block, roofing, trusses, window and door frames.

As of March 1990, initial site work is being carried out on the factory site by the Leninakan branch of the Armgosstroy and foundation work has begun. Seventy-six boxes of manufacturing equipment have been delivered to the site (airfreighted by Aeroflot from the US). Construction of factories is expected to commence as soon as the American Construction Site supervisor, Russell Berry returns (expected March 16, 1990).

It is expected that this set of factories will be able to produce components for 10,000 single family houses per year (operating at one shift per day). These houses should directly benefit about 40,000 people per year. The factory will also employ several hundred local people. The distribution of the houses will be handled by a joint panel of government and PVO representatives.

This initiative is of particular interest and merit because it attempts to introduce a major technological development into the Armenia housing industry. It also places new emphasis on single family housing and contributes to private home ownership. The project will initially be managed by Americans, but local labor will be trained and production will be based entirely on local raw materials. This reliance on local materials has expanded the project to include a saw mill and a wood drying kiln in order to guarantee adequate lumber quality for the trusses, windows, and doors. It has also been necessary to bring back samples of local material (aggregate, sand, sheetmetal) to the US for testing in order to adapt the manufacturing process. Quality control will be a major component of this project, and if successfully adopted will provide a major contribution to the Armenian construction industry.

Phase I of this project is budgeted at \$ 3.5 million. While it is intended that local personnel will take over the management of the factories, it is not yet clear what local organization will take over.

Mr. Raffi Hovannisian is the full-time director of the Yerevan office of the Armenian Assembly. He has good contacts in the government. His office has a staff of Americans and Armenians, and provides an effective base of operations for many groups working in Armenia.

5. Catholic Relief Services

CRS has no independent program in Armenia but has contributed \$805,000 to Caritas. Caritas has participated in the funding of a prefabricated housing assembly plant near Echmeadzin. The factory is supported by a consortium of seven church groups including the World Council of Churches, Lutheran groups (in Germany and Norway), and the

Armenian Orthodox Church. The project is being carried out by a German construction firm from Stuttgart, Wolfe and Muller. The factory has been set up in an industrial area near Echmeadzin in premises provided to the Catholicos by Gossagroprom (the Rural Development Agency of the Ministry of Agriculture). All equipment has been imported from Germany and Sweden. All material is imported from Norway and Germany. This includes finished lumber, sheetrock, insulation, windows and doors, roofing and plumbing fixtures. The housing panels are assembled in the plant using local labor. The houses are 117 m² in floor area and cost 350 rubles/m² finished with all fixtures.

The director of the factory is Alec Ataian who works for Agroprom. There is one German overseeing work at the factory and seven Germans working at the building site. When materials are in adequate supply the factory assembles panels for three houses per week or 12 to 15 houses per month. To date 44 units have been assembled. Twenty-seven have been erected on site and connected to infrastructures. Ten have been erected but have no hookup. The remaining seven are in the yard of the factory awaiting delivery.

Added components of the operation include a stone cutting saw to cut local tuff (rose colored volcanic stone) to be used in the exterior cladding of the houses and a window and door factory which is to be delivered to the current site in April 1990.

This project plans to construct 50 houses in Hajkaren (north of Leninakan) with one kindergarten and 50 houses in Gyulagarek (near Stepanavan) with one kindergarten. The plan is to finish these 100 houses and to leave by August 1990. It is not clear how this project can be sustained as it is totally dependent on imported material. This project represents an investment of 17,000,000 DM. That would suggest an actual cost of DM 1,453/m² - far more than the reported 350 rubles/m.

6. Church World Service

Church World Service has provided \$500,000 for the housing panel assembly factory described under Catholic Relief Services.

7. Armenian Educational Council, Inc.

No current program activity was observed, however the focus of proposed work on improvement of deteriorating infrastructure is insightful and warrants further consideration.

8. Armenian General Benevolent Union

The AGBU has no construction program under way in the field as of March 1990, however it has major construction activities planned. AGBU plans to build a 10,000 ton Cold Storage plant in Leninakan adjacent to the existing slaughterhouse. The project has been developed with UNIDO supervision and is currently at the bidding stage. Bids have been received from firms in Finland, Denmark, Germany, and Italy. A

facility is expected to cost \$4,500,000. A second smaller facility is planned for Kirovakan.

The AGBU also plans to build a disposable syringe plant which is budgeted at \$3,500,000. This project is not yet at the bid stage.

Site work, infrastructure hookups and foundations may be handled by Lenstroy, the construction organization of Leninakan. It is not yet clear how much of the building construction in these projects will be done by foreign contractors.

A third AGBU project is of particular interest to the housing and construction sector though it is not a construction project. It is the proposed Technical University for Northern Armenia. This institution is to be based on the American model for technical education. It is to provide instruction in English and to have a curriculum designed in conjunction with a team of American educators. The program is to focus on the fields of engineering, seismology, computer science and business administrators. This concept of creating an American educational institution in Armenia has received enthusiastic support from a wide range of professionals, and academics in Armenia, including the Minister of Education Misak Davtian. This Technical Training Institution may provide the most important contribution to long term recovery of Northern Armenia. It might also be expanded to provide the context for the range of PVO initiated training efforts in Armenia. This might imply the addition of health sciences and agriculture.

As of March 1990, AGBU is represented in Armenia by Bishop Karekin Nersissian in Yerevan. A permanent office is to be opened in the near future. The president of AGBU is widely known in Armenia and significant contributions are anticipated.

9. Adventist Development & Relief Agency

ADRA and the Mennonite Central Committee have contributed \$1,217,157 to the program currently being executed by ADRA - Germany. The primary activity of ADRA has been the construction of a physical therapy center for childrens' rehabilitation in Yerevan.

The center is being built on the site of an official rest house compound in Yerevan. The structure is made of pre-fabricated light concrete panels which were flown to Armenia from Germany by Aeroflot.

Karl Brauer, The German ADRA director of the project indicated that there is interest in developing a housing factory based on the system used to build the physiotherapy center. This housing factory is a part of the ADRA proposal to AID.

While the German light concrete panel system has the advantage of being lighter than conventional concrete construction, it did not appear to be superior to comparable US building systems. It is not clear that a

factory producing the system would be sustainable using exclusively locally available materials.

10. Armenian Engineers and Scientists of America, Inc.

AESA has developed extensive contacts in the technical professional and research community in Armenia. Joint proposals have been developed for the execution of fundamental and applied studies of seismic risks in Armenia and the earthquake vulnerability of existing structures in Armenia.

Prof. Serge Grigorian of the Institute of Geological Sciences of the Academy of Sciences of Armenia SSR reported that he has worked actively with AESA and that his institute and the construction research institute are very enthusiastic to develop collaboration with American professional and scientific colleagues.

Prof. Grigorian provided a list of US scientific equipment and instrumentation necessary for the establishment of the Armenian Seismic Array and for the pursuit of geo-chemical methods for estimation of potential seismic activity.

The potential of this project is very far-reaching. The proposed research work is critical to the definition of standards for siting and construction everywhere in Armenia. It should also be noted that this project represents a uniquely American contribution. The project would fit very well into the criteria identified at the conclusion of the Housing section situation analysis.

C. US-Based PVOs with Activities in Health

1. The American Red Cross/League of Red Cross Societies

There are several components to the program of the ARC/LRCS in Armenia with a primary focus on rehabilitation medicine and on housing in the rural areas of Spitak/Akhurian. The program operates as a joint project with the Soviet and Armenian Red Cross Societies. The strengths of the program include:

- o Strong linkages with a local counterpart organization;
- o Solid emphasis on manpower development. The training program introduces both new knowledge and new process to the system and addresses need at all levels of professional practice. There are well defined educational objectives for all programs;
- o Inclusion of a component of disaster preparedness initiated by a PVO which is unique;
- o Accessibility to an international network of Red Cross societies.

However, the program has certain problems that need to be dealt with. There are:

- o Inadequate coordination with the other PVOs that may lead to some duplication of effort;
- o Much of the program is Yerevan based while much more could be done in the earthquake zone;
- o The narrow focus of the rehabilitation program to spinal cord injuries has by its nature become primarily a program that serves the needs of a population that goes far beyond the earthquake victims.

Overall, this is a good program that has been very slow to move. With the available data it is difficult to make cost-benefit assessments at this stage.

2. Armenian Relief Society

The various branches of the Armenian Relief Society (ARS) have been involved in a number of health sector projects in addition to their involvement in construction and education projects. In addition to the distribution of drugs, equipment, and supplies, the ARS has an ongoing three year project with the Ministry of Health in developing a database for earthquake survivors involving the Johns Hopkins University. The strengths of this program include:

- o Emphasis on training the local Ministry of Health personnel;
- o Development of new and improved systems that will directly affect the health care of the earthquake survivors;
- o Scientific scrutiny of the various components of the program regarding the care of earthquake survivors;
- o Local control by Ministry of Health personnel;
- o Accessibility to the resources of a large university.

The major problems with this program are:

- o Lack of visibility from the general public;
- o The emphasis on scientific validity;
- o Long-term impact.

This is a strong program with data already generated that could be used for disaster preparedness tailored to the conditions and needs of the local population. A case-control study of some 500 hospitalized injuries in Leninakan has already been finalized and a cohort of some 64,000 earthquake survivors will be examined and followed starting April 1990.

3. Project Hope

The focus of this program is primarily on rehabilitation of children. The program is done with the Ministry of Health based at the Third Children's Hospital of Yerevan. In addition to this hospital the program operates an outreach clinic in Spitak. The strengths of this program include:

- o A strong emphasis on training. The program aims at developing the full spectrum of professionals for pediatric rehabilitation. The curriculum is modular and could integrate changes if it has to be coordinated with the other existing training programs;
- o Well-organized offices in Yerevan with excellent support staff. The leadership of Dr. George Kevorkian is a major asset to the program;
- o A long-term (five year) agreement with the Armenian and Soviet governments;
- o Provision of high quality of services which have attracted patients from as far away as Tashkent and Moscow.
- o A well-defined future program with a perspective of broadening activities.

There are some problems that this program needs to cope with. These include:

- o Lack of a strong presence in the earthquake region. This is being addressed now with the outreach clinics;
- o Lack of coordination at the program level that will hopefully be better addressed soon.

4. World Rehabilitation Fund/Lebanese Armenian Community Prosthesis Center/Americares

In this program the Lebanese Armenian community and a well organized American PVO, the World Rehabilitation Fund, have joined hands to develop an international success story in earthquake relief. The

program operates with a specialized focus of prosthesis and orthotics. The strengths of this program include:

- o Its well defined focus on one aspect of the relief needs;
- o An emphasis on training local prosthesis and orthotics technicians;
- o Its development of a solid database for the needs of rehabilitation accessible through simple computer equipment. This is one of the few places in Armenia where one could get access to data about use and need of services not only for this particular program but also for other programs;
- o Program operations from the facilities that were in existence prior to the earthquake. Thus, it will be very easy to integrate it when the PVO withdraws.
- o Requires minimal input from expatriate professional staff and as such operates very efficiently.

There are some problems that this program may need to address including:

- o Potential problems of funding with the volatility of the Lebanese situation;
- o Too little visibility in the earthquake region.

It was not clear whether Americares had any inputs in this program beyond airfreighting the equipment and material.

5. Medical Outreach for Armenians, Inc.

This organization operates primarily by the provision of medical equipment and supplies to the hospitals of Armenia. At the time of our visit there was no field activity that we could visit. The program is based on the voluntary contributions of some Armenian American physicians and organizations.

6. Earthquake Relief Fund for Armenia/Psychiatric Care Program

The psychiatric care program of the Earthquake Relief Fund has provided extensive psychotherapy and psychological care to children and parents in the earthquake affected population. The program has a strong field component of emergency relief but the long-term perspectives are not clearly defined.

7. American Jewish Joint Distribution Committee/Save The Children

These two organizations have joined their efforts to focus primarily on rehabilitation. So far sixty-one amputees have received extensive care in Israel and a rehabilitation center is under construction in Leninakan. The strengths of this program include:

- o A focus in the earthquake zone with a location of the projected rehabilitation center in Leninakan;
- o Development of adequate logistic support facilities in Leninakan under the very difficult circumstances of the city;
- o Strong involvement with local officials and professionals at the grassroots level.

There are some problems that this program needs to address, including:

- o Inappropriate support from the central government and authorities;
- o The need to broaden the program to earthquake affected areas other than Leninakan.

D. Findings and Conclusions²

- o The Armenian Assembly of America is the most effective American PVO working in Armenia at this time. The reasons for this are several:
 - It has the largest number of professional staff in Armenia working in a coordinating capacity in its own offices.
 - It can coordinate the efforts of other PVOs and NGOs in Armenia. All of the PVOs and NGOs contacted had already collaborated with the Armenian Assembly or had used some of their services.
 - It has the largest U.S. project in Armenia at present (in the area of housing).
 - It provides coordination and communication capabilities for the other PVOs, especially the smaller ones who do not have their own logistical capabilities.

²Many of the conclusions in this section are drawn from the March 11, 1990 meeting with the representatives of American PVOs in Armenia.

- It includes representatives of many Armenian groups.
- o The Armenian General Benevolent Union has been active in relief work and educational activities since the beginning of the century in the United States and in Armenia. However, at present, it does not have offices and staff in place in Armenia. Its activities (most of them at the planning stage) are coordinated and facilitated by the Armenian Church, mainly the Bishop of Yerevan, his office and the group of volunteers associated with his office.
 - o The Armenian Relief Society has been active in relief work and educational activities since the beginning of the century in the United States and in Armenia. However, at present, it does not have offices and office staff in place in Armenia. There is one professional working on one of its projects (construction work) intermittently. The health related projects of the ARS are being coordinated by a senior professional at the Health Ministry in Armenia. The ARS shares close relationship with other PVOs.
 - o Although the AAA, AGBU, and ARS are all experienced groups capable of managing the U.S. A.I.D. project, and it is clear that all three would like to apply for a share of the appropriated funds to realize some of their programs which are now in the planning stages, the AAA could best serve as a "lead" PVO for the reasons cited above.
 - o All three Armenian PVOs may eventually be affected by political developments in the earthquake area and in Armenia. Both AGBU and ARS have a long history of trying to stay neutral in order to pursue their humanitarian activities in the countries of their operation. (Both of them have worked in the United States, in Armenia, in the Middle East and in Europe.) However, the political inclinations and orientations of the leaders have given implicit political orientations (or perceptions of such by the Armenian public) to each of these organizations. The Armenian Assembly was formed to pull together the political efforts of all Armenian associations in America to act as an effective political pressure group in Washington, D.C. Over the years, both AGBU and ARS have sought strong representations in the Assembly directly or indirectly.
 - Project Hope has concentrated its efforts in the area of Health. This PVO is well-organized to carry out the activities already in place. They are planning new programmatic additions and looking for further financing.
 - o All the other PVOs are either too limited in scope or too small or too international to be able to act as a "lead" American

PVO. The American Red Cross, for example, is associated very closely and depends very heavily on the League of Red Cross and Red Crescent Societies. They share office space, personnel, logistical capabilities, etc.

- o There is not much detailed information available from the Armenia offices and representatives of the PVOs about their planned programs in Armenia for the next two years. Therefore, the Technical Team could not provide U.S.A.I.D. with accurate statistics about the number of personnel needed or the funds needed to realize some of these planned programs.
- o The organizational capability of a lead PVO must enable the pulling together of different areas of expertise in which the individual PVOs are working, mainly housing, public health and vocational training.
- o It is important that PVO programs leave something tangible that will enable the people of Armenia to continue the reconstruction work and the development process after the PVO leaves Armenia;
- o The PVOs working in Armenia tend to be relief oriented and have little experience in the implementation of development projects which require longer term involvement, particular project management skills and systems, etc.
- o Education and training are the best use of the money for long-term returns;
- o Construction technology and specific labor training to prepare skilled manpower to work with new tools in new factories is crucial to provide meaningful employment and to enhance economic and industrial development;
- o Water-power-sewage-infrastructures are essential for the success of housing projects. These should be made available by the local authorities before a housing project gets started;
- o U.S. assistance can be used in a central geographic location such as Yerevan, in the earthquake region in cities or in particular villages depending on the particular program being implemented;
- o A general constraint under which all PVOs operate is the lack of an adequate communication network with each other, with the different Ministries and with other foreign PVOs. This results sometimes in unnecessary duplication of efforts or loss of precious time;

- o A constraint facing all PVOs in Armenia is that the rules are changing daily due to political changes in the Soviet Union. Decision makers are hard to find and change from week to week;
- o Almost all PVOs currently operating health projects in Armenia are not able to carry the proposed projects without active linkage with specialized resources from universities or other institutions in the U.S.
- o Most PVOs' initial involvement in health projects has been as part of relief operations, something they are good at doing. However, the level of sophistication that is needed from the forthcoming phase of assistance goes beyond simple relief and most PVOs are not prepared for it.
- o Transportation is an important factor in the work of all the PVOs.

E. Recommendations

- o The Armenian Assembly of America should serve as the "lead" PVO in coordinating U.S.A.I.D. supported projects in Armenia.
- o PVOs without a track record of developing projects on the international scene should not be involved in the lead PVO role.
- o PVOs agreed with one exception that A.I.D. money should not be spent on transportation except when it is directly related to training or the transport of very specialized equipment. Even in these cases, it was found to be advisable to seek out alternative sources for funding.
- o Specialized medical equipment should be provided along with the necessary training and maintenance capabilities to utilize it effectively.
- o Dollars should be used to buy what is specifically U.S. technology and capability;
- o English language training is a priority and English should be the language for communications in the new technological training.

ANNEX 1

Scope of Work

ARMENIA
NEEDS ASSESSMENT
SCOPE OF WORK

Background: As a result of the earthquake in Armenia on December 7, 1989, thousands were left homeless and suffering. Since that date many local and U.S. funded private voluntary organizations (PVOs) and non-governmental organizations (NGOs) have been working in Armenia to relieve and rehabilitate the victims of this disaster, among these being 16 U.S. PVOs and NGOs (see Appendix A for a complete list).

The U.S. Congress has recently passed legislation allotting not less than \$5 million to fund humanitarian and medical relief, education, and vocational training to benefit the earthquake victims. These funds are all to be channelled through U.S. PVOs and NGOs who have been operating in Armenia.

The \$5 million fund will be administered by the Egypt/East European Affairs Office (EE) of the Asia Near East Europe Bureau of U.S.A.I.D. Because of limited staff resources, however, the EE Office intends to sign a grant with a U.S. PVO to manage and coordinate this activity in Armenia.

Purpose: U.S.A.I.D. needs more information about the post earthquake situation on the ground in Armenia and the work currently being carried out by the local and U.S. PVOs/NGOs in order to make decisions about the future management of U.S. funded activities in that region. U.S.A.I.D. is therefore requesting the services of three experts in the fields of public health, non-formal education and housing to undertake the needs assessment described in this scope of work. The three main objectives of this assessment are:

1. To assess the effectiveness of the current U.S. PVO/NGOs presently working in Armenia with earthquake victims.
2. To determine priorities for assistance in medical relief, education, vocational training and housing in the earthquake area.
3. To determine the most effective means to manage and coordinate PVO/NGO activities on the ground during the next two years.

Detailed Scope of Work

Consultants will concentrate on the activities in which they have expertise. Through intensive visits to U.S. PVOs/NGOs in Armenia specializing in these activities, they will obtain the following information:

I. Effectiveness of the PVO/NGO

A). Basic description of the organization:

1. number of professional staff in country
2. total number of staff in country, including volunteers
3. affiliation with indigenous groups
4. number of beneficiaries
5. how are people benefiting
 - a. if training, what kinds, practicality, how many have found employment, etc.
 - b. if housing, what are prospects for permanent housing? Is PVO dealing with this issue?
 - c. if medical care, what types of care; how much is preventive?

B). How are the present projects funded?; what is the total budget?

C) Overall impressions of the effectiveness and necessity of assistance;

1. will the PVO work itself out of a job? Does it appear to be planning for this? Are the activities sustainable?
2. how feasible are the projects in terms of PVO/NGO goals?
3. what is the implementation capability of the PVO/NGO?
4. logistical capability

II. Priorities for assistance in medical relief, education, vocational training and housing in the earthquake area:

Each specialist will contact the local government agency involved in his/her area of expertise and determine:

A. Statistics on the numbers of people affected by the earthquake who are still in need of assistance

B. Identification of local institutions and other donors involved in relief and rehabilitation of earthquake victims and their current activities and resources. What efforts are made locally to coordinate these activities and prevent overlapping and duplication?

C). Republic and local government's assessment of the highest needs directly related to the earthquake victims as it pertains to the authorizing legislation for U.S. assistance.

D). Team's assessment of these priorities

III. Gather sufficient information to draft a Request for Proposal (RFP) for the overall management of PVO/NGO activity in the field. A.I.D. will use this draft to help solicit competitive proposals for a PVO with experience in management. The organization chosen as the management agency will be required to:

A. in collaboration with AID, evaluate PVO/NGO proposals and award subgrants on a competitive basis, to PVOs/NGOs now working in Armenia

B. provide management support to the subgrantees

C. submit all progress reports, financial statements, audits, etc. to A.I.D. as required under the conditions of the grant.

D. monitor and evaluate on an ongoing basis and at the end of the two year projects, the activities and performance of the subgrantees.

Methodology

A. Before departure for the USSR, the team shall have two work days in Washington. One day will be spent in a team planning meeting. The second day will be spent in consultations with A.I.D. and the State Department, with an afternoon meeting scheduled with the U.S. representatives of the PVO/NGOs currently working in Armenia.

As part of the general background, the team will meet with A.I.D. staff from the Office of Egypt and European Affairs, Asia/Near East/Europe Technical Resources, Private Voluntary Operation, Office of Foreign Disaster Assistance and State Department's Soviet Union Affairs Office and any others deemed appropriate to understand the nature of the assignment, obtain information about humanitarian activities connected to the earthquake being conducted in Armenia by the U.S. and other donors.

B. The team, in collaboration with A.I.D., will convene a meeting of the PVOs and NGOs presently working in Armenia. The purpose of the meeting will be to: inform interested PVO/NGOs of the steps AID will be taking to execute the grant mechanism, apprise them of the needs assessment mission; gather information about their ongoing activities; and solicit their impressions of ongoing activities being carried out by local groups, resources available and those still needed, working conditions, and the general context for future activities.

C. In the Soviet Union, the team will meet pertinent U.S. Embassy officials in Moscow to brief on scope of the assessment mission, discuss Embassy views, and obtain names of Armenian contacts prior to travel to Yerevan. The team will also be requested to schedule an exit interview with the Embassy.

D. With guidance from A.I.D. and State Department, team will meet with appropriate government officials at the republic and local levels and any private organizations involved in relief and reconstruction activities to discuss the assessment, and the role of PVOs and NGOs in carrying out the mandate of the legislation. Team members will meet individually with government officials representing their technical specialties.

E. In Yerevan the individual team members will divide up by technical specialty and will meet individually with the PVOs/NGOs undertaking similar technical activities. Team members will be expected to spend a minimum of one full day with each PVO/NGO in order to gain as much information as needed to formulate an opinion about their activities.

Reports

A. The team shall prepare a report to be submitted in draft to ANE/EE at a debriefing on March 19. The report shall address the following points: prioritized needs; areas of new or expanded involvement by U.S. PVOs/NGOs; resources needed and next steps necessary to allow PVOs/NGOs to plan details of projects. The report should be prepared in two parts, one which outlines the technical activities and needs (public health, housing, training), and the second containing the assessment of the capabilities of the U.S. PVOs/NGOs working in Armenia. Annexes should include a listing of local and other donor institutions providing relief and rehabilitation services in the area and describing the activities, and the draft RFP. The draft report should not exceed 30 pages (excluding annexes), and must have an executive summary of no more than 3 pages.

b. The team will conduct a debriefing session for A.I.D. and State Department on its return from Armenia, preferably March 19th. A second debriefing will be scheduled with the interested PVOs/NGOs to discuss findings and recommendations. The results of this meeting will be reflected in the final report.

Level of Effort

The contractor shall provide three technicians, preferably all with previous experience in Armenia. If possible, all three should be fluent in Armenian (at the FSI 4 level). The technicians shall be:

1. A public health specialist with at least a MPH, and five years of experience working in lesser developed countries. Previous experience in Armenia preferred.
2. A vocational or technical trainer with at least five years demonstrated experience in this field in LDCs.
3. A housing expert with experience in earthquake construction techniques, structural engineering, low-cost housing alternatives and appropriate construction materials and their manufacture.

ANNEX 2

PVOs Working in Armenia

ANNEX 2

PVOs Working in Armenia*

| <u>Acronym</u> | <u>Full Name of Organization</u> |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| ADRA | Adventist Development and Relief Agency International |
| ARS | Armenian Relief Society |
| AGBU | Armenian General Benevolent Union |
| AAA | Armenian Assembly of America |
| ARC | American Red Cross |
| MCC | Mennonite Central Committee |
| AFSC | American Friends Service Committee |
| OXFAM | OXFAM |
| WV | World Vision |
| CWS | Church World Service |
| AJJDC | American Jewish Joint Distribution Center |
| CRS | Catholic Relief Services |
| DRI | Direct Relief International |
| HOPE | Project Hope |
| AC | Americares |
| Sch | Save the Children |
| Other PVOs who submitted completed questionnaires for the March 2, 1990 briefing meeting at U.S.A.I.D. in Washington, D.C.: | |
| AEC | Armenian Educational Council, Inc. |
| AESA | Armenian Engineers and Scientists of America, Inc. |
| MOA | Medical Outreach For Armenians, Inc. |
| ARS-Mass | Armenian Relief Society, Inc., Watertown, Mass. |
| ERFA | Earth-Quake Relief Fund for Armenia of Armenia Relief Society and the Prelacy |
| DIOCESE | Armenian Diocese (New York) |
| PRELACY | Armenian Prelacy (New York) |

*According to U.S. Department of State, October 1989 List.

ANNEX 3

PVOs Represented at March 2, 1990 Meeting at A.I.D./W.

ANNEX 3

PVOs represented at meeting of March 2, 1990 at U.S.A.I.D. in Washington D.C. with Technical Team Members and Devres, Inc.

| <u>Name of PVO</u> | <u>Represented by</u> |
|--------------------|------------------------------------------------------|
| AJJDC | Aryeh Cooperstock |
| AAA | Susan Carlin |
| ARS | Hrant Kurkjian Sarkis Nazarian Yervant Terzian |
| AGBU | Barry Zorthian |
| CRS | |
| HOPE | William Walsh |
| AC | Ty De Cordova |
| ARC | L. Fitzgerald |

ANNEX 4

Contacts in U.S. and Contacts in Armenia for U.S.-Based PVOs

ANNEX 4

Contacts in U.S. and Contacts in Armenia
For U.S. Based-PVOs*

| <u>Name of PVO</u> | <u>Name of Contact Persons for PVOs</u> | |
|--------------------|-----------------------------------------|--------------------------------------|
| | <u>In the U.S.A.</u> | <u>In Armenian SSR</u> |
| ADRA | Mario Ochoa Harold Seidl | Karl Brauer |
| ARS | Seda Aghamianz | Vahig Katchatourian |
| AGBU | Louise M. Simone | Bishop Karekin Nersissi |
| AAA | Van Krikorian | Raffi Hovannisian |
| ARC | Loretta FitzGerald | Michael Behr |
| MCC | Herman Bontrager | Karl Brauer |
| AFSC | Ed Reed | Karl Brauer |
| OXFAM | James Dawson | |
| WV | Richard Vénegone | Mrs. Simonian (Min. of Soc. Sec.) |
| CWS | Kenlynn K. Schroeder | His Holiness Vasken I |
| AJJDC | Aryeh Cooperstock | Mrs. Lilly Bouldoukian |
| CRS | Karel Zelenka | Michael Sidman |
| DRI | Susan Weinberg | Brooks Larson |
| HOPE | John Walsh | George Kevorkian |
| AC | Ty De Cordova | Gay Goodhart |
| Sch | Maha Muna | Lilly Bouldoukian |

*PVOs listed in the U.S. Department of State's October 1989 List plus those PVOs who submitted Completed Questionnaires for the March 2, 1990 briefing at U.S. A.I.D. meeting in Washington D.C.

ANNEX 4

Contacts in U.S. and Contacts in Armenia
For U.S.-Based PVOs (continued)

| <u>Name of PVO</u> | Name of Contact Persons for PVOs | |
|--------------------|----------------------------------|------------------------|
| | <u>In the U.S.A.</u> | <u>In Armenian SSR</u> |
| AEC | V.L. Parseghian | Min. of Housing |
| AESA | A.H. Hadjian | Sergey Y. Grigorian |
| ERFA | Dr. Armen Goenjian | Raffi Manjikian |
| MOA | Mary Najarian | Dr. Sevag Avakian |
| ARS-Mass | Arpi Balian | Dr. Ashot Oganessian |

ANNEX 5

Contact of Technical Team with PVOs in Armenia

ANNEX 5

Contact of Technical Team with PVOs in Armenia

| <u>Name of PVO</u> | <u>Attended General Meeting</u> | <u>Individual Interviews</u> |
|--------------------|---------------------------------|----------------------------------------------------------------------------------|
| ADRA | No | Yes with Team and site visit by Armenian and Krimgold |
| ARS | Yes | Yes site visit by Armenian and Krimgold |
| AGBU | No | Yes with Team and Site visit by Krimgold |
| AAA | Yes | Yes with Team and Site visit by Krimgold |
| ARC | Yes | Yes site visit by Krimgold and Armenian |
| MCC | No | Discussion with Armenian and Krimgold with Mr. Brauer |
| AFSC | No | Discussion with Armenian and Krimgold with Mr. Brauer |
| OXFAM | No | No direct interviews |
| WV | No | No direct interviews |
| CWS | No | Team visit and discussion with His Holiness Vasken I. |
| AJJDC | No | Team visit and individual discussions with Lilly Bouldoukian |
| CRS | No | No |
| DRI | No | No |
| HOPE | Yes | Team visit and individual discussions by Armenian and Krimgold |
| AC | Yes | Team visit and individual discussions with Gay Goodhart and all team members |
| Sch | No | Yes, Team visit and individual discussion by team members with Lilly Bouldoukian |

ANNEX 5

Contact of Technical Team with PVOs in Armenia (continued)

| <u>Name of PVO</u> | <u>Attended General Meeting</u> | <u>Individual Interviews</u> |
|--------------------|---------------------------------|--------------------------------------------------------|
| AEC | No | Individual discussion by Krimgold |
| AESA | No | Yes, visit by Hamalian and Krimgold |
| MOA | No | Meeting with Dr. Avakian by Dr. Armenian |
| ARS-Mass | yes | Visit and discussion by Hamalian Krimgold and Armenian |
| ERFA | No | Discussion by Armenian |
| DIOGESE | Yes | Visit and discussion by Krimgold |
| PRELACY | Yes | Visit and discussion by Krimgold |

ANNEX 6

List of Attendees, March 11, 1990 PVO Meeting

ANNEX 6

List of Attendees, March 11, 1990 PVO Meeting

Sunday, March 11, 1990, 11:00 a.m. to 1:30 p.m. Team met with all local Armenian PVO's. The Foreign Ministry had contacted them on our behalf to hold a general meeting.

| <u>Representative</u> | <u>Organization</u> |
|------------------------------------------|------------------------------------------------|
| Mr. Michael Behr, Head of Delegation | League of Red Cross and Red Crescent Societies |
| Mr. Vaheh Khatchatourian | Armenian Relief Society and (ERFA) |
| Mr. Raffi K. Hovannisian | Armenian Assembly of America |
| Mr. Vahe Palouljian Assistant | Armenian Assembly of America |
| Mr. R. Lee R. Simmons | Project Hope |
| Mr. Jude Galstian | Project Hope |
| Mr. Aram H. Dadian | Diocese of Armenian Church of America |
| Mr. Levon Soorikian | Diocese of Armenian Church of America |
| Ms. Gay Goodhart, Field Coordinator | World Rehabilitation Fund |
| Mr. Avedis G. Hintlian, Administrator | Norwegian Red Cross - Spitak |
| Mr. Ashot T. Oganessian | ARS - MASS |

ANNEX 7

List of Persons Met in Armenia

ANNEX 7

List of Persons Met in Armenia

| | |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| AGHALIAN, Armen Dean of Faculty of Architecture Architecture Institute Yeravan Polytechnic | B EGLARIAN, Arest Rector Architecture Institute Yerevan Polytechnic |
| ALEXANIAN, Ashot Sooreni First Deputy Chair Armenian SSR Construction Committee Chair, Architectural Planning Committee | BABAYAN, Hrayr Committee for Cultural Relations w/ Armenians of the Diaspora, Yerevan |
| ALEXANIAN, Micha Head of the AIDS Section Ministry of Health | BEHR, Michael Head of Delegation League of Red Cross |
| ANLIAN, Steven HOH Associates Inc. | BLANEY, John Economic Advisor US Embassy, Moscow |
| ASLANIAN-FAVREL, Micheline (Ms) Equilibre - France | BOGHOSSIAN, Heratch Armenian Planning & Construction Ministry |
| AVEDISIAN, Kevork, Vasken Director, Armenian Philharmonic Orchestra | BOULDOUKIAN, Lily (Mrs.) American Jewish Joint Distribution Committee and Save the Children |
| AVOYAN, Varaztad Chief, Sub-Sector of Leninakan | BRAUER, Karl Project Director for Armenia Adventist Development & Relief Agency Int'l |
| AZIZIAN, Krikor Armenian Planning & Construction Ministry | CALOOSTAIN, Robert, Chief of Protocol Permanent Representation to the Soviet Council of Ministers from the Armenian Council of Ministers |
| AZNAVOORIAN, Levon Armenian Planning & Construction Ministry | CHESTUOR, Oleg Head of Delegation, Soviet Red Cross |
| AZNAVOORIAN, - Minister of Health | |
| BAYANDURIAN, Vladimir Director, Red Cross Rehabilitation Center | |

DADIAN, Aram H
Diocese of Armenian Church of America

DAVITIAN, Misak A
Minister for Public Education of
Armenia

DILANIAN, Vladimir E.
Department of Foreign Relations
Council of Ministers, ASSR
DJSHMARITIAN, Yuri
First Secretary in Stepanavan
of the Communist Party

DYSINGER, William P
Senior Health Advisor
Adventist Development and Relief Agency

ENDERS, Alexander
Occupational Therapist, Red Cross

GAGOSIAN, Lavrent
Third Secretary in Leninakan
The Communist Party

GALSTIAN, Jude
Project Hope

GHRAGOEUZIAN, Hemazag Vantos
Mayor of Kirovakan

GHAZARIAN (Dr)
Director, Pediatrics Hospital with
which Hope is affiliated

GOODHART, Gay (Mrs)
World Rehabilitation Fund
and AMERICARES

GRIGORIAN, Sergey Y.
Director, Institute of Geology
Academy of Sciences of ASSR

HAMPARTSOAMIAN, Karlen Danelitch
Mayor of Leninakan

HAYKAZIAN, Edvard Assadoori
Permanent Representative to the
Soviet Council of Ministers of the
Council of Ministers, Armenian SSR

HINTLIAN, Avedis
Norwegian Red Cross - Spitak

HOVASAPIAN, Vartan
Rector, Medical University
Yeravan

HOVHANISIAN, Mathevos G. Sr.
Consultant
Permanent Representation of the
Council
of Ministers of Armenia to the
Council of Ministers of the USSR

HOVANNESIAN, Norayr Karekinitch
Chief Medical Doctor
Ministry of Social Security

HOVANNISIAN, Raffi, K.
Armenian Assembly of America

JEFFRIES, Nev
Program Delegate
League of Red Cross

KAZARIAN, Vasili, Kh.
Chief of Department of Foreign
Relations, Council of Ministers,
Armenian SSR

KHATCHATOURIAN, Vahig
Armenian Relief Society

KEIKORIAN, Z
World Rehabilitation Fund

MAKTASHIAN, Luda (Mrs)
Second Secretary in Stepanavan
Communist Party

MARKARIAN, Dean of Construction
Engineering faculty
Architecture Institute
Yeravan Polytechnic

MARITIROSIAN, Yenok
Representative of the Committee
for Cultural Relations with the
Armenian Diaspora, Moscow office

MEKERTCHYAN, Anatoly, A
Minister of Foreign Affairs, ASSR

MELIKDJANYAN, Alexander
Delegate, Soviet Red Cross

MOORADIAN, Norayr Grigorvitch
First Secretary of the Communist Party,
Spitak, Deputy to the Supreme Soviet

MOVSISIAN, Vladimir M
First Deputy Chairman
Council of Ministers, Armenia SSR

NIPSESSIAN, Karekin (Bishop)
Bishop of Yerevan

NOONOOSHIAN, Zavern
Deputy Minister,
Ministry of Social Security
Armenian SSR

OBEIDA, Eric
Equilibre, France

OGANESIAN, Ashot P.
Republic Information Computer Ctr
Ministry of Health

OLANDER, Jean
Occupational Therapist, Red Cross

PABLOOMIAN, Michael
Chief Medical Doctor - Stepanavan
Region

PADASAIN, NORIG, Director
Veterinary Technical Institute of
Stepanavan

PARSEGHIAN, Lavrent
Chairman of the Historic Monuments
Preservation Committee

PALOULIAN, Vahe
Armenian Assembly of Armenia

PARSADANYAN, Rita (Mrs)
Chairman, Armenian Red Cross

PETEOSIAN, SPARTAC
Second Secretary in Leninakan
The Communist Party

SHABANOV, Valerie
Council of Ministers, ASSR

SHIRINIAN, Samuel
Assistant Minister of Public
Education

SIMONIAN, Serge
Chief of the Protocol Department
Ministry of Foreign Relations
of the Armenian SSR

SOGHOMONIAN, Varoujean
Chief, Sub-Sector of Leninakan

TJEKNAVORIAN, Loris
Principal Conductor and Artistic
Director of the Armenian
Philharmonic Orchestra

VORSTEVELD, Hans
Medical Team Leader
League of Red Cross

SARGSIAN, Tachat
First Secretary in Leninakan
of the Communist Party

SHAHNAZERIAN, Alexander
Deputy Director, Foreign
Relations
Department for the State
Committee for the Construction of
Armenia SSR

SIMMONS, Lee R
Project Hope

STDMAN, Michael
Project Manager, Swiss Caritas

SMITH, J.H.
Project Manager
McWlem (British School,
Leninakan)

SOORIKIAN, Levon
Diocese of Armenian Church of America

VASKEN I
Catholicos of All Armenians
Etchmiadzin

VERATZENOONT Members
Local Armenian PVO

VOSKANIAN, Vartan
Deputy Head of the Information
Department
Ministry of Foreign Affairs, Armenian
SSR

WAIN, Douglas
Nursing Co-ordinator,
League of Red Cross

WILSON, Ross
US Embassy, Moscow

YEGHIAZARIAN, Ashot
Deputy Minister of Foreign Affairs
Armenian SSR

ZURABIAN, Karen
Principal Advisor,
Ministry of Foreign Affairs, ASSR

ANNEX 8

Assessment Team's Itinerary

9/6

ARMENIA NEEDS ASSESSMENT

Haroutune Armenian
Itinerary
March 1, 1990 - March 18, 1990

1. Friday, March 2, 1990

8:30 a.m. to 11:00 a.m. Meeting at Devres Inc.

11:00 a.m. to 1:00 p.m. Briefing A.I.D. and State Department
Officials

2:00 p.m. to 4:30 p.m. Meeting at A.I.D. with PVO's

4:30 p.m. and on Preparation traveller's cheques etc.

2. Saturday, March 3, 1990/Sunday March 4, 1990

Baltimore to N.Y. Kennedy Airport to Moscow

Arrive Moscow 11:00 a.m.

Met at airport by Mr. Ashot P. Oganessian
Director, Ministry of Health
Republics Information Computer Center
Armenian SSR

and

Mr. Robert Caloostian
Chief of Protocol
Permanent Representation
To the Soviet Council of Ministers
from the Armenian Council of Ministers

and

Mr. Yenok Martirosian
Representative of the Committee for Cultural
Relations with the Armenian Diaspora
Moscow Office.

2:00 p.m. to 3:30 p.m. Lunch meeting at Hotel Rossia — Team
Members

Itinerary: Haroutune Armenian (continued)

5:00 p.m. to 7:00 p.m. Meeting with American Embassy officials Mr. John Blaney and Mr. Ross at the home of Mr. Blaney Wilson
Mr. Ross Wilson briefed us on the situation in Yerevan.

3. Monday, March 5, 1990

Breakfast meeting at 8:30 - Team members

11:00 a.m. Meeting with Mr. Edvard Assadoor Haykazian
Permanent Representative to the Soviet Council of Ministers of the Council of Ministers of the Armenian SSR.

and

Mr. Mathevos G. Hovhanisian
Senior Consultant
Permanent Representation of
the Council of Ministers of Armenia
under the Council of Ministers of the USSR.

Fly to Yerevan - arrive at 1:30 a.m. Yerevan time on Tuesday March 6, 1990. We were met at the Airport by:

Mr. Serge Simonian, Chief of the Protocol Department,
Ministry of Foreign Relations of the Armenian SSR.

and

Mr. Vladimir E. Dilanian, Department of Foreign Relations,
Council of Ministers, Armenian SSR.

and

several members of the staff of the Ministry of Health.

4. Tuesday, March 6, 1990

Met Michael Sidman, Swiss CARITAS Project Manager
for reconstruction work in Armenia, at 8:30 a.m.

Breakfast with Team members at 9:00 a.m. plus
Mr. Ashot P. Oganessian

Set up room for office use at Hotel Armenia

Itinerary: Haroutune Armenian (continued)

10:00 a.m. to 12:45 p.m. Meeting at the Ministry of Foreign Affairs of the Armenian SSR.

Accompanied by Mr. Serge Simonian we met with:

Mr. Anatoly A. Mekertchyan
Minister of Foreign Affairs,
Armenian Soviet Socialist Republic, and

Mr. Ashot Yeghiazarian
Deputy Minister of Foreign Affairs,
Armenian SSR, and

Mr. Vartan Voskanian
Deputy Head of the Information Department,
Ministry of Foreign Affairs, Armenian SSR, and

Mr. Karen Zurabian
Principal Advisor,
Ministry of Foreign Affairs, Armenian SSR.

2:45 p.m. to 4:15 p.m. meeting
at the Council of Ministers of the Armenian SSR.

Mr. Vasili Kh. Kazarian
Chief of the Department of Foreign Relations,
Council of Ministers, Armenian SSR, and

Mr. Vladimir E. Dilanian
Department of Foreign Relations
Council of Ministers Armenian SSR.

6:30 p.m. to 7:45 p.m. met with Bishop Karekin Nersessian, Bishop of Yerevan, who organizes the relief effort of the Armenian Church (represents Vasken I Catholicos of All Armenians - in Etchmiadzin) and is also the contact person for AGBU (Armenian General Benevolent Union) one of the American PVO's working in Armenia.

Meeting with Team members 8:30 to 10:30 p.m.

5. Wednesday, March 7, 1990

8:30 breakfast meeting with Team members, Dr. George Kevorkian, director of project Hope, Armenia, and Ms. Gay Goodhart, M.S., Field coordinator, Armenia, for World Rehabilitation Fund Inc.

Itinerary: Haroutune Armenian (continued)

and Mr. Vahe Khatchadurian, Armenian Relief Society of North America

9:30 to 10:45 a.m. Meeting with Minister of Health Mr. Aznavoorian and his deputies.

11:00 a.m. to 1:00 p.m. Meeting with Mr. Misak A. Davtian, Minister for public education of Armenia, Corresponding Member Academy of Science of Armenia and Professor, and Mr. Samuel Shirinian, Assistant Minister of Public Education.

and their deputies.

1:15 p.m. to 2:00 p.m. Members of the Red Cross League working in Armenia:

Mr. Michael Behr, Head of Delegation, League of Red Cross
Mr. Nev Jeffries, Programme Delegate, League of Red Cross
Mr. Alexander Melikdzanyan, Delegate, Soviet Red Cross
Mr. Oleg Chestuor Head of Delegation, Soviet Red Cross
Mrs. Rita Parsadanyan, Chairman, Armenian Red Cross
Mr. Hans Vorsteveld, Medical Team Leader, League of Red Cross
Mr. Douglas Wain, Nursing Co-ordinator, League of Red Cross

2:30 p.m. to 4:30 p.m. meeting with Mr. Levon Shahbazian, First Deputy Minister and Mr. Alexander Shaġnazarian, Deputy Director, Foreign Relations Department for the State Committee for Construction of Armenian SSR.

6. Thursday, March 8, 1990

8:00 a.m. start field trip to the earthquake zone accompanied by the Minister for Public Education of Armenia, Mr. Misak A. Davtian, and Mr. Karen Zurabian, Principal advisor, Ministry of Foreign Affairs.

10:30 a.m. to noon Meeting with local authorities in Leninakan. T.V. journalists took pictures and later broadcast about the mission during weekly news program.

Attending the meeting were:

Mr. Tachat Sargsian, the First Secretary of the Communist Party in Leninakan, and

Mr. Spartac Petrosian, Second Secretary of the Communist Party in Leninakan, and

Itinerary: Haroutune Armenian (continued)

Mr. Lavrent Gagosian, Third Secretary of the Communist Party in Leninakan, and

Mr. Varoujean Soghomonian and Mr. Varaztad Avoyan, each of whom is responsible for one of the two sub-sectors of Leninakan, and

Mr. Karlen Danelitch Hampartsoomian, Mayor of Leninakan.

Noon to 3:00 p.m. Official lunch/meeting

3:00 p.m. to 5:00 p.m. Tour of affected areas

5:00 p.m. Individual meetings with families and construction workers by team members.

8:00 p.m. - 11:00 p.m. Dinner meeting with Ms. Lilly Bouldoukian, contact person for:
--American Jewish Joint Distribution Center
--Save the Children

Stayed night in Leninakan at hostel organized by Ms. Lilly Bouldoukian

7. Friday, March 9, 1990

8:30 a.m. Leninakan to Stepanavan

10:00 a.m. to 10:30 a.m. meeting with local officials:

Mr. Yuri Djshmaritian, First Secretary of the Communist Party in Stepanavan, and

Mrs. Luda Maktashian, Second Secretary of the Communist Party in Stepanavan, and

Mr. Michael Pabloomian, Chief medical doctor for the Region, and other assistants.

10:30 to 11:30 a.m. Visits of different sites by individual team members in their own areas of specialization. I visited the new prefab hospital as well as the currently used facility.

12:00 noon to 1:00 p.m. Lunch with local authorities

1:00 p.m. to 2:00 p.m. Stepanavan to Kirovakan.

2:00 p.m. arrive Kirovakan and meet with local authorities from

Itinerary: Haroutune Armenian (continued)

2:00 p.m. to 4:00 p.m. including tour of city center.

Mr. Hemayag Vantos Gharagoeuzian, Mayor of Kirovakan and several members of the Communist Party leadership and assistants to the mayor. Also present at the meeting was Yura Bablounian, Chief District Physician.

4:30 - 6:00 p.m. Supper meeting with team members and officials.

Arrive in Yerevan at 8:30 p.m.

9:30 p.m. to 12:00 p.m. Meeting with the Director of the Orchestra Mr. Kevork Vasken Avedisian and the principal conductor and artistic director Mr. Loris Tjeknavorian.

Received proposal for funding.

8. Saturday, March 10, 1990

8:00 a.m. Yerevan to Spitak

10:30 a.m. to noon Meeting with Spitak local authorities

Mr. Norayr Grigorevitcvh Mooradian, First Secretary in Spitak for the Communist Party and Deputy to the Soviet Parliament and his assistants and legislators visiting from Yerevan since Mr. Mooradian was supposed to leave the same day for Moscow to attend the sessions for the appointment of Mr. Gorbachev as President.

Tour of several sites in Spitak and some of the surrounding villages.

Visit of the new Nansen hospital built by the Norwegian Red Cross. Meetings with the administrator, Mr. Avedis Hintlian, the Chief District Physician, the Deputy Minister of Health and other personnel.

5:00 p.m. to 6:00 p.m. Supper meeting with local authorities.

Return to Yerevan by 8:30 p.m.

9. Sunday, March 11, 1990 (There was no Sunday in Soviet Armenia this week since the March 8, 1990 was an official holiday and therefore Sunday was declared an official working day).

Itinerary: Haroutune Armenian (continued)

11:00 a.m. to 1:30 p.m. We met with all local Armenian PVO's. The Foreign Ministry had contacted them on our behalf to hold a general meeting.

Present were:

- Mr. Michael Behr, Head of Delegation, League of Red Cross and Red Crescent Societies.
- Mr. Vaheh Khatchatourian, Armenian Relief Society and (ERFA)
- Mr. Raffi K. Hovannisian, Armenian Assembly of America.
- Mr. Vahe Paloulian, Assistant, Armenian Assembly of America
- Mr. R. Lee R. Simmons, Project Hope
- Mr. Jude Galstian, Project Hope
- Mr. Aram H. Dadian, Diocese of Armenian Church of America
- Mr. Levon Soorikian, Diocese of Armenian Church of America
- Ms. Gay Goodhart, World Rehabilitation Fund, Field Coordinator
- Mr. Avedis G. Hintlian, Administrator, Norwegian Red Cross - Spitak.
- Mr. Ashot T. Oganessian, ARS - MASS

Afternoon: Each team member conducted separate meetings. Meetings with the staff of the Information Center of the Ministry of Health.

10. Monday, March 12, 1990

8:30 a.m. to 9:30 a.m. Breakfast meeting with Frederic Khidishian, Program Director Medecins du Monde.

10:00 a.m. Armenian Assembly headquarters

11:00 a.m. to 1:00 p.m. Etchmiadzin, visit to the Catholicos Vasken I.

At 1:00 p.m., team members divided into two groups. Dr. Armenian first went to visit the Red Cross Rehabilitation program. Discussions were held with a number of Armenian professionals as well as Red Cross staff. In particular with Dr. Hans Varsteveld, Doug Waine and the two American Red Cross occupational therapists, Jean Olander and Alexandra Enders. Aslo met Dr. Vladimir Bayandurian, the newly appointed Armenian Director of the Center.

At 4 p.m. visited the offices of project Hope at Armetech and met with Dr. George Kevorkian and staff.

At 5 p.m. had a private meeting with the Minister of Health, Dr. Aznaurian and his deputy for additional discussion.

Itinerary: Haroutune Armenian (continued)

11. Tuesday, March 13, 1990

Team members went to visit different projects in their areas of specialization.

Dr. Frederick Krimgold returned to earthquake zone to see construction sites not covered on first trip.

Arpi Hamalian conducted meetings with Equilibre, a French PVO working mainly in construction and transportation and tried to contact all other PVOs not contacted individually.

Dr. Armenian went to meet World Rehabilitation Fund/Armenian Community of Lebanon Prosthesis and Orthotics Center. Meetings held with Gay Goodhart and Dr. Z. Krikorian.

In the afternoon, Arpi Hamalian and Harutune Armenian met with Ashot P. Oganessian at the Health Ministry's Computer Information Center. Dr. Armenian met with Dr. Micha Alexanian, Head of the AIDS section in the Ministry of Health and his assistant.

Supper meeting Arpi Hamalian and Harutune Armenian.

12. Wednesday, March 14, 1990

10:00 a.m. Meeting of Team members with:

Mr. Valdimir M. Movsisian, First Deputy Chairman of the Council of Ministers of the Armenian SSR.

attending were Mr. Vladimir Dilanian and Mr. Vasil Kh. Kazarian, Chief of Department of Foreign Relations.

(Mr. Markariantz the Chairman of the Council of Ministers of the Armenian SSR was in Moscow, attending the meetings there for the appointment of Mr. Gorbachev as President.)

This was the official debriefing meeting with the authorities of the Armenian SSR.

At 11:30 a.m. the team members went to specialized meetings. Haroutune Armenian visited with Dr. George Kevorkian the prosthesis and rehabilitation facilities of project Hope at the third pediatrics hospital. Met with Dr. Ghazarian, the hospital director.

Return to hotel 6:30 p.m. to 9:00 p.m. for meeting with the local Armenian PVO-Veratzenoont.

Itinerary: Haroutune Armenian (continued)

13. Thursday, March 15, 1990

8:00 a.m. to 9:00 a.m. Meeting with Mr. William P Dysinger, Senior Health Advisor of the Adventist Development and Relief Agency International (ADRA) and Mr. Karl Brauer, Project Director for ADRA in Armenia.

Dr. Armenian and Dr. Krimgold went to see their construction site of a rehabilitation center.

Dr. Armenian had a meeting with the Assistant to the Rector of the Medical University, Dr. Vartan Hovasapian.

At 3:00 p.m. Dr. Armenian visited the Committee for Cultural Relations with the Armenian Diaspora.

14. Friday, March 16, 1990

9:00 a.m. to 10:00 a.m. Meeting of Team members with the Deputy Minister of the Armenian Social Security Ministry, Mr. Zaven Noonoooshi and his assistants as well as the Chief Medical doctor, Mr. Norayr Karekinitch Hovannesian.

11:00 a.m. Yerevan airport to Moscow.

Arrive Moscow about 3:30 p.m. Tried to get in touch with American Embassy for debriefing. No need for official debriefing. Frederick Krimgold had a telephone conversation with Ross Wilson.

15. Saturday, March 17, 1990

8:30 a.m. to 10:30 a.m. Breakfast meeting with Mr. Norayr Mooradian, First Secretary of Spitak.

10:45 a.m. Go to Moscow airport. Fly to New York Kennedy Airport. Arrive at 3:30 p.m. at Kennedy. Leave airport at 7 p.m.

ARMENIA NEEDS ASSESSMENT

Arpi Hamalian
Itinerary
March 1, 1990 - March 18, 1990

1. Thursday, March 1, 1990

7:05 p.m. Fly to Washington D.C. from Montreal

2. Friday, March 2, 1990

8:30 a.m. to 11:00 a.m. Meeting at Devres Inc.

11:00 a.m. to 1:00 p.m. Briefing A.I.D. and State Department
Officials

2:00 p.m. to 4:30 p.m. Meeting at A.I.D. with PVO's

4:30 p.m. and on Preparation traveller's cheques etc.

3. Saturday, March 3, 1990/Sunday March 4, 1990

Washington D.C. to N.Y. Kennedy Airport to Moscow

Arrive Moscow 11:00 a.m.

Met at airport by Mr. Ashot P. Oganesian
Director, Ministry of Health
Republics Information Computer Center
Armenian SSR

and

Mr. Robert Caloostian
Chief of Protocol
Permanent Representation
To the Soviet Council of Ministers
from the Armenian Council of Ministers

and

Mr. Yenok Martirosian
Representative of the Committee for Cultural
Relations with the Armenian Diaspora
Moscow Office.

2:00 p.m. to 3:30 p.m. Lunch meeting at Hotel Rossia - Team
Members

Itinerary: Arpi Hamalian (continued)

5:00 p.m. to 7:00 p.m. Meeting with American Embassy officials Mr. John Blaney and Mr. Ross at the home of Mr. Blaney Wilson
Mr. Ross Wilson briefed us on the situation in Yerevan. (attached information letter for contacts etc.)

4. Monday, March 5, 1990

Breakfast meeting at 8:30 - Team members

11:00 a.m. Meeting with Mr. Edvard Assadoor Haykazian
Permanent Representative to the Soviet Council of Ministers of the Council of Ministers of the Armenian SSR.

and

Mr. Mathevos G. Hovhanisian
Senior Consultant
Permanent Representation of
the Council of Ministers of Armenia
under the Council of Ministers of the USSR.

Fly to Yerevan - arrive at 1:30 a.m. Yerevan time on Tuesday March 6, 1990. We were met at the Airport by:

Mr. Serge Simonian, Chief of the Protocol Department
Ministry of Foreign Relations of the Armenian SSR.

and

Mr. Vladimir E. Dilanian, Department of Foreign Relations
Council of Ministers - Armenian SSR.

and several members of the staff of the Ministry of Health

5. Tuesday, March 6, 1990

Met Michael Sidman, Swiss CARITAS Project Manager
for reconstruction work in Armenia, at 8:30 a.m.

Breakfast with Team members at 9:00 a.m. plus
Mr. Ashot P. Oganessian

Itinerary: Arpi Hamalian (continued)

Set up room for office use at Hotel Armenia

10:00 a.m. to 12:45 Meeting at the Ministry of Foreign
Affairs of the Armenian SSR.

Accompanied by Mr. Serge Simonian we met with:

Mr. Anatoly A. Mekertchyan
Minister of Foreign Affairs
Armenian Soviet Socialist Republic

and

Mr. Ashot Yeghiazarian
Deputy Minister of Foreign Affairs
Armenian SSR.

and

Mr. Vartan Voskanian
Deputy Head of the Information Department
Ministry of Foreign Affairs, Armenian SSR.

and

Mr. Karen Zurabian
Principal Advisor
Ministry of Foreign Affairs, Armenian SSR.

2:45 p.m. to 4:15 p.m. accompanied by Mr. Dilanian meeting
at the Council of Ministers of the Armenian SSR.

Mr. Vasili Kh. Kazarian
Chief of Department of Foreign Relations
Council of Ministers, Armenian SSR.

and

Mr. Vladimir E. Dilanian
Department of Foreign Relations
Council of Ministers, Armenian SSR.

5:00 p.m. to 6:30 p.m. meeting with
Mr. Steven Anlian HOH Associates, Inc.
Planning, Urban Design etc.
Working in Armenia on Construction.

Itinerary: Arpi Hamalian (continued)

6:30 p.m. to 7:45 p.m. met with Bishop Karekin Nersessian, Bishop of Yerevan, who organizes the relief effort of the Armenian Church (represents Vasken I Catholicos of All Armenians - in Etchmiadzin) and is also the contact person for AGBU (Armenian General Benevolent Union) one of the American PVO's working in Armenia.

Meeting with Team members 8:30 to 10:30 p.m.

6. Wednesday, March 7, 1990

8:30 breakfast with Team members and Ms. Gay Goodhart, M.S., Field coordinator, Armenia, for World Rehabilitation Fund Inc. Also contact person for Americares in Armenia.

9:30 to 10:45 a.m. Meeting with Minister of Health Mr. Aznavoorian and his deputies.

11:00 a.m. to 1:00 p.m. Meeting with Mr. Misak A. Davtian, Minister for Public Education of Armenia, Corresponding Member, Academy of Science of Armenia and Professor, and Mr. Samuel Shirinian, Assistant Minister of Public Education.

and their deputies.

1:15 p.m. to 2:00 p.m. Members of the Red Cross League working in Armenia:

Mr. Michael Behr, Head of Delegation, League of Red Cross
Mr. Nev Jeffries, Programme Delegate, League of Red Cross
Mr. Alexander Melikdzanyan, Delegate, Soviet Red Cross
Mr. Oleg Chestuor Head of Delegation, Soviet Red Cross
Mrs. Rita Parsadanyan, Chairman, Armenian Red Cross
Mr. Hans Vorsteveld, Medical Team Leader, League of Red Cross
Mr. Douglas Wain, Nursing Co-ordinator, League of Red Cross

2:30 p.m. to 4:30 p.m. Meeting with Mr. Levon Shahbazian, Deputy Minister, and Mr. Alexander Shahnazarian, Deputy Director, Foreign Relations Department for the State Committee for Construction of Armenian SSR.

7. Thursday, March 8, 1990

8:00 a.m. start field trip to the earthquake zone accompanied by the Minister for Public Education of Armenia, Mr. Misak A.

Itinerary: Arpi Hamalian (continued)

Davtian, and Mr. Karen Zurabian, Principal advisor , Ministry of Foreign Affairs.

10:30 a.m. to Noon Meeting with local authorities in Leninakan. T.V. journalists took pictures and later broadcast about the mission during weekly news program.

Attending the meeting were:

Mr. Tachat Sargsian, First Secretary of the Communist Party in Leninakan, and

Mr. Spartac Petrosian, Second Secretary of the Communist Party in Leninakan, and

Mr. Lavrent Gagosian, Third Secretary of the Communist Party in Leninakan, and

Mr. Varoujean Soghomonian and Mr. Varaztad Avoyan who are each responsible for one of the two sub-sectors of Leninakan, and

Mr. Karlen Danelitch Hampartsoomian, Mayor of Leninakan.

Noon to 3:00 p.m. Official lunch/meeting

3:00 p.m. to 5:00 p.m. Tour of affected areas

5:00 p.m. Individual meetings with families and construction workers by team members.

8:00 p.m. - 11:00 p.m. Dinner meeting with Ms. Lilly Bouldoukian, contact person for:
--American Jewish Joint Distribution Center
--Save the Children

Stayed night in Leninakan at hostel organized by Ms. Lilly Bouldoukian

7. Friday, March 9, 1990

8:30 a.m. Leninakan to Stepanavan

10:00 a.m. to 10:30 a.m. meeting with local officials:

Mr. Yuri Djshmaritian, First Secretary of the Communist Party in Stepanavan, and

Mrs. Luda Maktashian, Second Secretary of the Communist Party in Stepanavan, and

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Itinerary: Arpi Hamalian (continued)

Mr. Michael Pabloomian, Chief medical doctor for the Region,
and other assistants.

10:30 to 11:30 a.m. Visits of different sites by individual
team members in their own areas of
specialization. Ms. Hamalian visited
two music schools, one kindergarten,
one middle school and the veterinary
and agricultural technical school.
(Met Mr. Padasian Norig, Director).

12:00 noon to 1:00 p.m. Lunch with local authorities

1:00 p.m. to 2:00 p.m. Stepanavan to Kirovakan.

2:00 p.m. arrive Kirovakan and meet with local authorities from
2:00 p.m. to 4:00 p.m. including tour of city center.

Mr. Hemayag Vantos Gharagoeuzian, Mayor of Kirovakan and
several members of the Communist Party leadership and
assistants to the mayor.

4:30 - 6:00 p.m. Supper meeting with team members and
officials.

Arrive in Yerevan at 8:30 p.m.

Attend part of the concert by the Armenian Philharmonic
Symphonic Orchestra.

9:30 p.m. to 12:00 p.m. Meeting with the Director of the
Orchestra Mr. Kevork Vasken Avedisian
and the principal conductor and
artistic director Mr. Loris
Tjeknavorian.

Received proposal for funding.

9. Saturday, March 10, 1990

8:00 a.m. Yerevan to Spitak

10:30 a.m. to noon Meeting with Spitak local authorities

Mr. Norayr Grigorevitch Mooradian, First Secretary of the
Communist Party in Spitak and Deputy to the Supreme Soviet and
his assistants and legislators visiting from Yerevan since Mr.
Mooradian was supposed to leave the same day for Moscow to

Itinerary: Arpi Hamalian (continued)

attend the sessions for the appointment of Mr. Gorbachev as President.

Tour of several sites in Spitak and some of the surrounding villages.

5:00 p.m. to 6:00 p.m. Supper meeting with local authorities.

8:30 p.m. Return to Yerevan

10. Sunday, March 11, 1990 (There was no Sunday in Soviet Armenia this week since the March 8, 1990 was an official holiday and therefore Sunday was declared an official working day).

11:00 a.m. to 1:30 p.m. We met with all local Armenian PVO's. The Foreign Ministry had contacted them on our behalf to hold a general meeting.

Present were:

- Mr. Michael Behr, Head of Delegation, League of Red Cross and Red Crescent Societies.
- Mr. Vaheh Khatchatourian, ARS (ERFA)
- Mr. Raffi K. Hovannisian, Armenian Assembly of America.
- Mr. Vahe Palouljian, Assistant, Armenian Assembly of America
- Mr. R. Lee R. Simmons, Project Hope
- Mr. Jude Galstian, Project Hope
- Mr. Aram H. Dadian, Diocese of Armenian Church of America
- Mr. Levon Soorikian, Diocese of Armenian Church of America
- Ms. Gay Goodhart, World Rehabilitation Fund, Field Coordinator
- Mr. Avedis G. Hintlian, Administrator, Norwegian Red Cross - Spitak.
- Mr. Ashot T. Oganessian, ARS - MASS

Afternoon: Each team member conducted separate meetings.
Arpi Hamalian and Frederick Krimgold had a supper meeting.

11. Monday, March 12, 1990

8:30 a.m. to 9:30 a.m. Breakfast meeting with Medecins du Monde.

10:00 a.m. Armenian Assembly headquarters

11:00 a.m. to 1:00 p.m. Etchmiadzin, visit to the Catholicos Vasken I.

At 1:00 p.m. team members divided into two groups. Haroutune Armenian went to visit the Red Cross headquarters.

Itinerary: Arpi Hamalian (continued)

1:30 p.m. to 3:30 p.m. Arpi Hamalian and Frederick Krimgold went to visit the FRG construction materials site near Etchmiadzin.

3:30 p.m. to 4:00 p.m. Return to Yerevan to meet with Construction Committee members:

Mr. Heratch Boghossian

Mr. Krikor Azizian

Mr. Levon Aznavoorian

Meeting lasted from 4:00 p.m. to 6:30 p.m.

Dinner meeting 7:00 p.m. to 10:00 p.m. Arpi Hamalian and Frederick Krimgold

12. Tuesday, March 13, 1990

Team members went to visit different projects in their areas of specialization.

Dr. Frederick Krimgold returned to earthquake zone to see construction sites not covered on first trip.

Arpi Hamalian conducted meetings with Equilibre (Ms. Micheline Favrel Aslanian and Eric Obeida), a French PVO working mainly in construction and transportation and tried to contact all other PVOs not contacted individually.

Haroutune Armenian went to see World Rehabilitation Fund clinics.

Arpi Hamalian and Haroutune Armenian met with Ashot P. Ogenesian at the Health Ministry's Computer Information Center.

Supper meeting Arpi Hamalian and Haroutune Armenian.

13. Wednesday, March 14, 1990

10:00 a.m. Meeting of Team members with:

Mr. Valdimir M. Movsisian, First Deputy Chairman of the Council of Ministers of the Armenian SSR.

attending were Mr. Vladimir Dilanian and Mr. Vasil Kh. Kazarian, Chief of Department of Foreign Relations.

Itinerary: Arpi Hamalian (continued)

(Mr. Markariantz the Chairman of the Council of Ministers of the Armenian SSR was in Moscow, attending the meetings there for the appointment of Mr. Gorbachev as President.)

This was the official debriefing meeting with the authorities of the Armenian SSR.

At 11:30 a.m. the team members went to specialized meetings.

Arpi Hamalian and Frederick Krimgold went to meet:

Mr. Ashot Sooreni Alexanian, First Deputy Chair of the Armenian SSR's Construction Committee and Chair of the Architectural Planning Committee with his assistants.

Tour by Mr. Alexanian of some modern architectural monuments.

Late lunch meeting at 4:00 p.m. with his assistants.

Return to hotel 7:00 p.m. to 9:00 p.m. meeting with a local Armenian PVO-Veratzenoont.

Arpi Hamalian met with the Motherhood Fund, a local Armenian PVO from 9:30 to 11:00 p.m.

14. Thursday, March 15, 1990

8:00 a.m. to 9:00 a.m. Meeting with Mr. William P Dysinger, Senior Health Advisor of the Adventist Development and Relief Agency International (ADRA) and Mr. Karl Brauer, Project Director for ADRA in Armenia.

Haroutune Armenian and Frederick Krimgold went to see the ADRA site.

Arpi Hamalian followed up some PVO's and took care of accounts.

10:00 a.m. to 11:30 a.m. Arpi Hamalian and Frederick Krimgold met with Mr. Beglarian Rector of the New Architecture Institute of the Yerevan Polytechnic. Also present: Mr. Aghalian, Dean of the Faculty of Architecture, and Mr. Markarian, Dean of the Construction Engineering Faculty.

12:00 a.m. to 3:30 p.m. meeting with Mr. Lavrent Parseghian, Chair of the Historic Monoument's Preservation Committee of the Armenian SSR.

3:00 p.m. to 4:00 p.m. Haroutune Armenian visited the Committee for Cultural Relations with the Armenian Diaspora.

Itinerary: Arpi Hamalian (continued)

4:00 p.m. to 6:00 p.m. Arpi Hamalian and Frederick Krimgold visited Mr. Sergey Grigorian, Professor, Corresponding member of the Armenian SSR Academy of Science, Director of the Institute of Geology, Academy of Sciences of the Armenian SSR.

15. Friday, March 16, 1990

9:00 a.m. to 10:00 a.m. Meeting of Team members with the Deputy Minister of the Armenian Social Security Ministry, Mr. Zaven Noonoooshian and his assistants as well as the Chief Medical doctor, Mr. Norayr Karekinitch Hovannesian.

11:00 a.m. Yerevan airport to Moscow.

Arrive Moscow about 3:30 p.m. Tried to get in touch with American Embassy for debriefing. No need for official debriefing. Frederick Krimgold had a telephone conversation with Ross Wilson.

16. Saturday, March 17, 1990

8:30 a.m. to 10:30 a.m. Breakfast meeting with Mr. Norayr Mooradian, First Secretary of Spitak.

10:45 a.m. Go to Moscow airport. Fly to New York Kennedy Airport. Arrive at 3:30 p.m. at Kennedy. Leave airport at 7 p.m. Spend night in New York City.

17. Sunday, March 18, 1990

Arrive in Bethesda.

ARMENIA NEEDS ASSESSMENT

Frederick Krimgold
Itinerary

1. Friday, March 2, 1990

8:30 a.m. to 11:00 a.m. Meeting at Devres Inc.

11:00 a.m. to 1:00 p.m. Briefing A.I.D. and State Department
Officials

2:00 p.m. to 4:30 p.m. Meeting at A.I.D. with PVO's

4:30 p.m. and on Preparation traveller's cheques etc.

2. Saturday, March 3, 1990/Sunday March 4, 1990

Washington D.C. to N.Y. Kennedy Airport to Moscow

Arrive Moscow 11:00 a.m.

Met at airport by Mr. Ashot P. Oganessian
Director, Ministry of Health
Republics Information Computer Center
Armenian SSR

and

Mr. Robert Caloostian
Chief of Protocol
Permanent Representation
To the Soviet Council of Ministers
from the Armenian Council of Ministers

and

Mr. Yenok Martirosian
Representative of the Committee for Cultural
Relations with the Armenian Diaspora
Moscow Office.

2:00 p.m. to 3:30 p.m. Lunch meeting at Hotel Rossia - Team
Members

5:00 p.m. to 7:00 p.m. Meeting with American Embassy officials
Mr. John Blaney and Mr. Ross at the
home of Mr. Blaney Wilson
Mr. Ross Wilson briefed us on the
situation in Yerevan.

Itinerary: Frederick Krimgold (continued)

3. Monday, March 5, 1990

Breakfast meeting at 8:30 - Team members

11:00 a.m. Meeting with Mr. Edvard Assadoor Haykazian
Permanent Representative to the Soviet
Council of Ministers of the Council of
Ministers of the Armenian SSR.

and

Mr. Mathevos G. Hovhanisian
Senior Consultant
Permanent Representation of
the Council of Ministers of Armenia
under the Council of Ministers of the
USSR.

Fly to Yerevan - arrive at 1:30 a.m. Yerevan time on
Tuesday March 6, 1990. We were met at the Airport by:

Mr. Serge Simonian, Chief of the Protocol Department
Ministry of Foreign Relations of the Armenian SSR.

and

Mr. Vladimir E. Dilanian, Department of Foreign Relations
Council of Ministers - Armenian SSR.

and Mr. Muchigian, Director of the Institute of Urban Design

4. Tuesday, March 6, 1990

Met Michael Sidman, Swiss CARITAS Project Manager
for reconstruction work in Armenia, at 8:30 a.m.

Breakfast with Team members at 9:00 a.m. plus
Mr. Ashot P. Oganessian

Set up room for office use at Hotel Armenia

10:00 a.m. to 12:45 Meeting at the Ministry of Foreign
Affairs of the Armenian SSR.

Accompanied by Mr. Serge Simonian we met with:

Mr. Anatoly A. Mekertchyan,
Minister of Foreign Affairs,
Armenian Soviet Socialist Republic

Itinerary: Frederick Krimgold (continued)

and

Mr. Ashot Yeghiazarian
Deputy Minister of Foreign Affairs.

and

Mr. Vartan Voskanian
Deputy Head of the Information Department
Ministry of Foreign Affairs, Armenian SSR.

and

Mr. Karen Zurabian
Principal Advisor,
Ministry of Foreign Affairs, Armenian SSR.

2:45 p.m. to 4:15 p.m. accompanied by Mr. Dilanian meeting
at the Council of Ministers of the Armenian SSR.

Mr. Vasili Kh. Kazarian
Chief of Department of Foreign Relations
Council of Ministers, Armenian SSR.

and

Mr. Vladimir E. Dilanian
Department of Foreign Relations
Council of Ministers, Armenian SSR.

5:00 p.m. to 6:30 p.m. meeting with
Mr. Steven Anlian HOH Associates, Inc.
Planning, Urban Design etc.
Working in Armenia on Construction.

6:30 p.m. to 7:45 p.m. met with Bishop Karekin Nersessian,
Bishop of Yerevan, who organizes the relief effort of the
Armenian Church (represents Vasken I Catholicos of All
Armenians - in Etchmiadzin) and is also the contact person for
AGBU (Armenian General Benevolent Union) one of the American
PVO's working in Armenia.

Meeting with Team members 8:30 to 10:30 p.m.

5. Wednesday, March 7, 1990

8:30 breakfast with Team members and Ms. Gay Goodhart, M.S.,
Field coordinator, Armenia, for World Rehabilitation Fund Inc.

Itinerary: Frederick Krimgold (continued)

Also contact person for Americares in Armenia,
Dr. George Kevorkian, Director of Project Hope,
Mr. Vahig Khachatourian, Armenian Relief Society of North
America.

9:30 to 10:45 a.m. Meeting with Minister of Health
Mr. Aznavoorian and his deputies.

11:00 a.m. to 1:00 p.m. Meeting with Mr. Misak A. Davtian,
Minister for Public Education of Armenia, Corresponding Member,
Academy of Science of Armenia and Professor, and Mr. Samuel
Shirinian, Assistant Minister of Public Education.

and their deputies.

1:15 p.m. to 2:00 p.m. Members of the Red Cross League working
in Armenia:

Mr. Michael Behr, Head of Delegation, League of Red Cross
Mr. Nev Jeffries, Programme Delegate, League of Red Cross
Mr. Alexander Melikdzanyan, Delegate, Soviet Red Cross
Mr. Oleg Chestuor Head of Delegation, Soviet Red Cross
Mrs. Rita Parsadanyan, Chairman, Armenian Red Cross
Mr. Hans Vorsteveld, Medical Team Leader, League of Red Cross
Mr. Douglas Wain, Nursing Co-ordinator, League of Red Cross

2:30 p.m. to 3:00 p.m. Meeting with Mr. Levon Shahbazian,
Deputy Minister, and Mr. Alexander Shahnazarian, Deputy
Director, Foreign Relations Department for the State Committee
for Construction of Armenian SSR.

3:00 - 4:30 p.m. Mr. Levon Shahbazian, First Deputy Minister
of Construction.

4:30 - 5:30 p.m. Mr. Ashot Alexainian, Chairman, State
Architectural Committee

6. Thursday, March 8, 1990

8:00 a.m. start field trip to the earthquake zone accompanied
by the Minister for Public Education of Armenia, Mr. Misak A.
Davitian, and Mr. Karen Zurabian, Principal Advisor, Ministry of
Foreign Affairs.

10:30 a.m. to Noon Meeting with local authorities in
Leninakan. T.V. journalists took pictures and later broadcast
about the mission during weekly news program.

Itinerary: Frederick Krimgold (continued)

Attending the meeting were:

Mr. Tachat Sargsian, First Secretary of the Communist Party in Leninakan, and

Mr. Spartac Petrosian, Second Secretary of the Communist Party in Leninakan, and

Mr. Lavrent Gagosian, Third Secretary of the Communist Party in Leninakan, and

Mr. Varoujean Soghomonian and Mr. Varaztad Avoyan who are each responsible for one of the two sub-sectors of Leninakan, and

Mr. Karlen Danelitch Hampartsoomian, Mayor of Leninakan.

Noon to 3:00 p.m. Official lunch/meeting

3:00 p.m. to 5:00 p.m. Tour of affected areas

5:00 p.m. Individual meetings with families and construction workers by team members.

Dinner meeting with Ms. Lilly Bouldoukian, contact person for
--American Jewish Joint Distribution Center
--Save the Children

Stayed night in Leninakan

7. Friday, March 9, 1990

8:30 a.m. Leninakan to Stepanavan

10:00 a.m. to 10:30 a.m. meeting with local officials:

Mr. Yuri Djshmaritian, First Secretary of the Communist Party in Stepanavan, and

Mrs. Luda Maktashian, Second Secretary of the Communist Party in Stepanavan, and

Mr. Michael Pabloomian, Chief medical doctor for the Region,
and other assistants.

Visits of different sites by individual team members in their own areas of specialization. I visited construction sites including the site of the New York Diocese Project of Prefabricated Housing.

Itinerary: Frederick Krimgold (continued)

12:00 noon to 1:00 p.m. Lunch with local authorities

1:00 p.m. to 2:00 p.m. Stepanavan to Kirovakan.

2:00 p.m. arrive Kirovakan and meet with local authorities from
2:00 p.m. to 4:00 p.m. including tour of city center.

Mr. Hemayag Vantos Gharagoeuzian, Mayor of Kirovakan and several members of the Communist Party leadership and assistants to the mayor.

4:30 - 6:00 p.m. Supper meeting with team members and officials.

Arrive in Yerevan at 8:30 p.m.

Attend part of the concert by the Armenian Philharmonic Symphonic Orchestra.

9:30 p.m. to 12:00 p.m. Meeting with the Director of the Orchestra Mr. Kevork Vasken Avedisian and the principal conductor and artistic director Mr. Loris Tjeklavorian.

Received proposal for funding.

8. Saturday, March 10, 1990

8:00 a.m. Yerevan to Spitak

10:30 a.m. to noon Meeting with Spitak local authorities

Mr. Norayr Grigorevitch Mooradian, First Secretary of the Communist Party in Spitak and Deputy to the Soviet Parliament and his assistants and legislators visiting from Yerevan since Mr. Mooradian was supposed to leave the same day for Moscow to attend the sessions for the appointment of Mr. Gorbachev as President.

Tour of several sites in Spitak and some of the surrounding villages. Saw village reconstruction, Red Cross temporary housing and the site for the roof tile factory.

5:00 p.m. to 6:00 p.m. Supper meeting with local authorities.

8:30 p.m. Return to Yerevan

Itinerary: Frederick Krimgold (continued)

9. Sunday, March 11, 1990 (There was no Sunday in Soviet Armenia this week since the March 8, 1990 was an official holiday and therefore Sunday was declared an official working day).

11:00 a.m. to 1:30 p.m. We met with all local Armenian PVO's. The Foreign Ministry had contacted them on our behalf to hold a general meeting.

Present were:

- Mr. Michael Behr, Head of Delegation, League of Red Cross and Red Crescent Societies.
- Mr. Vaheh Khatchatourian, ARS (ERFA)
- Mr. Raffi K. Hovannisian, Armenian Assembly of America.
- Mr. Vahe Palouljian, Assistant, Armenian Assembly of America
- Mr. R. Lee R. Simmons, Project Hope
- Mr. Jude Galstian, Project Hope
- Mr. Aram H. Dadian, Diocese of Armenian Church of America
- Mr. Levon Soorikian, Diocese of Armenian Church of America
- Ms. Gay Goodhart, World Rehabilitation Fund, Field Coordinator
- Mr. Avedis G. Hintlian, Administrator, Norwegian Red Cross - Spitak.
- Mr. Ashot T. Oganessian, ARS - MASS

Afternoon: Each team member conducted separate meetings. Arpi Hamalian and Frederick Krimgold had a supper meeting.

10. Monday, March 12, 1990

8:30 a.m. to 9:30 a.m. Breakfast meeting with Medecins du Monde.

10:00 a.m. Armenian Assembly headquarters

11:00 a.m. to 1:00 p.m. Etchmiadzin, visit to the Catholicos Vasken I.

At 1:00 p.m. team members divided into two groups. Haroutune Armenian went to visit the Red Cross headquarters.

1:30 p.m. to 3:30 p.m. Arpi Hamalian and Frederick Krimgold went to visit the FRG construction materials site near Etchmiadzin.

3:30 p.m. to 4:00 p.m. Return to Yerevan to meet with Construction Committee members:

Mr. Ashat Alexainian

Itinerary: Frederick Krimgold (continued)

Mr. Heratch Boghossian

Mr. Krikor Azizian

Mr. Levon Aznavoorian

Meeting lasted from 4:00 p.m. to 6:30 p.m.

Dinner meeting 7:00 p.m. to 10:00 p.m. Arpi Hamalian and
Frederick Krimgold

11. Tuesday, March 13, 1990

Team members went to visit different projects in their areas of
specialization.

Dr. Frederick Krimgold returned to earthquake zone to see
construction sites not covered on first trip.

Leninakan: Assembly factory site, Austrian Village

Akhurian: ARS housing site

Gaushin: ARS housing site

Spitak: Norweigan housing and hospital, Red Cross Housing,
Italian Village

12. Wednesday, March 14, 1990

10:00 a.m. Meeting of Team members with:

Mr. Valdimir M. Movsisian, First Deputy Chairman
of the Council of Ministers of the Armenian SSR.

attending were Mr. Vladimir Dilanian and Mr. Vasil Kh.
Kazarian, Chief of Department of Foreign Relations.

(Mr. Markariantz the Chairman of the Council of Ministers of
the Armenian SSR was in Moscow, attending the meetings there
for the appointment of Mr. Gorbachev as President.)

This was the official debriefing meeting with the authorities
of the Armenian SSR.

At 11:30 a.m. the team members went to specialized meetings.

Arpi Hamalian and Frederick Krimgold went to meet:

Itinerary: Frederick Krimgold (continued)

Mr. Ashot Sooreni Alexanian, First Deputy Chair of the Armenian SSR's Construction Committee and Chair of the Architectural Planning Committee with his assistants.

Tour by Mr. Alexanian of some modern architectural sites.

Late lunch meeting at 4:00 p.m. with his assistants.

Return to hotel 7:00 p.m. -- 9:00 p.m. meeting with a local Armenian PVO-Veratzenoont.

14. Thursday, March 15, 1990

8:00 a.m. to 9:00 a.m. Meeting with Mr. William P Dysinger, Senior Health Advisor of the Adventist Development and Relief Agency International (ADRA) and Mr. Karl Brauer, Project Director for ADRA in Armenia.

Haroutune Armenian and Frederick Krimgold went to see the ADRA site.

10:00 a.m. to 11:30 a.m. Arpi Hamalian and Frederick Krimgold met with Mr. Beglarian Rector of the New Architecture Institute of the Yerevan Polytechnic. Also present: Mr. Aghalian, Dean of the Faculty of Architecture, and Mr. Markarian, Dean of the Construction Engineering Faculty.

12:00 a.m. to 3:30 p.m. meeting with Mr. Lavrent Parseghian, Chair of the Historic Monoument's Preservation Committee of the Armenian SSR.

4:00 p.m. to 6:00 p.m. Arpi Hamalian and Frederick Krimgold visited Mr. Sergey Grigorian, Professor, Corresponding member of the Armenian SSR Academy of Science, Director of the Institute of Geology, Academy of Sciences of the Armenian SSR.

14. Friday, March 16, 1990

9:00 a.m. to 10:00 a.m. Meeting of Team members with the Deputy Minister of the Armenian Social Security Ministry, Mr. Zaven Noonoooshian and his assitants as well as the Chief Medical doctor, Mr. Norayr Karekinitch Hovarnesian.

11:00 a.m. Yerevan airport to Moscow.

Arrive Moscow about 3:30 p.m. Official debriefing of U.S. Embassy personnel was not feasible. Dr. Krimgold contacted Ross Wilson of the U.S. Embassy for debriefing by telephone at 7:30 p.m.

Itinerary: Frederick Krimgold (continued)

15. Saturday, March 17, 1990

8:30 a.m. to 10:30 a.m. Breakfast meeting with Mr. Mooradian,
First Secretary of Spitak.

10:45 a.m. Go to Moscow airport. Fly to New York Kennedy
Airport. Arrive at 3:30 p.m.

ANNEX 9

Reports on Activities of U.S. PVOs in Armenia

1. NAME OF THE ORGANIZATION

Adventist Development and Relief Agency

2. ADDRESS

a) In the United States - Contact Person:

Mario Ochoa, Harold Seidl
12501 Old Columbia Pike
Silver Spring, MD 20904
Tel: 301-680-6380 Fax: 301-680-6370 Telenex: 440186

b) In Armenian SSR - Contact Person:

Mr. Karl Brauer
Old Etchmaisyn Street 102
Yezevan, ASSR
Tel: 582231 or 562171

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

Contact Person: Karl Brauer

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

25 Project Director Karl Brauer and volunteers

5. AFFILIATIONS

a) Affiliation with indigenous groups

Soviet Ministers of Health and Agriculture ASSR

Gossagroprom ASSR

The church of Kirovakan

Other ADRA groups

b) Affiliation with international groups

Network of ADRA internationally

Mennonite Church
ADRA - Germany, in particular

6. NUMBER OF BENEFICIARIES

- a) Rehabilitation clinic once completed 70 inpatients 50 outpatients
- b) 7 rural clinics - hundreds of beneficiaries

7. TRAINING; AREA OF INTERVENTION

- a) Request training of health personnel (physio-therapists, nurses) at the rehab clinic in Yerevan 3 years US \$250,000

Emphasis: "We need to continue the training of personnel as well as building up the ambulatories as training center."

- b) Training of 6 specialized workers for prefab house factory US \$100,000
- c) Agricultural programs

8. HOUSING: AREAS OF INTERVENTION

Pre-fabricated housing project (planned)

9. MEDICAL CARE: AREAS OF INTERVENTION

- a) Mainly construction at this stage of 7 rural clinics
- b) Request: Kirovakan Health Center US \$350,000

10. FUNDING OF PRESENT PROJECTS

D.M. 2.008.310 US \$ 1,217,157

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Co-financing ADRA/MCC

12. TOTAL BUDGET FOR PRESENT PROJECTS

| | <u>DM</u> | <u>US</u> |
|--------------|-----------|-----------|
| Rehab-Clinic | 1,248,400 | 756,606 |

| | | |
|---------------|------------------|------------------|
| Rural Clinics | <u>759,910</u> | <u>460,551</u> |
| Total | <u>2,008,310</u> | <u>1,217,157</u> |

13. REQUEST FOR FUNDING FOR USAID

Training Housing \$100,000
 Training Health \$250,000
 Construction Health \$350,000
 US \$700,000

14. TOTAL BUDGET FOR REQUEST

US \$ 700,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

a) Will the PVO work itself out of a job?

Yes, if necessary training is provided for local specialists to take over

b) Does it appear to be planning for this?

Yes

c) Are the activities sustainable?

Yes, if necessary training is provided to local specialists.

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Very good prospects

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Good with Karl Brauer as director

18. LOGISTICAL CAPABILITY IN THE USA

Well developed network of offices and administrative staff.
 Volunteers as needed

19. LOGISTICAL CAPABILITY IN THE ASSR

a) Reasonable budget

b) Total amount request US \$700,000 can match = 25% up to 250,000 US

c) Office at Rehab Center

Equipped (telex not yet installed)

Housing for 10

Two vehicles

Volunteers - pocket money

Clinics

Transportation equipment US \$400,000

1. NAME OF THE ORGANIZATION

American Jewish Joint Distribution Committee

2. ADDRESS

a) In the United States - Contact Person:

Aryeh Cooperstock and Henrika Manes
International Development Program
711 Third Avenue
New York, NY 10017
Tel. (212) 687-6200

b) In Armenian SSR - Contact Person:

Lilly Bouldoukian
c/o American Assembly
Yerevan, ASSR and
Leninakan, ASSR

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

1 project manager and occasional medical specialists - short term (2 to 8 at a time)

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

5 to 20 depending on number of volunteers needed

5. AFFILIATIONS

a) Affiliation with indigenous groups - Ministry of Health

b) Affiliation with international groups

Armenian Assembly of America, CARE, American Church of Israel, Oxfam, American Earthquake Disaster Aid of Rhode Island, Save the Children, USA Dutch Red Cross, Bernard Van Lear Foundation, Dutch Friends of Magon David

6. NUMBER OF BENEFICIARIES

a) Program involved 61 - initially treated in Israel

b) Center under construction in Leninakan - many beneficiaries on long-term basis

7. TRAINING: AREA OF INTERVENTION

a) Medical professionals

b) Physical and occupational therapy

8. HOUSING: AREAS OF INTERVENTIONS

Children's Rehabilitation Center in Leninakan

9. MEDICAL CARE: AREAS OF INTERVENTION

Airlift of 61 amputees - program update

10. FUNDING OF PRESENT PROJECTS

\$1,300,000 from various agencies

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Various agencies

12. TOTAL BUDGET FOR PRESENT PROJECTS

\$1,300,000 plus

13. REQUEST FOR FUNDING FOR USAID

a) Construction \$150,000

b) Training in ASSR \$ 60,000

c) Training outside ASSR \$ 12,000

d) Training equipment \$ 15,000

\$237,000

14. TOTAL BUDGET FOR USAID REQUEST

US \$237,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

a) Will the PVO work itself out of a job?

Most probably

b) Does it appear to be planning for this?

yes - over five years or more

c) Are the activities sustainable?

Yes, with appropriate training of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Good - Site in Leninakan is an asset

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Good

18. LOGISTICAL CAPABILITY IN THE USA

a) Offices are equipped

b) 8 administrative professional staff in USA and Israel

c) Volunteers as needed

19. LOGISTICAL CAPABILITY IN THE ASSR

a) Access to equipped office

b) Volunteers (professional and other)

c) Local employees

d) Able to match USAID contribution dollar for dollar

1. NAME OF THE ORGANIZATION

American Red Cross

2. ADDRESS

a) In the United States - Contact Person:

Loretta Fitzgerald
National Headquarters - International Services
17th & D Streets, NW
Washington, DC 20006
Tel: 202-639-3316

b) In Armenian SSR - Contact Person:

Micheal Behr, Head of Delegation
League of Red Cross and Red Crescent Societies
DOM Journalists Building, Pushkin Street #3-A
Yerevan, 10, Armenia, SSR
Tel: 56-12-95 Telenex: 243328

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

a) 20 expatriate nurses

b) Other: 14 nurses, 2 medical doctors, etc. Volunteers as needed.

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

20 to 200+ volunteers as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups

Armenian Red Cross

b) Affiliation with international groups

11 other Red Cross

Berlin Arbeit Samaritan Fund

SOS children village

ADRA, Mennonite Church

World Rehabilitation Fund

Americares

HOPE

6. NUMBER OF BENEFICIARIES

Potentially thousands

7. TRAINING: AREA OF INTERVENTION

Rehabilitation team training program for local Armenian doctors, nurses, therapists

8. HOUSING: AREAS OF INTERVENTION

a) Technical delegates (construction engineers, administrative supervisors

b) 315 temporary housing units

c) Construction of mini projects -- schools, kindergartens, clinics, hospitals, rehabilitation center in Yerevan

9. MEDICAL CARE: AREAS OF INTERVENTION

Rehabilitation teams (doctors, nurses, occupational and physical therapists

10. FUNDING OF PRESENT PROJECTS

a) Mini projects US \$3.7 million

b) Post traumatic rehabilitation center US \$2 million

c) Personnel US \$.5 million

11. SOURCE OF FUNDING FOR PRESENT PPOJECTS

American Red Cross

12. TOTAL BUDGET FOR PRESENT PROJECTS

US \$ 6.5 million

13. REQUEST FOR FUNDING FOR USAID

a) Construction of Post-traumatic Rehabilitation Center
US \$ 3 million

b) 9 additional staff members US \$.5 million

c) Children's psychological center US \$ 50,000

14. TOTAL BUDGET FOR REQUEST

US \$ 3,550,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

a) Will the PVO work itself out of a job? Yes

b) Does it appear to be planning for this? Yes

c) Are the activities sustainable? Yes, with appropriate training of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Very good

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Very good

18. LOGISTICAL CAPABILITY IN THE USA

Well organized network of offices and administrative personnel.
Network of volunteers.

19. LOGISTICAL CAPABILITY IN THE ASSR

- a) 20 expatriate personnel
- b) Local trained personnel
- c) Equipped offices
- d) Volunteers
- e) 20 bed unit in a local hospital
- f) Able to match AID funds dollar for dollar

1. NAME OF THE ORGANIZATION

Americares

2. ADDRESS

a) In the United States - Contact Person:

Ty De Cordova
Project Director
161 Cherry Street
New Canaan, Conn. 06840
(203) 966-5195

b) In Armenian SSR - Contact Person:

Gay Goodhart
Prothethis Center of Yereven
Avan, Armenia, SSR
Tel: 61-80-70 or 28-21-58
or Hotel Armenia, rm 620, Tel: 56-96-20

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

One full time; 44 assisting volunteers

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

5. AFFILIATIONS

a) Affiliation with indigenous groups

Ministry of Health - ASSR
Ministry of Social Security - ASSR
League of Red Cross & Red Crescent Society

b) Affiliation with international groups

6. NUMBER OF BENEFICIARIES

7. TRAINING: AREA OF INTERVENTION

a) Modern prosthetics manufacturing facility

b) Training

8. HOUSING: AREAS OF INTERVENTION
- a)
 - b)
 - c)
9. MEDICAL CARE: AREAS OF INTERVENTION
10. FUNDING OF PRESENT PROJECTS
\$496,900 to date
11. SOURCE OF FUNDING FOR PRESENT PROJECTS
12. TOTAL BUDGET FOR PRESENT PROJECTS
13. REQUEST FOR FUNDING FOR USAID
- a) Training of 4 students in prosthetics - \$25,000
 - b) Prosthetics workshop materials & transportation - \$200,000
 - c) Airlift - \$1,050,000
14. TOTAL BUDGET FOR REQUEST
\$1,275,000
15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE
- a) Will the PVO work itself out of a job? Most probably
 - b) Does it appear to be planning for this? Not clear
 - c) Are the activities sustainable? Yes, with training of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO'S GOALS?

Good

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Good (to be clarified relationship to World Rehabilitation Fund)

18. LOGISTICAL CAPABILITY IN THE USA

- Offices
- Administrative staff
- Network of donors in supplies of medical items

19. LOGISTICAL CAPABILITY IN THE ASSR

- Access to equipped office
- Access to translator (4)
- Access to ministry van
- Access to World Rehabilitation Fund facilities

1. NAME OF THE ORGANIZATION

Armenian Assembly of America

2. ADDRESS

a) In the United States - Contact Person:

Van Krikorian
122 C Street, N.W., Suite 350
Washington, D.C. 20001
Tel: 202-393-3434

b) In Armenian SSR - Contact Person:

Raffi Hovannisian
39 Alavaerdian Street
Yezevan 375010 ASSR
Tel: 564695 Fax: 011-873-150-5150
566602

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

5 plus volunteers as needed

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

5 to 200+ as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups (several ministries)

b) Affiliation with international groups

Interaction - chaired by Executive Director of AAA

ICVA

Ad hoc with score others

6. NUMBER OF BENEFICIARIES

40,000 direct beneficiaries a year in housing program

7. TRAINING: AREA OF INTERVENTION

Bring American specialists to train local specialists

8. HOUSING: AREAS OF INTERVENTION

10,000 units a year

9. MEDICAL CARE: AREAS OF INTERVENTION

Third party advocacy, medical airlift etc.

10. FUNDING OF PRESENT PROJECTS

Phase I of housing project - US \$3,500,000

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Armenian Assembly

12. TOTAL BUDGET FOR PRESENT PROJECTS

\$3,500,000+

13. REQUEST FOR FUNDING FOR USAID

a) Housing

b) Construction training

c) Environmental project

14. TOTAL BUDGET FOR REQUEST

Not indicated

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

a) Will the PVO work itself out of a job?

Not clear - probably

b) Does it appear to be planning for this?

Not clear

c) Are the activities sustainable?

Yes with training of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NBO GOALS?

Very good

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Very good

18. LOGISTICAL CAPABILITY IN THE USA

Very good. Equipped offices coast to coast and permanent professional and administrative staff (see attached newsletter)

19. LOGISTICAL CAPABILITY IN THE ASSR

Very good

a) Offices -- equipped and satellite link for telephone and fax

b) Personnel -- 3 permanent and many volunteers as needed

c) Matching AID contribution dollar by dollar -- unknown at this time

d) Representation capability for all groups working in ASSR

1. NAME OF THE ORGANIZATION

Armenian Educational Council, Inc.

2. ADDRESS

a) In the United States - Contact Person:

Dr. V.L. Parsegian
Brunswick Hills, East Road
Troy, NY 12180
(518) 274-4526

b) In Armenian SSR - Contact Person:

Serge Saroukhanian
First Deputy Minister
Ministry of Housing and Communal
Khanjian no. 27
Yerevan 10
Tel: 57-82-16

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

5. AFFILIATIONS

a) Affiliation with indigenous groups

b) Affiliation with international groups

6. NUMBER OF BENEFICIARIES

7. TRAINING: AREA OF INTERVENTION

a) Plastics factory related training

b)

8. HOUSING: AREAS OF INTERVENTION

- a) Steel underground pipes (technical input and equipment) to carry water to earthquake area
- b)
- c)

9. MEDICAL CARE: AREAS OF INTERVENTION

10. FUNDING OF PRESENT PROJECTS

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

12. TOTAL BUDGET FOR PRESENT PROJECTS

13. REQUEST FOR FUNDING FOR USAID

- a) Technical equipment - \$600,000

14. TOTAL BUDGET FOR REQUEST

\$600,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

- a) Will the PVO work itself out of a job? Yes
- b) Does it appear to be planning for this? Yes
- c) Are the activities sustainable? Yes, with proper training of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Possible with appropriate funding

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Not clear - but good professional track record of volunteer professional involved

18. LOGISTICAL CAPABILITY IN THE USA

-Offices

-Retired professionals who will work as volunteers

19. LOGISTICAL CAPABILITY IN THE ASSR

-Good contacts

-Volunteers

-Links with appropriate ministries

1. NAME OF THE ORGANIZATION

Armenian Engineers and Scientists of America

2. ADDRESS

a) In the United States - Contact Person:

A.H. Hadjian
207 S. Brand Blvd. Suite 203
Glendale, CA 91204
(818) 547-3372

b) In Armenian SSR - Contact Person:

Prof. Sergei Y. Grigorian
Academy of Sciences of ASSR
Tel: 524426

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

Several related to the Academy of Sciences of ASSR

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

Several volunteers as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups

Academy of Sciences ASSR

b) Affiliation with international groups

Collaboration of French and Swiss professional colleagues

6. NUMBER OF BENEFICIARIES

Millions - related to seismic damages prevention

127

7. TRAINING: AREA OF INTERVENTION

- a) training related to Seismology and Earthquake Engineering
- b)
- c)

8. HOUSING: AREAS OF INTERESTS

- a) Instrumentation and analysis related to better siting & design
- b)
- c)

9. MEDICAL CARE: AREAS OF INTERVENTION

10. FUNDING OF PRESENT PROJECTS

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

12. TOTAL BUDGET FOR PRESENT PROJECTS

13. REQUEST FOR FUNDING FOR USAID (see also appendix)

- a) Testing of typical buildings in Yerevan \$580,000
- b) Micro zonation network for Yerevan \$450,000
- c) Micro earthquake network for Yerevan \$450,000
- d) Instrumentation of buildings \$510,000

14. TOTAL BUDGET FOR REQUEST

\$ 1,990,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

- a) Will the PVO work itself out of a job? Yes
- b) Does it appear to be planning for this? Yes
- c) Are the activities sustainable? Yes, with appropriate training
of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NBO GOALS?

Feasible

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Professional volunteers with outstanding professional qualifications

18. LOGISTICAL CAPABILITY IN THE USA

Institutions affiliated with AESA members
University of California
Universisty of Southern California

19. LOGISTICAL CAPABILITY IN THE ASSR

The Academy of Sciences and the City Council of Yerevan. Full support of all professionals attached to the Academy & the Council of Yerevan.

1. NAME OF THE ORGANIZATION

Armenian General Benevolent Union

2. ADDRESS

a) In the United States - Contact Person:

Louise T. Simone, President
585 River Road
Saddle, New Jersey 07662
Tel: 201-797-7600

b) In Armenian SSR - Contact Person:

Dr. Bagrat Edilian
Bishop Karekin Nersissian
Tel: 58-73-68 or 58-57-13

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

Cited 2 in questionnaire

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

2 + volunteers as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups

Bishop of Yerevan

b) Affiliation with international groups

i. Project Hope

ii. SOS Armenina (France)

iii. Armenia AID (England)

iv. Yale University
University of California

v. United Nations Industrial Development Organization

6. NUMBER OF BENEFICIARIES
Many

7. TRAINING: AREA OF INTERVENTION
 - a) Technical University (\$3,500,000)
 - b) Training in Housing and Health

8. HOUSING: AREAS OF INTERVENTION
Cold Storage in Leninakan (\$4,500,000)

9. MEDICAL CARE: AREAS OF INTERVENTION
 - a) Disposable Syringe Plant (\$5,500,000)
 - b) Plastic Surgery Unit (\$1,000,000)
 - c) Patient airlifts (\$200,000)

10. FUNDING OF PRESENT PROJECTS
\$13,000,000 plus

11. SOURCE OF FUNDING FOR PRESENT PROJECTS
Donations

12. TOTAL BUDGET FOR PRESENT PROJECTS
\$13,000,000 plus

13. REQUEST FOR FUNDING FOR USAID
 - a) Training \$ 3,500,000
 - b) Building and Training \$ 4,500,000
 - c) Health and Training \$ 8,500,000

\$16,500,000

14. TOTAL BUDGET FOR REQUEST

Any part of \$16,500,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

a) Will the PVO work itself out of a job?

Not clear

b) Does it appear to be planning for this?

Not clear

c) Are the activities sustainable?

Yes, with appropriate training for local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Feasible given previous AGBU track record internationally

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Very good

18. LOGISTICAL CAPABILITY IN THE USA

a) Offices well equipped

b) 14 administrators

c) Several office staff

d) Many volunteers as needed

19. LOGISTICAL CAPABILITY IN ASSR

a) Office in ASSR equipped with satellite communications link for telephone and fax. Also has computer facilities and copier.

b) 2 local employees

c) Bishop of Yerevan

d) Match AID contribution dollar for dollar

e) Volunteers as needed

1. NAME OF THE ORGANIZATION

Armenian Relief Society, Inc.

2. ADDRESS

a) In the United States - Contact Person:

Mrs. Arpie Balian
80 Bigelow Ave.
Watertown, Maine 02172
202-223-2333
617-926-5892

b) In Armenian SSR - Contact Person:

Dr. Ashot Oganessian
Armenian Republic Information Computer Center
Paruyr Sevak Street 5
375044 Yerevan, Armenia
28-66-56

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

2 part-time

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

As many volunteers as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups

Armenian Republic Information Computer Center
Ministry of Health

b) Affiliation with international groups

Johns Hopkins University
Amitie Québec Arménie
Chrysler Foundation
Volunteers in Technical Assistance (VITA)

6. NUMBER OF BENEFICIARIES

Potentially: thousands

7. TRAINING: AREA OF INTERVENTION

- a) Computers for Education: 10 IBM compatible units
- b) Sausage making enterprises: equipment and training
- c)

8. HOUSING: AREAS OF INTERVENTION

- a) -----
- b)
- c)

9. MEDICAL CARE: AREAS OF INTERVENTION

- a) Data base project for earthquake survivors
- b) Critical care project
- c) Psychiatric care project: Phase I
- d) Mobile medical units

10. FUNDING OF PRESENT PROJECTS

US \$585,000

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Donations to Fund

12. TOTAL BUDGET FOR PRESENT PROJECTS

US \$ 585,000 plus

13. REQUEST FOR FUNDING FOR USAID

- a) Instruction for Psychiatric Care Project Plan II US \$ 300,000
- b) Johns Hopkins Project - Phase II US \$ 250,000
- c) Vocational training and equipment - small scale rural development: US \$ 1,000,000
- d) Education, elementary, secondary, computer: US \$ 1,000,00

14. TOTAL BUDGET FOR REQUEST

US \$ 2,750,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

- a) Will the PVO work itself out of a job? not clear
- b) Does it appear to be planning for this? not clear
- c) Are the activities sustainable? Yes, with proper funding and training of local specialists.

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NBO GOALS?

Good feasibility

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Good - given funding

18. LOGISTICAL CAPABILITY IN THE USA

Well organized network of offices, administrators, volunteers, and professionals

19. LOGISTICAL CAPABILITY IN THE ASSR

- Good links with local groups and ministries
- Some projects are already in Phase I
- 25% able to match A.I.D. contributions dollar for dollar

1. NAME OF THE ORGANIZATION

Armenian Relief Society of North America

2. ADDRESS

a) In the United States - Contact Person:

Seda Aghamianz/Arpi Balian
80 Bigelow Avenue
Watertown, MA 02172 Fax: 617-926-1750

b) In Armenian SSR - Contact Person:

Vahig Khatchatourian (Engineer)
ARS Society of North America
Hotel Armenia
Yerevan, ASSR

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

One

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

Volunteers as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups

b) Affiliation with international groups

6. NUMBER OF BENEFICIARIES

a) Prefab housing (190)

b) Kindergarten - 100 children

7. TRAINING: AREA OF INTERVENTION

a) Grants to US youth to work in relief

b) Training needed for all programs

8. HOUSING: AREAS OF INTERVENTION
 - a) Prefab housing - Akhourian Region (190)
 - b) Kindergarten - \$1,000,000

9. MEDICAL CARE: AREAS OF INTERVENTION
 - a) Contribution to Protheses factory in Yerevan (\$65,000)
 - b) Polyclinic project \$150,000 per unit near villages
 - c) Psychiatric assistance (#30,000)
 - d) Supplies (see attached table for details)

10. FUNDING OF PRESENT PROJECTS

\$2,490,136

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Donations ARS - Earthquake Fund

12. TOTAL BUDGET FOR PRESENT PROJECTS

\$2,490,136

13. REQUEST FOR FUNDING FOR USAID
 - a) Fonar-magnetic Resonance Scanner Equipment
 - b) Maintain stone cutting equipment for construction activities
 - c) Model village development for small scale agricultural development

14. TOTAL BUDGET FOR REQUEST

\$2,490,136

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE
 - a) Will the PVO work itself out of a job?

Not clear

b) Does it appear to be planning for this?

Not clear

c) Are the activities sustainable?

Yes, with appropriate training provided for local specialists to take over

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Feasible with

a) Funding

b) Training

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Good, need to strengthen local ASSR capability - personnel, offices, etc.

18. LOGISTICAL CAPABILITY IN THE USA

a) Offices

b) 4 paid personnel

c) Many volunteers as needed

19. LOGISTICAL CAPABILITY IN THE ASSR

a) Volunteers

b) Matching of AID contributions dollar for dollar

1. NAME OF THE ORGANIZATION
Catholic Relief Service
2. ADDRESS
 - a) In the United States - Contact Person:
Karel Zelekna
209 West Fayette Street
Baltimore, MD 21201
 - b) In Armenian SSR - Contact Person:
3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA
4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS
5. AFFILIATIONS
 - a) Affiliation with indigenous groups
 - b) Affiliation with international groups
Caritas International
6. NUMBER OF BENEFICIARIES
Many through housing and jobs in factory
7. TRAINING: AREA OF INTERVENTION

8. HOUSING: AREAS OF INTERVENTIONS

- a) Prefab housing factory
- b) Refrigerated containers

9. MEDICAL CARE: AREAS OF INTERVENTION

Water purification

10. FUNDING OF PRESENT PROJECTS

\$1,906,000

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Donations and agencies

12. TOTAL BUDGET FOR PRESENT PROJECTS

\$1,906,000 plus

13. REQUEST FOR FUNDING FOR USAID

- a) Manufacturing of prefab housing
- b) Community Center Construction

14. TOTAL BUDGET FOR REQUEST

Not available

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

- a) Will the PVO work itself out of a job? Not clear
- b) Does it appear to be planning for this? Not clear
- c) Are the activities sustainable? Yes, with appropriate training of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NBO GOALS?

Not clear

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Not clear

18. LOGISTICAL CAPABILITY IN THE USA

Not clear

19. LOGISTICAL CAPABILITY IN THE ASSR

Not clear

1. NAME OF THE ORGANIZATION

Church World Service

2. ADDRESS

a) In the United States - Contact Person:

Kenlynn K. Schroeder
475 Riverside Drive
New York, NY 10027
Tel: 212-870-3151/3154

b) In Armenian SSR - Contact Person:

His Holiness Vasken I
Catholicos of All Armenians
Etchmiadzin, Armenia USSR

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

As many as needed through His Holiness Vasken I

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

As many as needed through churches in Armenia

5. AFFILIATIONS

a) Affiliation with indigenous groups

Armenian churches in Armenia

b) Affiliation with international groups

World Council of Churches

Armenian Organization in the USA

6. NUMBER OF BENEFICIARIES

Many in housing project and construction work (100 houses)

7. TRAINING: AREA OF INTERVENTION
School Kits
8. HOUSING: AREAS OF INTERVENTION
 - a) Reconstruction of housing
 - b) Soil brick making machine
9. MEDICAL CARE: AREAS OF INTERVENTION
 - a) Medical supplies, health kits
 - b) Mobile medical unit
10. FUNDING OF PRESENT PROJECTS
\$2,201,418
11. SOURCE OF FUNDING FOR PRESENT PROJECTS
Various churches and church related groups
12. TOTAL BUDGET FOR PRESENT PROJECTS
\$2,201,418 plus
13. REQUEST FOR FUNDING FOR USAID
Mainly for building of houses
14. TOTAL BUDGET FOR REQUEST
Not indicated
15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE
 - a) Will the PVO work itself out of a job?
Not clear
 - b) Does it appear to be planning for this?
Not clear

c) Are the activities sustainable?

Yes with appropriate training of local specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Very good

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Very good

18. LOGISTICAL CAPABILITY IN THE USA

19. LOGISTICAL CAPABILITY IN THE ASSR

a) The services of the Holy See of the Armenian Apostolic Church in Etchmiadzin

b) Equipped office

c) Guest houses

d) Volunteers as needed

1. NAME OF THE ORGANIZATION
Earthquake Relief Fund of Armenia (ERFA) of Armenia Relief Society
and the Prelacy

2. ADDRESS
 - a) In the United States - Contact Person:

Dr. Armen Goenjian or Jack Bedikian
517 Glen Oaks Blvd.
Glendale CA 91202
213-424-8597

 - b) In Armenian SSR - Contact Person:

Raffi Manjikian and Noraye Taspinian
Leninakan 2nd Children's Hospital
Yerevan
575609
616533

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

one full-time
one 6 month

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

40 short-term to date

5. AFFILIATIONS
 - a) Affiliation with indigenous groups

Ministry of Health and Cultural Relations Committee

 - b) Affiliation with international groups

Armenian American Medical Society of California

6. NUMBER OF BENEFICIARIES

To-date 5000 children, parents, teachers

132

Psychiatric help

7. TRAINING: AREA OF INTERVENTION

a) Psychiatric - mental health

b)

c)

8. HOUSING: AREAS OF INTERESTS

a)

b)

c)

9. MEDICAL CARE: AREAS OF INTERVENTION

Psychiatric - mental health services

10. FUNDING OF PRESENT PROJECTS

Travel of 40 psychiatric therapists to Armenia

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Several agencies and donations, Armenian Relief Society and Prelacy

12. TOTAL BUDGET FOR PRESENT PROJECTS

13. REQUEST FOR FUNDING FOR USAID

a) Psychiatrist's salary \$100,000 per yr.

b) Social worker's salary \$ 35,000 per yr.

c)

14. TOTAL BUDGET FOR REQUEST

\$ 135,000

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

- a) Will the PVO work itself out of a job? Yes
- b) Does it appear to be planning for this? Yes
- c) Are the activities sustainable? Yes, with appropriate training of local specialist.

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

feasible with proper funding

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

good individual, professional reputation, program on-going for over a year now

18. LOGISTICAL CAPABILITY IN THE USA

ERFA resources

19. LOGISTICAL CAPABILITY IN ASSR

- full-time volunteer
- support of Committee for Cultural Relations with Armenians of the Diaspora
- volunteers on an as needed basis
- able to match U.S.A.I.D. contributions up to \$ 60,000

1. NAME OF THE ORGANIZATION

Medical Outreach for Armenians, Inc.

2. ADDRESS

a) In the United States - Contact Person:

Mrs. Mary Najarian or Mrs. Armine Sherikian
1030 South Glendale Ave., Suite 503
Glendale, CA 91205
(818) 548-1990

b) In Armenian SSR - Contact Person:

Dr. Seveg Avakian or Papken Vartarian
Ministry of Health - Dept. of Foreign Affairs
Toumanian Street, no. 8
Yerevan, USSR, 375001
Tel: 58-75-65

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

No long-term staff, occasional visits by professionals

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

None. Volunteers as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups

Ministry of Health

b) Affiliation with international groups

Southwest medical, Northwest medical teams, Armenian Missionary Association, Armenian Assembly of America, and World Vision. Knights of Vartan, etc.

6. NUMBER OF BENEFICIARIES

Not clear - As many as use the medical lab equipment and work with the equipment.

7. TRAINING: AREA OF INTERVENTION
 - a) Nursing school project in Yerevan
 - b) Training for use of specialized equipment
 - c) Physician Exchange

8. HOUSING: AREAS OF INTERVENTION
 - a)
 - b)
 - c)

9. MEDICAL CARE: AREAS OF INTERVENTION
 - a) Lab equipment for hospitals

10. FUNDING OF PRESENT PROJECTS

\$250,000

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

Various agencies and donations

12. TOTAL BUDGET FOR PRESENT PROJECTS

\$250,000 (US 10 million?)

13. REQUEST FOR FUNDING FOR USAID
 - a) For nurses training - sterile techniques
 - b) For operating room training
 - c)

14. TOTAL BUDGET FOR REQUEST

Not clear

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

- a) Will the PVO work itself out of a job? Yes
- b) Does it appear to be planning for this? Not clear
- c) Are the activities sustainable? Yes, with proper
training of local
specialists

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Possible with proper funding

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Good individual professional reputation of members

18. LOGISTICAL CAPABILITY IN THE USA

1 secretary

Many volunteer professionals

19. LOGISTICAL CAPABILITY IN THE ASSR

Not clear as to offices

Many volunteers and local professionals

Links with ministry

Able to match USAID contribution dollar for dollar

Name of the Organization: Project Hope

Address in the United States:

Address in Armenian SSR: Armedtechnica, Yerevan & Third Pediatrics
Hospital

Number of professional staff in Armenia: Five

Total number of staff in Armenia including volunteers: 6 - 10

Affiliation with indigenous groups: Works with Ministry of Health

Number of beneficiaries: 40 - 50 patients every month
+ +

Areas of intervention:

Training: 30 - 40 students taught yearly in pediatric rehabilitation.
Scientific exchange.

Housing: none

Medical care: Yerevan, Spitak clinics. Rehabilitations center in
Yerevan

Funding of Present Projects:

Source: U.S. private funds & Armenian government

Total Budget:

Overall Impressions of the effectiveness and necessity of assistance:

1. Will the PVO work in itself out of a job? Does it appear to be planning for this? Are the activities sustainable?

Five year agreement. Yes, yes.

2. How feasible are the projects in terms of PVO/NGO goals?

Very realistic & reasonable program.

3. What is the implementation capability of the PVO/NGO?

Good.

4. Logistical capability?

Well organized offices in Yerevan with good support staff. Good local leadership with Dr. George Kevorkian.

1. NAME OF THE ORGANIZATION

Save the Children

2. ADDRESS

a) In the United States - Contact Person:

Maha Muna
St. Wilton Rd.
Westport, CT 06880
(203) 221-4131

b) In Armenian SSR - Contact Person:

c/o Armenian Assembly
39 Alavertian St.
Yerevan, ASSR 375010

3. NUMBER OF PROFESSIONAL STAFF IN ARMENIA

Contact person: Lilly Bouldoukian in Leninakan and at Hotel Armenia in Yerevan

4. TOTAL NUMBER OF STAFF IN ARMENIA INCLUDING VOLUNTEERS

As many as needed

5. AFFILIATIONS

a) Affiliation with indigenous groups

Ministry of Health; Soviet Children's Fund

b) Affiliation with international groups

American Jewish Joint Distribution
?? Armenian Assembly

6. NUMBER OF BENEFICIARIES

Many - treatment in center for rehabilitation

7. TRAINING: AREA OF INTERVENTION

a) Rehabilitation Center training program

b) Day Care center

8. HOUSING: AREAS OF INTERESTS

- a) Guest house in Leninakan for specialists and consultants
- b)
- c)

9. MEDICAL CARE: AREAS OF INTERVENTION

Rehabilitation center in Leninakan

10. FUNDING OF PRESENT PROJECTS

Joint effort with AJJDC

11. SOURCE OF FUNDING FOR PRESENT PROJECTS

AJJDC and Lebanese Armenian Community

12. TOTAL BUDGET FOR PRESENT PROJECTS

To continue salary of one professional at \$55,000/vr.

13. REQUEST FOR FUNDING FOR USAID

- a) Mrs. Bouldoukian would like to have a day care center next to the Rehabilitation Center in Leninakan
- b)
- c)

14. TOTAL BUDGET FOR REQUEST

No funding is requested

15. OVERALL IMPRESSIONS OF THE EFFECTIVENESS AND NECESSITY OF ASSISTANCE

- a) Will the PVO work itself out of a job? Yes
- b) Does it appear to be planning for this? Not clear
- c) Are the activities sustainable? Yes, with proper training of local specialists.

16. HOW FEASIBLE ARE THE PROJECTS IN TERMS OF PVO/NGO GOALS?

Good

17. WHAT IS THE IMPLEMENTATION CAPABILITY OF THE PVO/NGO?

Good

18. LOGISTICAL CAPABILITY IN THE USA

Office equipped with professional staff

19. LOGISTICAL CAPABILITY IN THE ASSR

-Rehab Center in Leninakan

-Guest house in Leninakan

-One professional and the husband full-time.

-Local professionals who volunteer

-Many volunteers as needed

-Car

ANNEX 10

Priority Areas for Funding as Expressed by the Ministries,
the City Officials in the Earthquake Zone,
and the American PVOs working in Armenia

ANNEX 10

PRIORITY AREAS FOR FUNDING AS EXPRESSED BY THE MINISTRIES, THE CITY OFFICIALS IN THE EARTHQUAKE ZONE, AND AMERICAN PVOs WORKING IN ARMENIA

A. Priorities of the different Ministries of the Armenian SSR

One aspect of the detailed scope of work for the technical team was to contact the local government agency involved in the area of the technical expertise of the team members and to obtain the "Republic and local government's assessment of the highest needs directly related to the earthquake victims as it pertains to the authorizing legislation for U.S. assistance."

The Team members systematically asked the "priority" question of all the officials encountered in group sessions and individually. The following are lists of priorities identified by the different Ministries visited.

A.I.D. officials may notice that the same priorities and requests keep on coming back to them over and over again through different channels of communication such as the technical equipment and expertise for baby food factory or for the disposable syringe manufacturing factory. It is important to realize that this pattern is not haphazard or due to disorganization of efforts by the official authorities. Rather, it should be acknowledged that the needs are many and pressing and the potential donors visit the same ministries on a daily basis. The ministries do not have any indication which project ideas will be privileged by donors until a project is in progress in Armenia. Therefore, they really do not have much of a choice but to present the same list of needs and proposed projects from one donor to the other.

Priorities by Ministry from the different ministries visited are presented below:

1. Ministry of Health

- o Baby food factory (mainly the technology);
- o Freezer plants for meat conservation. (Thirty percent of meat received from the Soviet Republics is spoiled now due to lack of appropriate refrigeration and storage facilities);
- o Disposable syringe manufacturing factory;
- o Preservation of old town of Leninakan — water/flooding problems;
- o Infertility problems;
- o Environmental health.

The major priority is the realization of a baby food factory. This message was given to us directly by the Minister of Health as well as the Council of Ministers of Armenia. This is the priority area chosen by the Armenian SSR authorities for the U.S. \$5 million appropriated by the U.S. Congress. While

indicating their area of priority, the authorities acknowledge the fact that the U.S. Government is free to choose how they spend their money.

2. Ministry of Planning and Construction

- o Manufacturing equipment and training for mid-level professionals;
- o Geographic Information System;
- o Training for Geographic Information System.

3. Ministry of Education

- o School construction (they consider this to be their job locally);
- o Equipment for the Polytechnic Institute of Leninakan (specifically science laboratories);
- o Spare parts for technical equipment in schools;
- o New curriculum planning approach;
- o Special language schools (example of British School in Leninakan);
- o AGBU Technical University Project.

Any help related to the educational system in areas of US strength and specialization.

4. Ministry of Social Security

- o Equipment and gadgets to facilitate home reintegration of handicapped;
- o Wheelchairs adapted to sports;
- o Occupational Therapy training (no such specialization in the Soviet Union);
- o Center for housing and training of handicapped for long term handicapped youth and adults;
- o Prostheses;
- o Workshops in Leninakan, Spitak and Kirovakan for the 5,000 handicapped and amputees directly related to the earthquake.

5. Council of Ministers

The baby food factory is the priority for the Council of Ministers which is the highest body in the Armenian SSR. The Chairman, Mr. Markariantz and the Deputy Chairman, Mr. Movsissian insist on this project as the contribution of A.I.D. even if it has to be channeled through an American PVO. They indicated that the Soviet Embassy in Washington D.C. has an account for the Earthquake relief donations where they have accumulated 1.5 million U.S. dollars. They are willing to add this sum to any contribution from the U.S. Government towards the baby food factory project.

While emphasizing the baby food factory project, the officials made sure that it was understood that this is their own preference. They said that they are aware of the fact they cannot make the decision for the U.S. Congress; but they are indicating this as their own choice since they were asked about their priority. They indicated also that they will pursue this idea independently through their own channels and contacts at the Washington Embassy.

B. Priorities of officials of the different cities visited

In line with the scope of work's requirement of determining the local government's assessment of the highest needs, the Team members enquired about the priorities of the local city and regional authorities in the four areas visited. Leninakan and Kirovakan are large cities with important industrial and tourism attractions and have received a good amount of attention by the planners of the reconstruction efforts, specially in building activities.

Stepanavan has received less attention because the death toll was not really very high there (according to the perception of the local authorities) and Spitak seems to have received the least attention. The local authorities do not understand this situation very well. They have suffered the highest death toll and the city and the villages have been practically destroyed for good.

While Spitak was the center of the attention of the world, being so near to the epicenter and because of the death toll, it seems to have been caught in one administrative and planning impasse after another. While many PVOs have volunteers concentrating on the psychological counselling of the population, whatever financial and concrete help has arrived to Spitak is due mainly to the efforts of the local officials. One other reason for the slower rate of rebuilding of Spitak and the villages is that the inhabitants are being convinced to move from their traditional ancestral village locations to new areas which used to be their agricultural land for the production of beets and potatoes.

The following is a detailed list of the priorities presented to the team members by the local officials of the four cities visited:

1. Leninakan

Priorities

- o Kindergartens and schools;
- o Hotels;

- o House of Culture;
- o Sports Complex;
- o Telephone network;
- o Joint ventures - light industry;
- o Garbage/sewer;
- o Building design;

Highest priorities

- o Joint ventures (such as baby food factory or meat freezing plants);
- o Hotel;
- o Building design;

2. Stepanavan

- o Veterinary clinic for the Veterinary Technical Institute;
- o Hotel;
- o Joint ventures related to tourism and light industry;
- o Cheese factory.

The second secretary mentioned that there is no move to rebuild the three music schools and the one fine arts school destroyed during the earthquake for the coming year. She also regretted the fact that the rebuilding of the Houses of Culture is not planned for the next year. She thinks these should be priorities to help the population, especially the youth to resume a normal life.

3. Kirovakan

- o Diagnostic center;
- o Garbage processing plant;
- o Complete lines of light industry;
- o Computers for schools;
- o Sports palace;
- o Technical institute;
 - Mechanical engineering;
 - Civil engineering;
 - Chemical engineering;
 - Road construction.

Kirovakan has been a major center for sports and has produced many olympic champions and world record holders. The First Secretary is an international judge for weight lifting competitions.

Kirovakan is also a major tourist center for Armenia and the surrounding republics. The rebuilding of the Tourism Industry is seen as crucial to the economic recovery of the city.

4. Spitak

- o Roof tile making technology for tile making factory;
- o Sugar factory for fructose production;
- o Elevator factory;
- o Europolice built in Spitak.

They provided the team with a list of industrial development projects that they would like to realize. Spitak was heavily involved in sugar making (from beets) and in textile, sewing industries as well as in elevator manufacturing. There is a large pool of skilled manpower in these areas (6,000 women involved in the sewing factories alone).

The First Secretary of Spitak was the director of the sewing factories before the earthquake. He has a good sense of management efficiency and would like to provide work and new economic vitality to his town and the surrounding villages.

C. American PVO proposals for funding from U.S. A.I.D.

The American PVOs were invited to submit proposals for funding by U.S.A.I.D. They were asked to complete specially prepared questionnaire forms. Fifteen such forms were received by U.S.A.I.D. prior to the Technical Team's departure for Armenia. The following is a detailed listing of the proposals of these fifteen PVOs:

| | |
|------|-----------------------------------------------------------------------------------------------------------------------------------|
| ADRA | Construction of a health center in Kirovakan |
| | Training of health personnel (Physiotherapists, nurses) at the new rehabilitation clinic for children in Yerevan for three years. |
| | Agricultural programs |
| | Training of 6 specialized workers for prefabricated house factory |
| ARS | Sonar-magnetic Resonance Scanner equipment |
| | Native stone cutting equipment for construction activities |
| | Model village development for small scale agriculture development |
| AAA | Housing Construction Training |
| | Environmental projects |
| AGBU | 10,000 ton cold food storage |
| | Technical university |
| | Disposable syringe plant |
| | AGBU/Yale University Hospital Medical Program |
| | Airlifts of patients from Armenia |

Armenia agriculture needs

Peace Corps

| | |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ARC | Construction of post-traumatic rehabilitation center; provide nine additional staff; |
| | Construction of a psychological center to assist with counseling assistance to Armenian children; |
| CWS | Humanitarian relief; rebuilding of earthquake area for the long-term' |
| AJJDC | Construction; technical training; Armenian professional training abroad; specialized toys/equipment for motor coordination, physical strength; technical literature and translation; |
| CRS | Manufacturing of pre-fabricated housing units; construction of community centers; |
| AC | Airlift transportation; |
| Sch | Salary of one employee; |
| AEC | Equipment for PVC pipes; |
| AESA | Testing of typical buildings in Yerevan; micro-zonation network for Yerevan; micro-earthquake network for Yerevan; instrumentation of buildings for Yerevan; |
| MOA | Improve overall health care; upgrade standards of operating rooms; teaching programs for nurses in sterile techniques; |
| ERFA | Mental health treatment of victims; training of local therapists; outpatient mental health clinics; full-time child psychiatrist to work and provide training locally; |
| ARS-mass | Psychiatric care project, phase II--child psychiatry facility, English instruction to staff; upgrading of library capacity; |
| | Epidemiology survey and exchange of selected specialists; |
| | Johns Hopkins Project, phase II--develop health information network, improve the quality of care, monitor progress of health care in earthquake zone; |
| | Develop small scale manufacturing and food |

processing enterprises; purchase of equipment, vocational training of people concerned in operating management, financial planning and management, operations and maintenance of enterprises implemented;

Education: Strengthen teacher training at the elementary and secondary levels; English language training, upgrade library capacities, introduce modern teaching methods and systems; additional computer training;

HOPE

Vocational assessment and training program focused on earthquake victims in their teens in the Leninakan area;

Educational: Home care rehabilitation educational program for relatives/guardians;

Comprehensive outreach rehabilitation education program in earthquake stricken areas;

Scientific exchange program with final year medical residents in physical medicine and rehabilitation from several major US academic institutions;

Architectural consultation for the Yerevan Pediatric Rehabilitation Center;

Comprehensive pediatric rehabilitation "center of excellence" in Yerevan;

Outreach clinics;

Pediatric rehabilitation home care program.

ANNEX 11

Background Report on the Earthquake's Impact on Armenia

Background Information About the Impact of and
Response to the Earthquake in Armenia

A. The Grim Statistics of the Earthquake

This section A is based on an article published in the journal Industrial Production and Architecture of Armenia (No.1 12, 1989, pp. 3-7). The author is M.H. Mekerdichian, the Deputy Chair of the Council of Ministers of the Armenian SSR and Director of the Armenian State Planning Unit at the time of writing.

1. The general picture

Twenty-one cities and regions were affected by the December 7, 1988 earthquake, representing 40 percent of the total area of the Armenian SSR. Spitak was completely destroyed. Leninakan turned into city of ruins. The cities of Kirovakan, Stepaanavan, and Dilijan were severely damaged and practically destroyed. Basic damage was suffered by the inhabited centers around Spitak, Stepavan, Akhourian, Ghoogasian, Amassia, Kiikark, Arakatz, Ani, Toomanian, Artig, Abaran, and Kalinino. Three hundred sixty-five villages were affected heavily. Of these, 58 were completely destroyed.

Eight million square meters of living quarters, representing 17 percent of the total living quarters of the republic, were lost completely. Most of the housing structures still standing in the earthquake area are not safe.

The following structures were totally destroyed: 277 schools, 245 kindergartens and nursery schools, 550 medical buildings, 324 social clubs and houses of culture, 367 libraries, four hotels, seven sanatoriums, 2300 trade- service- food centers; a central station with 50,000 telephone numbers, 530 international telephone lines. Several other social service and public buildings were also damaged severely and cannot be used.

In the area of industrial production, major damages were suffered as well. One hundred seventy factories and enterprises were severely damaged. One hundred thirty of these have stopped production altogether. Factories for the production of construction materials have been paralyzed. The losses are as follows:

- o 324,000 cubic meters of reinforced cement;
- o 82,000 "toof" rock blocks;
- o 24,000 square meters of interior wall units;
- o 5.5 million rubles worth of tool production capability;
- o 120 million rubles worth of production capability related to

- o construction technology; and
- o 1400 units of the transportation fleet (trucks, cars, etc.) and other, similar equipment and products.

In the domain of rural economy, the losses were also great, especially in the areas of hydro-electricity, transportation, and communally owned farms.

2. Leninakan

Over two million square meters of habitable surface-area were lost. Eighty percent of the following were rendered unusable: Housing, schools, nurseries, hospitals and polyclinics, cultural-social clubs and houses, communal-government buildings, public engineering works and structures, and communication networks.

Of the 40 factory/production/industrial units and plants of the city, 17 were completely destroyed and the rest is heavily damaged.

3. Kirovakan

The city's habitable surface-area was 2.1 million square meters until the earthquake. Over 50 percent of this area was damaged and made unfit for use. Of the eight hospitals, four were destroyed, the rest were partially damaged and need to be reinforced. Fourteen of the 28 schools of the city were destroyed, and 4 of the 41 kindergartens were damaged heavily. Also damaged were most of the following: cultural-social clubs and houses, communal-government-public buildings, engineering works and communication networks, transportation networks.

Of the 37 factory/production/industrial plants of the city, 17 were heavily damaged. All the rest have suffered major capital damage and need to be reinforced and equipped.

4. Spitak

Spitak was completely destroyed by the earthquake. Fifteen of the 21 villages in the region of Spitak were completely destroyed. The rest were heavily damaged and need complete rebuilding.

All industrial, communal, public, government buildings, communication and transportation networks were out of service and damaged almost 100 percent.

The region had many transformation industry plants. All were destroyed or heavily damaged: The sugar production factory (from beets); the flour milling factory; the elevator manufacturing factory; the textile, sewing factories, etc.

Almost all the cattle and the small animals were killed.

5. Stepanavan

Major building and habitable surface-area damage was suffered here. Only 33,000 square meters of the 313,000 square meters remained available for use. This means 89 percent of living quarters were destroyed.

Of seven schools catering to 3693 students, only one school with a capacity of 964 students could be used after the earthquake. Of the 10 kindergartens serving 1250 children, only one with 140 places remained operational. All the textile and sewing factories and the cheese production factory were destroyed.

6. Akhourina Region

In this area, 5,420 residential buildings were damaged. Also, 30 school buildings were damaged beyond use and 15 kindergartens were damaged beyond use. Several public baths were destroyed along with 18 social-clubs and cultural houses. Two technical Institutes of higher education were destroyed.

7. Kookark Region

Of 23 inhabited centers of this region, eight were completely destroyed such as the regional center of Kookark as well as the villages of Lernabad and Archood.

Many private houses went down in ruins; 2,705 were destroyed and 1003 others were later demolished.

Of the 21 school buildings of the region, only 6 remained standing. Only four of 17 kindergarten-nursery buildings remained operational.

All health and medical centers were damaged beyond use as well as all public service buildings and structures.

All the production and industrial plants were damaged beyond use. These included: The milk factory, the reinforced cement production factory, the sewing factory, and the greenhouses.

8. Amassia Region

Two of 26 centers of habitation were completely destroyed. Of the 3070 public housing buildings, 861 were damaged irreparably, of which 370 were completely destroyed.

Eight of 21 schools were destroyed as were two of the three kindergartens.

All branch factories of the Leninakan area main plants were also destroyed: The electro-technical production plant; the sewing factory; the veterinary farms and plants as well as many other factories.

9. Damages suffered by specific areas of the economy

The Council of Ministers of the USSR and the Council of Ministers of the Armenian SSR have commissioned new plans and construction designs to replace the damage incurred. This effort clarified the extent of damage suffered by specific branches of the economy as follows:

a. Industrial Production

The different levels of industrial production (controlled by the USSR, or USSR-ASSR, or by ASSR) taken together suffered losses estimated at 1.9 billion rubles. The production of several important items was totally lost. These items include a magnetic communications unit, compressors, electrical batteries, condensers, printing machinery and tools, construction tools, carpentry tools, elevators, stone cutting machines, cotton textiles, hosiery and sewing products, shoes, furniture, bicycles knitting products and many others.

According to preliminary calculations, to revive the industry in the region, an input of at least 1,130 billion rubles is required. As noted above, 170 factories suffered severe damage. Among these were the following:

- o Ministry of electrical-technical production: Ten factories were affected. Of these, three plants were completely destroyed. Damages: 147 million rubles and 7,660 jobs lost.
- o Ministry of mechanical engineering production: Two factories were lost completely. Damages: 10.4 million rubles and 1,100 jobs lost.
- o Ministry of radio production industry: Five factories were affected of which two were destroyed completely. Damages: 241 million rubles and 10,870 jobs lost.
- o Ministry of chemical production: Two plants were lost. Damages: 66 million rubles and 2,600 jobs lost.
- o Ministry of fertilizer production: One factory was lost completely. Damages: 50 million rubles and 3,260 jobs lost.

- o Ministry of electro-technical production: Fourteen plants were damaged of which two were completely destroyed. Damages: 45 million rubles and 6,570 jobs lost.
- o Communications industry: Three damaged plants, one totally destroyed. Damage: 44 million and 4,200 jobs lost.
- o Carpentry tool production: Three factories were completely destroyed. Damages: 85 million rubles and 4,200 jobs lost.
- o Five equipment production factories were damaged of which one was destroyed completely. Damages: 78.5 million rubles and 5,540 jobs lost.
- o Ministry of road and public works: One factory destroyed. Damages: 29.3 million rubles and 1820 jobs lost.
- o Ministry of communications: One factory destroyed. Damages: 10 million rubles and 750 jobs lost.
- o Ministry of color metallurgy: One factory completely destroyed. Damages: 8.6 million rubles and 2,900 jobs lost.
- o Six plants of Armenian Forestry Production units: Two were completely destroyed. Damage: 32 million rubles and 1,920 jobs lost.
- o Ministry of light industrial production: Forty of the 97 plants and factories have been completely destroyed. Damages: Several billion rubles in retail prices and 11,600 jobs lost.
- o Eighteen production units of the Armenian Republic: Six are completely destroyed. Damages: 59.8 million rubles and 4,750 jobs lost.

Sixty-four factories need to be rebuilt; the rest should be reinforced during 1989-1990.

The replacement of the factories is planned to proceed according to the latest innovations in the field of technology and quality control. The building designs will be in conformity with the seismic nature of the region. This last requirement is true for all construction projects in the region.

The Central Committee of the Soviet Union has issued directives to the different ministries concerned to replace 81 factories in 1989, 32 more during 1990 and six after 1990.

b. The agricultural-industrial complex of the Republic

The total loss in this area is estimated at 1.9 billion rubles. Two hundred and nine communal farms and 90 collective farms have been severely damaged. More than 80 plants of the transformation industry have been affected as well. Four poultry production factories have been destroyed, along with 1,200 veterinary buildings and constructions, two milk factories, and two meat processing factories. The cereal silos of Spitak and its feed factory and elevators factory, the sugar factory and many food industry related plants were also completely destroyed.

The irrigation network of the republic has been heavily damaged. Irrigation facilities and pumps on several thousand hectares of land have been destroyed. Six hundred kilometers of subsidiary pipeline networks have been so severely damaged that they must be rebuilt completely.

Based on pre-earthquake statistics and inventories, the following animal losses were calculated: 24,000 cattle, 45,000 sheep and goats, 8,000 pigs and 2 million poultry.

To understand the extent of the damage, it is important to note that the earthquake region used to produce:

- o 24 percent of the total rural-agricultural produce (estimated at 220 million rubles) for the Republic;
- o 13.3 percent of the transformation industry's total volume (estimate at 147.6 million rubles) for the Republic;
- o 50 percent of the cereals for the Republic;
- o 50 percent of the potatoes for the Republic;
- o 35 percent of the tobacco production for the Republic;
- o 11 percent of the vegetable production for the Republic;
- o 100 percent of the beet-sugar production for the Republic;

The economy of the region was also responsible for an important share of the animal husbandry and veterinary wealth of the Republic.

The concrete replacement plans for the rural sector are as follows for 1989 and 1990:

- o Housing: 1.6 million square meters;
- o Buildings for 20,000 pre-school places;
- o Buildings to accommodate more than 41,000 students in rural areas;
- o Ambulatory polyclinics to serve 4,200 visitors in in one shift;
- o Social and cultural clubs to accommodate 33,000 people.

It is planned to rebuild animal farms and poultry factories, the cereal silos, the service centers for technical production, and the irrigation networks. It also is planned to build agro-industrial complexes for the agricultural transformation technology based on the most recent developments in the field.

c. Building industry and the production of building materials

The following were completely damaged:

- o The stone cutting factory of Kirovakan;
- o The large panel production factory of Leninakan;
- o The reinforced cement factory of the Lenshin Leninakan;
- o The lime factories of Jajour town of Akhourian region;

The following were partially destroyed:

- o The reinforced cement factory of Akhourian;
- o The large panel production factory of Leninakan;
- o The lumber treatment factory of Kirovakan;
- o The buildings materials factory of Akhourian;
- o The mechanical repairs factory of Mayisian township of the Akhourian region.

Many other similar factories and enterprises were damaged. The total damage in this sector represents 87 million rubles of lost production (20.3 percent of the total production of the Republic) and 82 million of basic capital funds (21 percent of the total for the Republic).

For the reconstruction effort, the following areas are planned to be priority areas: building materials from "toof" surface materials from stones, light filler materials and artificial building stone factories from the residual materials of the other factories.

To revive the construction and building industry, a capital input of 456.9 million rubles is earmarked for 1989-90; of these, 268.4 million rubles to go to building equipment.

d. Transportation and communications industry

The total damage suffered by factories producing materials for public works and communication is estimated at 57 million rubles.

The Ministry of Transport and Highways for the Republic will revive the transportation network by an input of 38 million rubles of its own money as well as by an input of four million in related industrial production units.

Fifty nine villages are without any transportation means. The total damage in the region is estimated at 78 million rubles including Leninakan, Spitak, Kirovakan, and Stepanavan .

During the two years following the earthquake, the Armenian Republics communication ministry will rebuild the communication structures and buildings in 59 villages. In Leninakan, Kirovakan, Stepavan, and Spitak, these communication buildings and structures will be the responsibility of the other republics of the Soviet Union presently involved in reconstruction work in Armenia.

e. Automobile transportation

In this sector, the total damage of the earthquake is 43 million rubles. All cities in the earthquake area lost their bus stations. Eight such structures were completely destroyed and nine others need to be rebuilt partially. The different republics of the Soviet Union working in the reconstruction field in Armenia are planning to build parking and stations for 3,000 units of transportation.

f. Train transportation

Around Leninakan, Kirovakan, and Spitak, 34 points have been completely destroyed, and 120 others have been heavily damaged. The total damage is estimated to be about 170 million rubles.

g. Housing construction

In general around the earthquake zone, 6 million square meters of housing surface-area will be made available in 1989-90. the designs and construction materials are required to be of the highest quality and planned according to the seismic nature of the region.

h. Communal economy

Before the earthquake, the network of water pipelines in the zone was 2,976 kilometers long. Of these, 1,780 kilometers have been completely destroyed. Seventy-two percent of water servicing structures are in damaged condition.

Of 931 kilometers of sewer networks, 402 kilometers have been completely destroyed and 431 kilometers are in very bad shape. In Leninakan, all the structures are completely destroyed. In Herazusan, around the village of Kash and the regional center of Bert, these networks are in severely damaged state. The total value of these networks is estimated at 110.3 million rubles of which 742 million rubles worth is destroyed and out of commission.

Of the total heating network, 61 percent (about 22.1 million rubles worth) is damaged beyond use.

All services geared toward the social life of the communities were heavily affected including: Public health, social security, sports, popular education, adult education, printing presses, journal and periodical buildings, and several similar structures.

More than 250 medical institutions, among these 24 hospitals, 14 polyclinics and eight regional hospitals, 134 maternity wards and pediatric wings, and eight sanatoriums were completely destroyed. Another 300 health oriented institutions were so severely damaged that they could not be used. The total damage in the health area was about 500 million rubles. The large number of people in need of prostheses and surgery related to loss of limbs has pushed forward plans for the construction of a 600 bed specialized hospital for prostheses-bone injury. It is important to note that the plan is to use international standards in the building and equipment of these new medical units.

In the earthquake zone, 29 sports-health oriented complexes were completely destroyed and 12 others were partially damaged. Of 628 cultural orientation institutions, 475 were seriously damaged. Among these one can find: 49 music and fine arts schools, 372 libraries, 12 museums, 40 cinema theatres, 2 centers of film rental for the region. To rebuild some of these and to strengthen some others, a budget of 100 million rubles is necessary.

Twenty-five out of thirty-three polygraphic production units have been completely destroyed, including 13 printing presses and editorial buildings for 12 regional papers. The reconstruction costs for these units is estimated at 20 million rubles.

Due to the earthquake, school and educational buildings serving 103,400 students have to be rebuilt completely as well as kindergartens for 46,000 places. Five hundred million rubles are necessary for this effort. For rebuilding of higher educational institutions in the area, 127.9 million rubles is needed. An additional 18 million rubles is necessary to reinforce damaged buildings.

i. Trade

Sixty percent of all trading and warehouse space has been damaged in the earthquake zone. Ninety percent of all such structures has been damaged in Leninakan alone. It is planned to rebuild the whole network during 1989-90 to satisfy all the needs of the population of the area. It is already planned to build five public trading centers, two children's stores, 50 department store branches and four furniture stores to cite just some examples.

M.H. Mekerdichain, the Deputy Chair of the Council of Ministers of the Armenian SSR and Director of the Armenian State Planning unit concludes his article as follows:

"The earthquake in Spitak focused our attention on the low level of quality of the scientific and technological research related to seismic sciences. This research work is out of line not only with modern technologies but with research available in the other republics of the Soviet Union as well.

It is obvious that the improvement of the situation is dependent not only on better co-ordination, but also on the adoption of new scientific research methods. Therefore, it is imperative to organize the coordination capability of this section as well as to review the research orientation of the following institutes: Geophysics, Seismic Engineering, Mechanical Engineering and other related sciences. Radical changes are necessary in the network of seismic stations and the work carried in these stations.

The tragedy that hit the Republic offers serious lessons to all. Many conclusions will follow. To start with, the shortcomings of the traditional economic organization which could not meet the necessary functions under extreme conditions must be noted.

We are now entering a second phase, that of the reconstruction. Its success depends on the coordination of all branches of the government departments. It is therefore necessary to create a complete data base and to design an information system for earthquake relief and preparedness. All levels of local and central governments and other units participating in the work of reconstruction will benefit from such a project."