VII. ASSESSMENT OF THE DP CAMPS

OVERVIEW AND TYPOLOGY

The term "displaced persons camps" is a misnomer for it conjures up an image of refugee camps in other situations where large groups of people live in orderly shelters supported by one or more relief agencies providing shelter, food and medical supplies. In the case of the Salvadoran DP settlements, however, few are organized camps or settlements. Most are ad hoc concentrations of people sporadically served by various agencies and many are distinguishable from the squatter settlements in the same area only by the generally higher density and poorer condition of the shelters.

Few camps are supported by an organization that takes responsibility for providing all services. Neither the government nor the Red Cross run camps per se, and very few receive comprehensive support. The vast majority receive only minimal assistance from PVOs such as CARITAS or the Green Cross. The only commodity supplied on a regular basis by CONADES is food. Installation of water and sanitation facilities is generally the responsibility of the municipality, although CONADES has assisted in some cases, and the jobs component of the Jobs & Health Program has installed water and sanitation in a number of the settlements.

The construction of shelter is generally the responsibility of the individual family and, while CONADES has distributed various construction materials including USAID-supplied plastic sheets, most of the units are self-made from local materials. Neither CONADES nor the U.S. Government runs or provides administrative assistance to the camps.

Types of Camps

There are five types of DP camps. They are:

1. Designated camps: Designated camps are those which were planned as DP settlements. The size varies greatly with the largest, 2,072 persons at El Tiangue in San Francisco Gotera, and the smallest, several multi-family shelters errected by CONADES buildings in the San Isidro section of San Salvador with 226 residents. Designated camps usually have water and sanitation and, because the sites expansion contingencies and needs were considered, there is usually room to upgrade and expand the camps.

2. Ad hoc settlements: The ad hoc settlements are areas where groups of DPs have settled in groups and where relief agencies are distributing relief supplies. The ad hoc settlements also vary in size and shape. Many are linear, i.e., the shelters are situated along roads, railroads and in alleys. In many of the departamental centers where extensive fighting has occurred, linear settlements can be found along the roads leading from the towns. The ad hoc settlements, especially those which are linear, are difficult to upgrade. Some services, such as water, would be easy to provide, but sanitation and other facilities will be more difficult because space is limited. It will be especially to difficult to provide latrines within walking distance of individual shelters without acquiring private lands adjacent to the camps or providing individual, rather than group, latrines.

3. Concentrations of DPs in colonias: In many cases, groups of DPs have moved into areas adjacent to towns or squatter settlements and have become an extension of these marginal areas. In the rural towns, these are generally the best living environment for

the DPs. The housing plots are usually larger, and there is a small amount of land for gardens, individual family latrines and some outdoor area where children can play. In these settlements, the shelters are usually more substantial, with many made of bajareque* or adobe.

In San Salvador and the target urban areas, many desplazados have located in, or adjacent to, existing squatter settlements and live in a symbiotic relationship with these communities. While the situations of people living in these settlements is certainly marginal at best, the nutritional and mortality studies show that the urban D.P.s are slightly better off than their rural counterparts living in ad hoc and designated camps.

Colonias in the smaller towns are fairly easy to upgrade, and self-help initiatives can be very successful. In the urban colonias, upgrading should be limited to providing water, sanitation and building materials to improve the shelters.

4. Occupied buildings: In some situations, large abandoned buildings have been occupied by the desplazados. The Tololco camp in Chalatenango is a good example. A small granary was abandoned and the equipment removed by the owners; shortly thereafter, approximately 292 desplazados occupied the grounds and have taken over the three buildings on the site. In one of the buildings, people simply share open-air facilities, partitioning them at night with clothes, towels and sheets. A smaller building nearby has been subdivided by constructing mud walls to divide the area. In the second building, the desplazados have occupied individual stalls of the former hog shed using sheets and mats to screen individual living areas. All water and utilities were cut off when the granary was closed; today water is obtained from a polluted stream that flows near the site, and people

use the stream and nearby fields for excretion. CONADES did install two pit latrines with cement covers, but neither latrine is used.

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*A local form of earthen construction.

In order to upgrade conditions in camps such as these, emphasis must be placed on hygiene and organization. Without extensive education and community organization, latrine facilities and other installations will have little effect.

5. Sanctuaries: Many desplazados concerned for their personal safety have taken refuge in church buildings where they are provided protection and sanctuary. Groups of people ranging from 150 to 1300 receive a variety of services from the churches. These sanctuaries are discussed in a special section of this report.

Settlement Data

It is estimated that approximately 15% of all displaced persons reside in settlements as defined above. Of principle concern to the U.S. Government are the settlements listed by CONADES, where the majority of persons residing on the sites are eligible to receive food and other services because they are registered with CONADES (a list of all camps and their populations is included in the technical appendices.

Considerations for Upgrading D.P.Settlements

DP settlements should be viewed as a collection of interrelated systems. In order to obtain significant improvements in one sector or another, it is important to understand the interrelationship be tween the various systems and how they contribute to the overall health or environmental status of the camps.

In planning or upgrading a DP settlements, three design principles should be considered. They are:

1. Design for health: Health in a DP settlement is dependent upon

good water, good sanitation, good personal and group hygiene practices, and environmentally-sound shelters. Camps are usually designed around a sanitation and hygiene plan. Water facilities are installed in support of that plan and shelters are upgraded in such a way that food and water can be stored and prepared hygienically within the shelter units.

2. Design for security: The physical layout and design of the camps, and arrangement, design, and construction of shelters are important considerations in promoting internal security and providing an environment that promotes hygiene and cleanliness. Planners have generally found tht grid layouts, long linear camps, and large-scale multi-family buildings inhibit security and social organization while community units i.e. clusters of inward facing shelters around a small common ground, and the use of one-or two-family shelters, promotes security and a higher standard of hygiene and cleanliness.

3. Design for long-term occupancy: Despite both DP and GOES desires that they return home, or be resettled and integrated into the general society as soon as possible, the reality is that most DP camps can be expected to exist for years. Therefore, planners and relief agencies should plan to install facilities and promote activities that will keep the people active and engaged in enterprises which promote their self-respect. Home gardening, cottage industries, and cooperative activities all play an important part in helping people maintain their dignity in these adverse situations. It is especially important in planning new camps that these considerations be incorporated into the layout plans. There are two analogies that are often helpful in conceptualizing assistance to DP camps. When a thousand or more people are living in a large camp, they are in fact a small village or suburb and need all the amenities and facilities that would

normally be provided to a human settlement. Small camps of several hundred or less are like large apartment complexes. They require the basic installations such as water, sanitation and light, but generally their economic and social activities will be focused outside the camps' environment.

Other Considerations

Before examining the status of camp systems, several points should be addressed. There is an attitude prevalent in some quarters that DPs "have it too good" in the camps. There is a myth that they are receiving ample supplies of free food, clothing and medical care. This is not the case. Food supplies are inadequate, and very few people are able to supplement their diet adequately from the sporadic employment that they receive either from the Jobs Program, or the odd jobs that they are able to obtain in an economy where officially 40% of the people are unemployed. The statistics gathered by this team on malnutrition and infant mortality in sample communities throughout the country should provide ample evidence of the poor status of people in these camps.

There is also a prevailing attitude that, if the camps are improved to a basic minimum standard, DPs will flock into the camps for "the good life." Even under the best of circumstances, DP camps will be sub-marginal settlements. Density levels are higher than in the marginal settlements, and the conditions of shelters are generally far worse. Furthermore, due to uncertainties relating to the length of time the people will be in the settlements, there is a reluctance to invest any money or efforts into upgrading the shelters to make them more livable. This will result in higher than average hygienic problems and increased health risks. There is extensive information on motivations of people for moving into refugee camps and, by extrapolation, DP camps. The primary reason people go to camps is for security. Camps are ussually a last

choice, taken only when other options have been foreclosed. The level of camp services needed to "draw" desplazados into camps is far above the level that any relief agency can provide.

There is, however, one reality that should be recognized; many of the people who have moved from the rural areas to the towns, or to San Salvador, will never return to their former homes. The longer the people remain in the various camps or colonias, the more they will adapt to their new surroundings. Many will find job opportunities and other means of coping that may be stronger reasons to stay than safety will be an incentive to return. In the larger planned camps, the ad hoc camps along roads or railroads, and especially in the concentrations of DPs in colonias, only a minimal number of people will return to their place of origin. On the other hand, almost no one will want to remain in the multi-family shelters, occupied buildings or sanctuaries and, as soon as safety permits, they can be expected to want to return or relocate. These trends should be kept in mind by relocation planners, for they can indicate where persons most willing to relocate may be found. It also provides general principles for planning new settlements and determining their size.

SHELTER

The types of shelter used by displaced persons in each camp vary considerably, not only among the different camps but also within camps.

The problem of shelter in the displaced persons camps goes beyond the provision of an enclosed, safe space for the displaced families. In virtually all the camps, the shelters are environmentally deficient. They provide neither security nor a basic, healthful environment for their occupants.

The principal building systems and associated problems are described below:

1. Self-made champitas: Champitas are small one-room shelters made of scavanged materials such as cardboard, plastic, cane, bamboo and unsawn timber. Most have corrugated metal roofs or plastic-covered wooden roofs.

   The environmental conditions inside these shelters contribute to the overall poor physical state of the displaced persons. Dust and dirt easily penetrate the houses and envelop occupants, their belongings, and food and water. Passing vehicles in the linear camps cause dirt and dust to shake off the roof and walls, further contaminating persons and belongings with each passing vehicle. Winds blow dust and debris that contribute to the problem. Cooking inside these facilties is marginal at best, and the walls and ceilings often are covered with soot and creosote caused by the smoke.

2. Wood frame, plastic sheet covered walls with corrugated metal roofs: In various camps, CONADES or other agencies have built wooden frames and used a green woven plastic provided by the Office of U. S. Foreign Disaster Assistance (OFDA) to erect multi-family shelters. In most cases, the shelters have corrugated metal roofs.

   These shelters are only slightly better than the self-made champitas because the flexible plastic causes the same problems as the cardboard and leaf walls. Because they are flexible, and not rigid, they constantly eject the dirt and grime accumulated on the walls into the living environment. In most cases the displaced persons have recognized that they cannot cook inside these units; thus, smoke and soot are less of a problem than in the champitas. As a general rule, these units are not popular because the occupants feel that they have no security and must keep someone in the shelter at all times to prevent theft.

3. Earthen casitas with metal or tile roofs: Many displaced persons are building small oneor two-room houses made of earthen materials. Two popular building systems -- adobe and bajareque (walls made of mud packed between wooden posts and horizontal guides of bamboo or cane) -- are seen frequently among families that have been in the camps for longer than several months. On those sites where desplazados are living among poor people in the marginal areas, or in colonias at the edge of the provincial centers, more elaborate and permanent structures are being erected, many of adobe and even a few utilizing brick. In the camps, bajareque structures are beginning to predominate, and this trend can be expected to continue the longer that people remain in the camps. In Berlin, many of the new arrivals have already begun to build bajareque structures, because of a greater feeling of security with this type of building. As a general rule, structures made with

bajareque or other earthen materials offer a better potential for maintaining a healthful interior environment. The walls are rigid and therefore do not give off dust, and occupants can more easily design and install measures to vent smoke if stoves are used inside the building.

4. Multi-family shelters in large buildings: In several situations, large numbers of families have occupied abandoned commercial buildings such as warehouses or barns, or have been provided refuge and sanctuary by churches in church buildings. In some cases, the families live openly without partitions; in others, the buildings have been subdivided by installing walls made of plastic, bajareque, cloth or cardboard. Conditions inside these buildings vary greatly, depending upon whether or not they receive support continuously from humanitarian organizations. From the standpoint of cleanliness and hygiene, the shelters supported by the Archdiocese are in excellent condition (with the exception of sanitation in one of the facilities). In the settlements that are supported only by CONADES, the conditions in multi-family shelters are generally poor and the buildings ill-maintained.

Options for Improving Shelter

Shelter conditions in camps must be upgraded in order to promote general improvement in the overall health status of the families in camps. Several options can be considered:

1. Distribution of more permanent materials: Wood for structural components of buildings and metal roofing sheets could be distributed through CONADES, or other assisting agencies, to help improve the structural integrity of the various buildings. Schemes for materials distribution systems could be linked to the Jobs Program, e.g., materials for work or coupons redeemable

at local suppliers for building materials could be issued to workers, or other schemes could be developed.

2. Provision of modular, prefabricated shelter units made of fire resistant fiberboard materials: These shelter units could be designed, prefabricated, and delivered at relatively low cost. Considerable success has been obtained in other areas using designs that provide three walls, a floor and a metal roof. The family occupying the structure is responsible for finishing the front wall, using local material such as bajareque, adobe, brick, wood, or other materials at hand, and finishing the design in a way that expresses some individuality. Units designed in this manner were delivered on-site for approximately $250 U.S., each, in Thailand in 1980. A simple design for such a shelter unit is on the following page. The advantage of the system is that it provides a rigid building with walls, roof, and floor that is easy to clean and free from dirt. One disadvantage of this system is that it will be difficult to transport these units to the rural areas. Furthermore, the cost of providing these units could be prohibitive on a large scale. On the other hand, they can be relocated with ease.

3. Earthen buildings: Displaced persons could be encouraged to build adobe, bajareque or other forms or earthen buildings and to improve these buildings with materials supplied by an assisting agency. Special attention would be given to helping each family properly ventilate each house, and the materials supplied should enable the family to have a semi-rigid roof, a hard-surfaced floor, and rigid, clean walls.

Recommendations

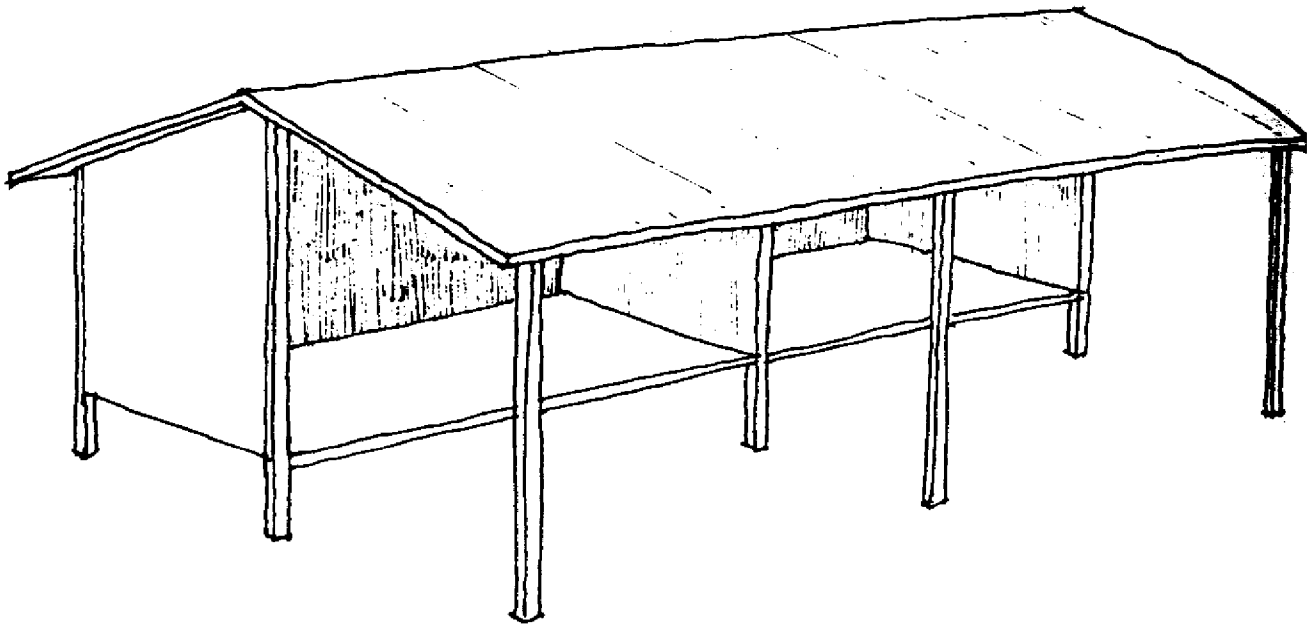
It is recommended that the third alternative be adopted. An assisting agency should provide support to encourage people to build

houses of bajareque. Bajareque is generally not considered to be a permanent house because untreated wooden posts will deteriorate over a period of only 5-7 years and the walls will then have to be replaced. By providing untreated wood of relatively small diameter, shelters with rigid walls could be erected which the occupants would be unlikely to consider permanent. By providing corrugated metal roofing sheets and the wood for a frame to support a metal roof, a rigid roof could be provided to give adequate protection from rain. Once the families had erected the bajareque walls, a 50-kilo bag of lime could be provided to enable the families to put a lime stucco or lime wash over the interior of the buildings. It is type of interior treatment of earthen buildings that makes them hygienic, because the lime is acidic and kills most germs. Furthermore, the walls can be periodically swept and cleanliness can be maintained.

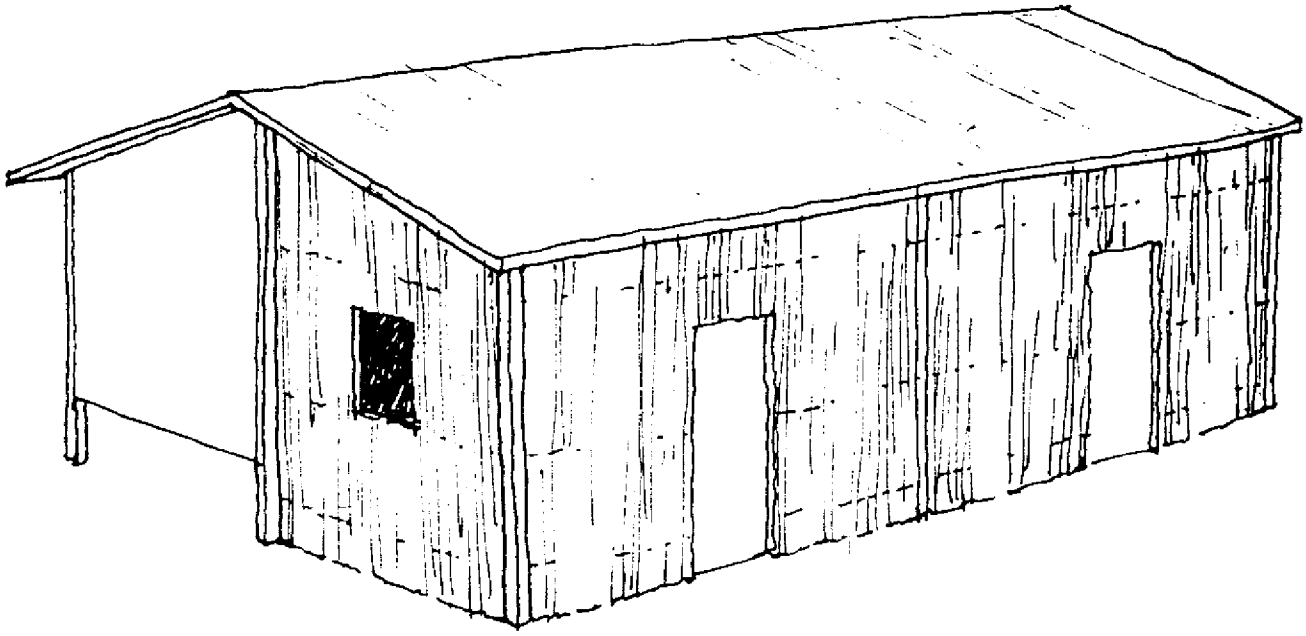
The floors of the shelters should be hard surfaced. A thin layer of cement can provide the needed cleanliness at fairly low cost. In some areas, bricks or cement road panels could also be used, although the costs would be greater than a cement floor.

A further advantage to providing these materials is that, when hostilities cease, and the displaced persons return to their place of origin or resettle to another location, the metal roofing materials can be taken with the families and used to repair their original homes or build new structures (This would also be the advantage of using bricks or paving panels for the floor.)

Typical Prefab Shelter



SHELTER UNIT AS SUPPLIED



SHELTER UNIT AS MODIFIED BY OCCUPANT

WATER SUPPLY

The quantity and quality of water supplied to the camps, as well as the methods of supply, vary greatly from camp to camp. The attached table depicts typical data relative to the water supply situation. In many cases, water is obtained from urban water systems, although in several camps, water is taken from nearby streams or from hand-dug wells. In all cases, by the time the water is consumed by the displaced persons, the quality is poor. Most reports have focused on the problem of improving the water supply. This is only one part of the problem for even if pure water could be supplied the quality badly deteriorates because families store the water in unclean containers and it is distributed for drinking or cooking in unclean receptacles. Therefore, to improve the quality of the water and to reduce the incidence of diarrhea, several measures must be taken simultaneously. First, improvements must be made in the water supply system. In locations where water is drawn from wells or streams piped water should be extended.

Second, the environment at the water point must be protected. Concrete or brick platforms should be installed around all water taps, and adequate drainage should be installed so that water does not stand and accumulate. The installation of these platforms will promote general cleanliness around the water point and will permit sunlight to help suppress bacteria around the tap.

Third, displaced persons living in camps should receive colored containers for storing their water. One system that has proved successful in other situations is to provide large green and red plastic jerry cans. The red jerry can is for obtaining the water and bringing it to the house; the green container is for storing water which has been decontaminated.

Fourth, an extensive public education campaign should be carried out in camps to acquaint people with methods for purifying water and to demonstrate basic hygienic measures for protecting the water source.

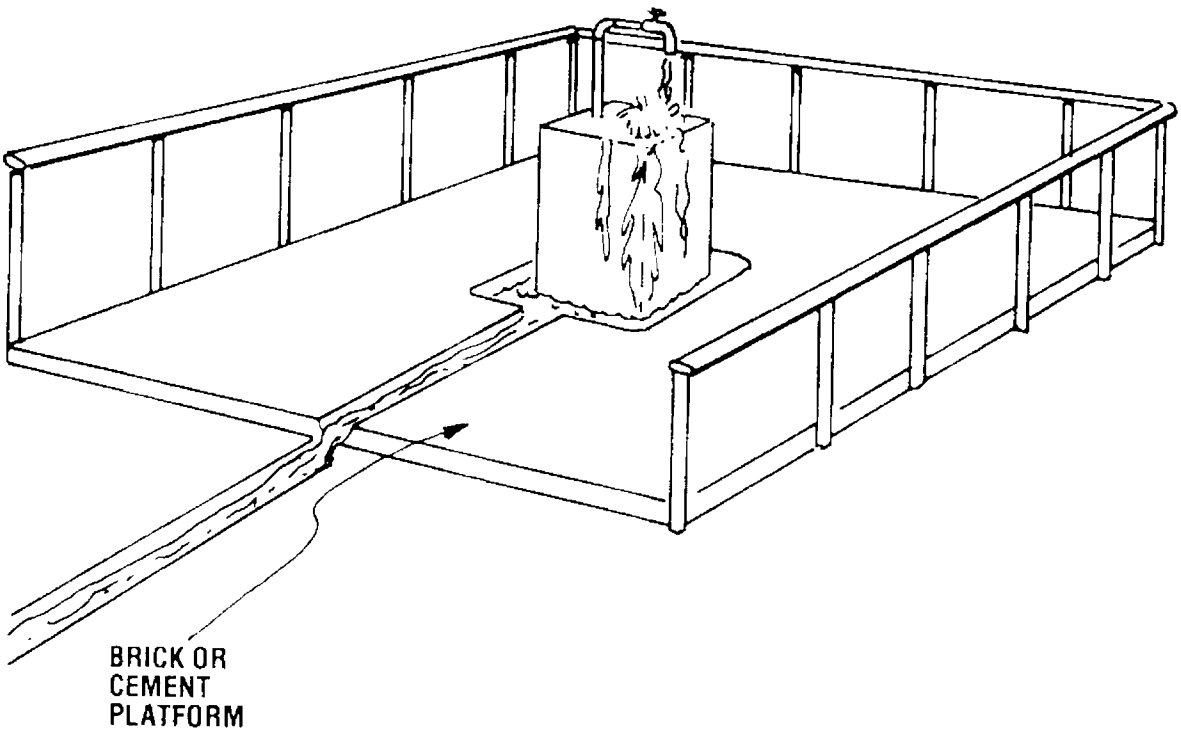
Fifth, a minimum standard of 15 liters of water per person per day should be maintained. Water supply is a function of both the amount of water that can be delivered at the water point and the distance from the a family shelter to the distribution point; i.e., the greater the distance, the less likely it is that sufficient water supplies will be acquired. The 15-liter standard has been adopted on the basis of studies that indicate that, at certain reduced levels, adverse factors occur. For example, if the water supply falls to 11 liters per day, clothing will not be washed as often and scabies may result. At 8 liters per day, eating usentils, pots and pans will not be properly washed. At 5 liters per day, more severe problems occur. (In all camps, adequate supplies of water are available nearby, although in several sites the walking distance effectively reduces the supplies on hand to levels approximating 8 liters per person per day).

Recommendations

The team recommends that piped water be supplied to each specific type of DP settlement. CONADES has developed an inventory of needs for most of the camps where persons registered for CONADES aid reside that may be used to identify specific project needs.

A quantity standard of 15 liters per person per day is recommended.

More detailed standards for water supply can be found in the technical appendices.


BRICK OR
CEMENT
PLATFORM

1/19/84

POPULATION, NO. OF PUBLIC TAPS, DISTANCE AND CHARGES FOR WATER IN NINE DISPLACED PERSON CAMPS

CAMPS	A POPULATION	B # OF PUBLIC TAPS IN CAMP	C POPULATION WITHIN 100 M. OF TAP	D MEDIAN DISTANCE TO CLOSEST TAP (in meters)	E PERSON METERS = B x D x 1000	F CHARGE FOR 1 JUG OF WATER IN COLONES	G # OF LATRINES
Santa Tecla, La Libertad	800	2	0	200	160	0	12
San Marcos, San Salvador	800	0	0	1,000	800	0.11	2
San Isidro	480	0	0	500	240	0.30	4
Berlin #1, Usulutan	200	0	0	400	80	0.05	0
Berlin #2, Usulutan	800	0	100	400	320	0.05	0
Cacaopera, Morazon	400	0	0	300	120	0.05	0
El Tiangue, Morazan	3,000	3	300	400	1,200	0	10
Caritas, San Vicente	3,000	2	300	400	1,200	0	12
Fenadesal, San Vicente	1,800	0	0	400	720	0	0
TOTAL	11,280	7	700	4,000	4,840	-	40

Source: Project HOPE proposal

SANITATION

The provision of latrines in DP settlements poses a number of technical as well as social problems. In the linear camps, the provision of common latrine facilities will not resolve the overall problem. Experience in Latin America as well as in other regions indicates that people will not walk farther than about 75 meters to use latrines, no matter what type of latrine or its cleanliness. In all the linear camps that were visited, use of communal latrines was low and evidence of defecation within several meters of all the houses could clearly be seen. In the smaller, concentrated camps as well as the three rectangular camps in Gotera, the level of use was much higher. In part, this is due to the fact that these latrines are flush toilets and are relatively well-maintained. However, in no case was the distance to the latrines greater than 50 meters.

Options for Meeting Need

In the linear camps, individual or small group latrines should be installed. If individual family latrines are chosen, pit latrines with concrete covers and built-in seats can be used. With proper technical assistance, these latrines can serve quite well for an extended period. However, given the density of the population, pit latrines should only be used if piped, running water can be supplied to the camps.

An alternative latrine system for large camps which should be considered is the aqua privy. Several designs have been developed for use by refugees. One disadvantage to the aqua privy is that it requires periodic desludging of the receptable (although this can be done with a cart and hand-pump) and a steady water supply to the

settlement (not the latrine) in order to work properly. Literature about the aqua privy is attached in the appendices.

Another option to consider is the installation of chemical toilets. Various designs are available, but essentially they are the same type of unit that is used by construction crews in the United States. The chemicals can be acquired commercially; a fiberglass tank could easily be fabricated at low cost in El Salvador; and a design for the enclosure, relying principally on local materials, could easily be prepared. The primary disadvantage to chemical toilets is that they need to be emptied periodically.

Water-sealed toilets have been proposed as a solution for several of the camps. This type of toilet would probably work well in smaller camps where numerous people are living in one large building (such as the Totolco camp in Chalatenango). The primary disadvantage to the water-sealed toilet is that the "goose neck" that maintains the water seal can easily become clogged with paper or other non-dissolving materials. A simple "plumber's helper" can usually clear the blockage, but how long such devices could be kept on hand is questionable. Technical drawings and designs for the water-sealed toilet are attached in the technical appendices.

Composting toilets have been recommended by several appropriate technology specialists and relief agencies working in the country. As a general rule, composting toilets have <u>not</u> proved successful in refugee camp situations, especially if the toilets are used by more than one family. One primary disadvantage is that multiple users fill up the latrine before the composting action can take place and removal of the waste can be an unpleasant experience. Composting toilets, however, could be a sucessful alternative for displaced persons who are dispersed throughout larger <u>colonias</u> or who are residing in rural areas.

Recommendations

No single latrine option should be considered a universal solution to the sanitation problem. The attached table lists the recommended latrine systems for each type of DP settlement.

RECOMMENDED LATRINE SYSTEMS

FOR D.P. CAMPS

CAMP TYPE	LATRINE SYSTEMS URBAN AREAS	RURAL OR SEMI-URBAN
Designated Camps		
Large (500 plus)	Flush latrines	Water seal toilets
Small (499 less)	Flush latrines	Aqua privies
Ad Hoc Camps		
Small rectangular	Flush latrines	Aqua privies
Linear	Aqua privies	Individual pit
Colonias	Aqua privies	Pit latrines or composting toilets
Occupied Buildings	Flush latrines	Chemical toilets

WASHING FACILITIES

Some of the health problems in the camps can be directly attributed to a lack of hygienic facilities in the camps. Some diarrhea can be attributed to dirty eating utensils, and scabies can be attributed both to prolonged wearing of dirty clothes and infrequent bathing.

Possible Solutions to the Problem

Three possible solutions can be suggested:

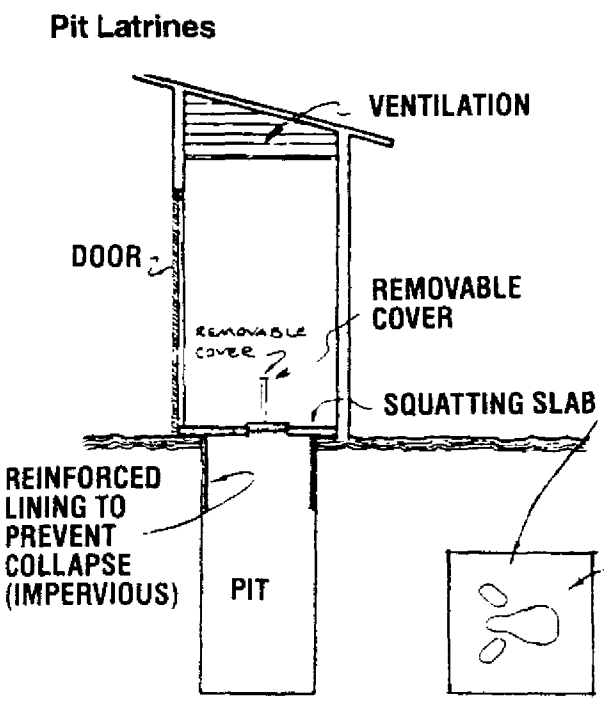
1. In smaller camps, a concrete or brick platform near a water tap could be built. Plastic or local materials could be used to provide a divider so that men and women could have privacy when they are bathing. A portion of the area could be designated for washing the cooking and eating utensils. As a general rule, however, a single platform and tap -- even with adequate drainage -- often proves difficult to keep clean.

2. Various designs exist for an integrated shower house with an adjacent washing area for cooking and eating utensils. While environmentally such facilities are usually sound, in large and linear camps they can become a problem, because at night the facilities become potential sites for crime and assaults on women.

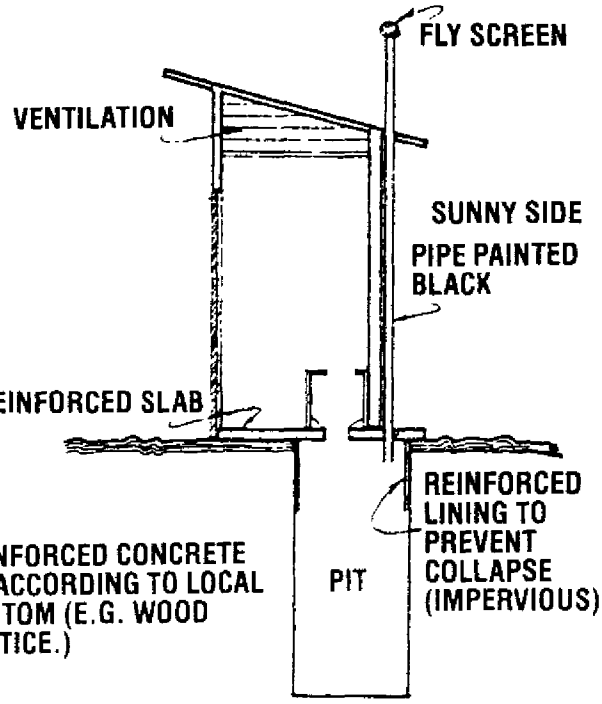
3 A third approach is a multi-purpose washstand. Several designs have been developed for use in refugee camps that could be employed in most of the displaced persons camps in El Salvador.

LATRINES

Pit Latrines

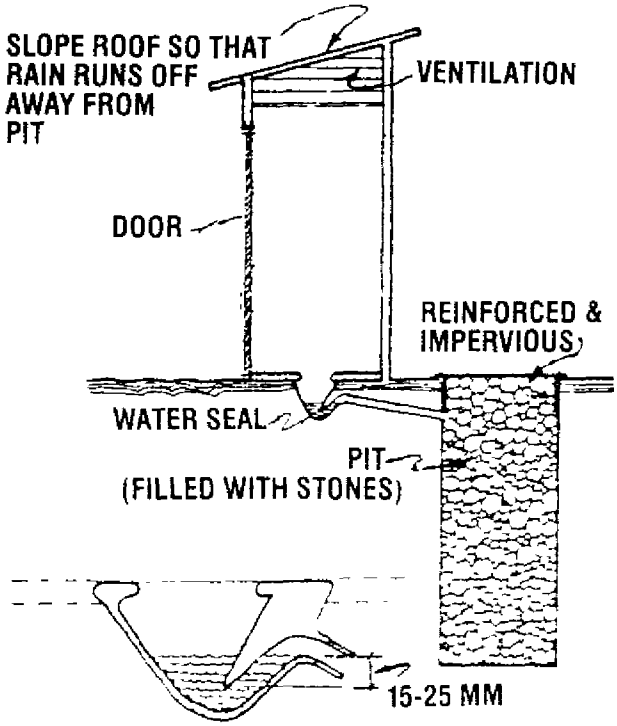


BASIC PIT LATRINE (WITH SQUATTING SLAB)



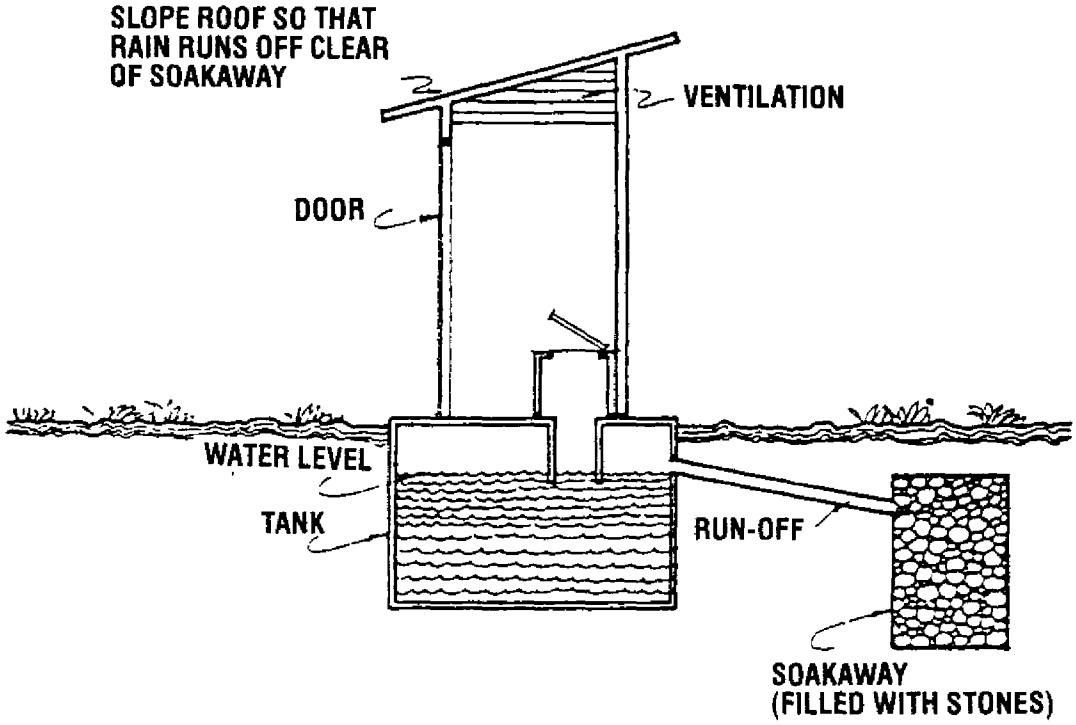
VENTILATED IMPROVED LATRINE (WITH SEAT)

Water Seal Latrine



WATER SEAL—MAY BE CAST IN ONE UNIT WITH SQUATTING SLAB

Aqua Privy

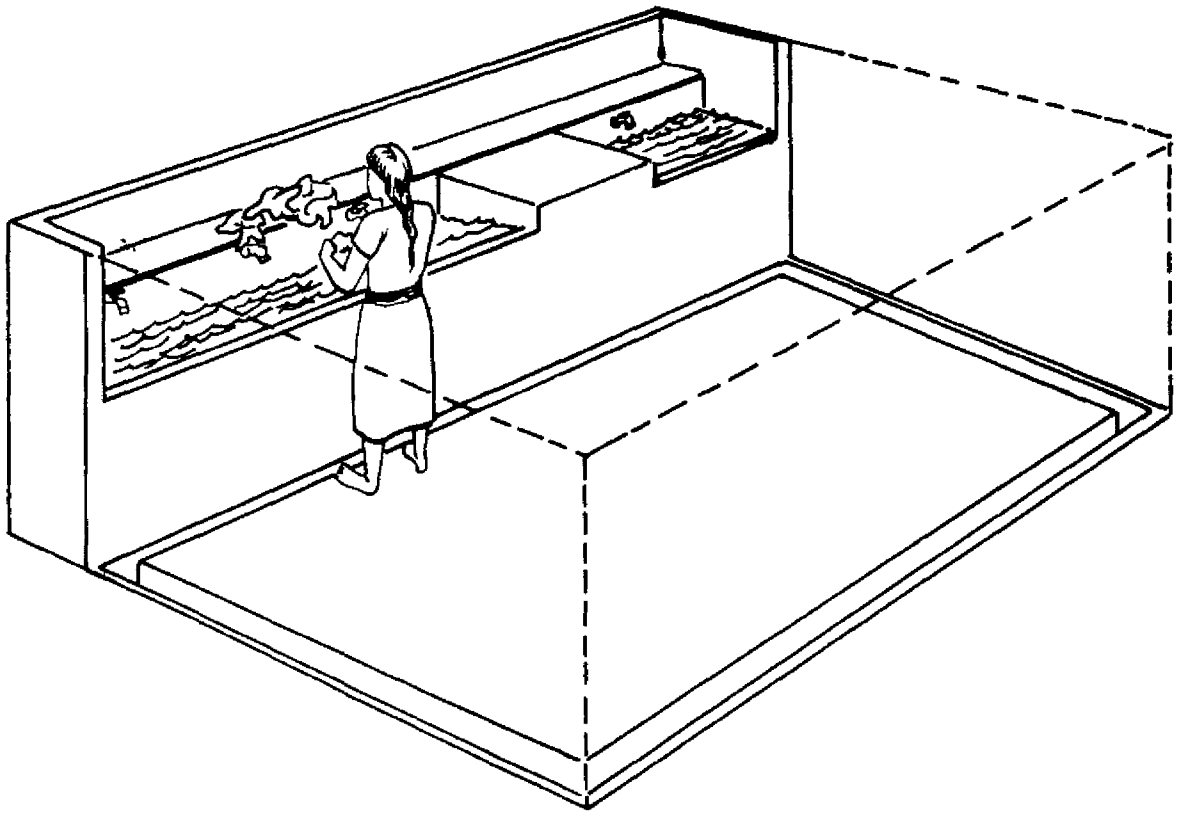

SLOPE ROOF SO THAT
RAIN RUNS OFF CLEAR
OF SOAKAWAY
VENTILATION
DOOR
WATER LEVEL
TANK
RUN-OFF
SOAKAWAY
(FILLED WITH STONES)

RECOMMENDED WASHING FACILITIES

FOR D.P. CAMPS

CAMP TYPE	WASHING FACILITIES
Designated Camps	
Large (500 plus)	Integrated showerhouse with washstands
Small (499 less)	Multi-purpose washstands
Ad hoc Camps	
Small, rectangular	Multi-purpose washstands
Linear	Multi-purpose washstands
Colonias	N.A.
Occupied Buildings	Designated area

Multi-Purpose Washstand



FLY CONTROL

At the present time, flies do not appear to be a major problem in the displaced persons camps. As the numbers of people increase however, and sanitation and hygienic problems become more acute, flies could become a major problem. Furthermore, during the rainy season the fly problem may naturally increase. Therefore, it is important that activities be taken to control flies before they do become a problem.

Options for Addressing the Problem

Several options exist for controlling flies. They include:

1. Chemical Control: Insecticides can be acquired and provided to teams in the camps to periodically spray areas that would attract flies. The problem is that chemicals must be rotated periodically; protection must be provided to the workers, and results will not be effective unless widespread spraying is carried out.

2. Improve refuse collection and hygiene control in the shelter areas: By collecting refuse and providing families with receptacles for holding wastes until they can be collected, flies can be denied their sources of food and breeding areas. This, coupled with better sanitation systems, can substantially reduce the threat of fly-borne disease, as well as reducing the overall number of flies present in the camps.

3. Installation of screens: In recent years, sanitarians working in refugee camps have demonstrated that installation of wire

mesh screens around latrines and garbage storage areas, coupled with a program of active refuse collection, can substantially control flies. This is a relatively low-cost measure.

Recommendations

It is recommended that the Program Unit utilize the Jobs Program to establish refuse collection teams in each of the displaced persons camps. Refuse storage barrels should be provided according to the standards outlined in the technical appendices, and families should be provided with plastic waste bags that can be sealed tight and will hold approximately two week's garbage.

It is recommended that the Jobs Program undertake the construction of screened waste-holding bins where waste bags can be deposited until they can be collected by the municipal authorities. It is also recommended that the Jobs Program install wire mesh screens on all latrines and improve the doors so that flies cannot enter the latrines.

Public education on the importance of fly control should be carried out as part of the overall health education program. Visual aids such as posters, comic books and/or filmstrips can be acquired from PAHO, the International Rescue Committee (IRC) or other internationally-recognized health education specialists.

MALARIA CONTROL

Malaria has been identified as a health program in some of the areas where displaced persons have concentrated.

Options for Malaria Control

Malaria control involves several simultaneous activites. They are:

1. Suppression of mosquitos with insecticides.

2. Removing sources of breeding by improving drainage so that water will not stand close to houses, removing areas where water could stand or accumulate under shade, keeping large water containers covered, and keeping muddy areas from forming by paving locations such as washing areas, water taps, etc.

3. Providing medical treatment with chloroquine to symptomatic non-immune persons. This latter group includes young children and any persons who have recently moved from a non-malarious area to an area with endimic malaria.

Recommendations

1. Given the current conditions, only the second two actions are feasible. Therefore, it is recommended that the Jobs Program ask appropriate staff of MSPAS to identify malarious regions and identify areas where mosquitoes could breed and undertake small projects to eliminate or improve these sites.

2. It is recommended that staff of MSPAS help in developing a questionnaire to identify desplazado families who have recently moved from non-malarious areas to areas endemic for P. falciparum malaria. These persons are without immunity and are at high risk of severe or fatal malaria attacks; they should be counselled and treated accordingly.

3. It is also recommended that the GOES Malaria Control Division be provided with funds, as necessary, to provide appropriate malaria control activities and treatments in the concentrations of displaced persons.

4. It is recommended that careful attention be paid to reports of malaria in desplazados as a stimulus for deciding on priority areas for intervention programs by the MSPAS malaria unit.

COOKING FACILITIES

In each of the camps visited, different types of cooking facilities were observed. Generally, most displaced persons use the traditional earthen stove, built on a table or earthen platform, which uses firewood for fuel. However, in many camps private organizations have demonstrated and/or built the Lorena stove, an earthen stove that uses less than half the normal amounts of firewood, and which can be vented with a simple chimney to take the smoke outside the house (although most Lorena stoves have been built outside rather than inside the house). In those cases where the Lorena stove is not used, both firewood and smoke are major problems.

Options for Meeting the Need

Several options exist for improving cooking facilities and reducing smoke. First, additional technical assistance can easily be provided by existing voluntary agencies to the camps to further encourage people to use Lorena stoves. There does not appear to be any resistance to the use of these stoves, although many people have complained that the stove is too big and takes up too much space.

Second, other designs for fuel-efficient earthen stoves have been developed. In the Dominican Republic, a modified Lorena stove, more comparable to the traditional stoves used in El Salvador, has been designed. This stove is also easy to vent but is less fuel-efficient. The primary advantage is that it is more in line with traditional stoves and takes up much less room.

Third, solar stoves have been proposed by several relief agencies. Solar stoves have generally not proven to be successful

in refugee camp situations in other countries. This is because a solar stove often requires extensive adjustments during the cooking period; the women cannot easily determine the cooking times necessary for basic meals; and the stoves have to be left out in the open in order to collect sunlight. Therefore, in the denser camps where many families are living in one building, they would not be practical. Furthermore, in the rainy reason the solar collectors are not as efficient, and meals could not be prepared on schedule.

Fourth, stoves that use other types of fuel could be provided. One type of system that is often proposed is a stove that uses methane gas derived from biodegradation of human and animal wastes. As a general rule, these have not proved successful in refugee camp situations unless a substantial number of animals are kept by the resident population. (Human wastes alone do not provide sufficient biogas for sustained cooking of the type normally found in a camp situation.). Furthermore, the use of biogas would necessitate common cooking facilities, a practice which is not in keeping with traditional social customs in this country. A biogas system, however, could be contemplated in facilities where large numbers of people are living in one building in rural -- not urban -- areas.

Another measure which should be contemplated is the introduction of charcoal as a fuel. Charcoal-making could easily be carried out on most of the camp sites, and the use of this fuel would reduce the amount of wood needed and the amount of smoke produced during burning. Information on charcoal-making is included in the appendices.

Recommendations

Recommendations for stoves and/or cooking facilities for each type of camp is included in the following table.

HYGIENE AWARENESS

Hygiene education is an important part of any health program and is especially critical in an environment such as displaced persons camps where people are living in marginal and unfamiliar conditions. Education regarding sanitation, personal hygiene, water purification, vector control, and even elemental measures such as the necessity for children to wear shoes, all require extensive and public awareness and education efforts.

In recent years, a wealth of literature and visual material has been developed specifically for refugees and persons living in marginal areas; this could easily be adapted to the displaced persons in El Salvador. Many of these materials are already in Spanish, and others could be quickly translated. Without hygiene education, even the most well-intentioned, well-organized and well-supplied relief activities will have only partial success.

Options for Resolving the Need

The primary focus for all health hygiene and nutrition education should be though the supplemental feeding program (see section on nutrition and feeding). Organization of the feeding program and the supply of services through the feeding center provide an opportunity to address a "captive audience" of women who have brought their children to the feeding center. By involving women in the preparation of the foods, nutrition education is provided. By working with the women on a daily basis in bringing their children back to health, other opportunities arise in which education can be presented.

Women are the critical element in hygiene education, for it is they who prepare the food, maintain the drinking water supply, clean the house, bathe the children, wash the clothes and eating utensils, and breast-feed the younger children. In the supplemental feeding program, these women are brought into the centers to get food for the younger children; this provides an opportunity to present them with education on a daily basis. Studies in various refugee operations have shown that, when women's awareness of hygiene rises, the general overall condition of the family will improve.

2. The Ministry of Public Health has extensive experience in health education activities. Unfortunately, these have been disrupted by the conflict and many of the experienced health promoters have been unable to continue their service. As part of the health sector revitalization efforts, the MSPAS should be supported to revitalize its health education component, and funds should be provided to permit the MSPAS to provide specific promotion services to the displaced persons living in camp situations as well as to large concentrations of displaced persons living in identifiable marginal areas.

3. A voluntary agency could be assigned responsibility for health education. Several organizations have proposed a health education component in their overall scope of services. Some of the more experienced agencies, such as IRC, have extensive literature and experience in various aspects of hygiene education and, by utilizing these agencies, the costs would be reduced.

4. The Program Unit could be charged with responsibility for hygiene education in the displaced persons camps. A health promoter could be assigned to work with the nurses already providing services in some of the camps.

Recommendations

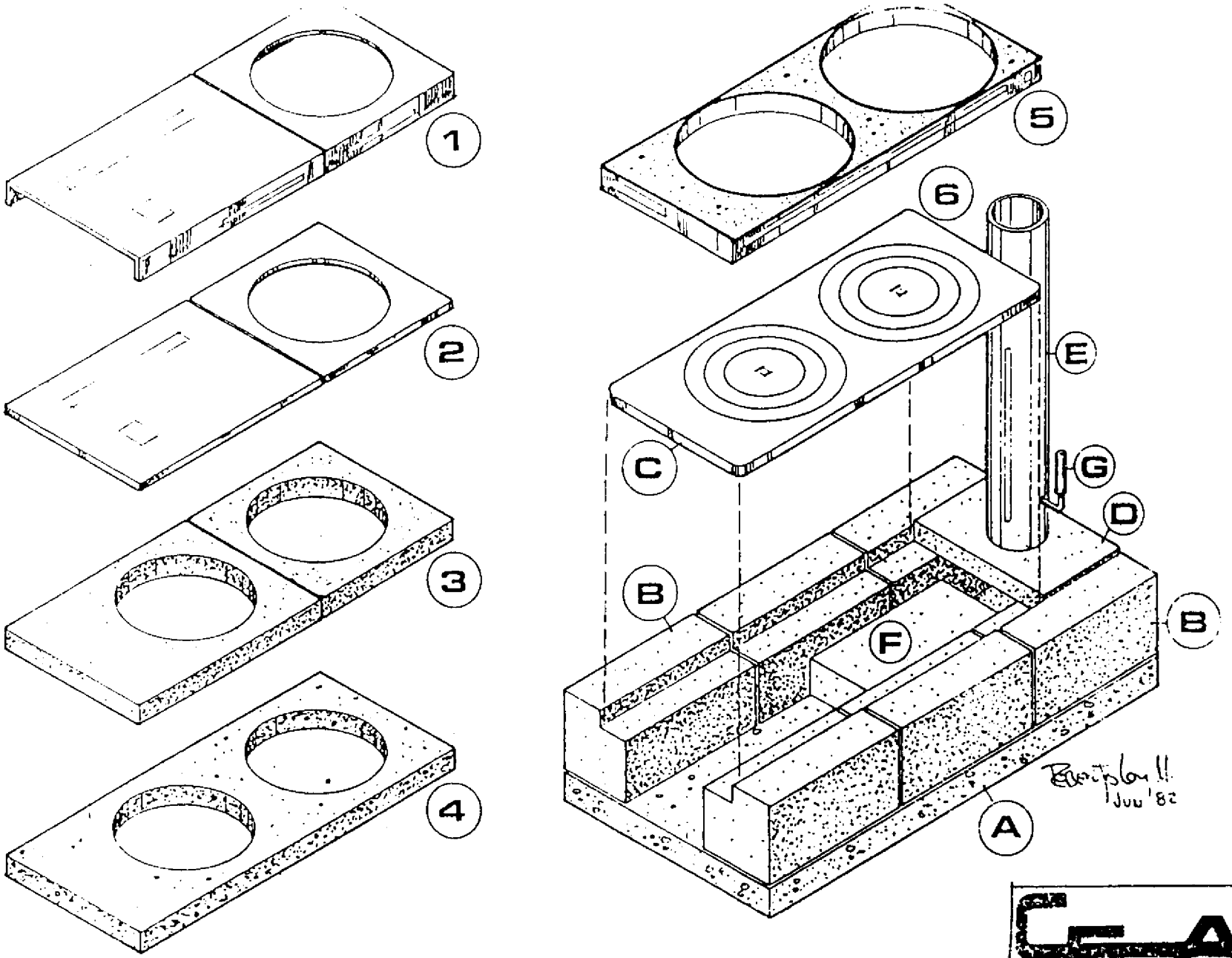
It is recommended that the primary outlet for hygiene education be the supplemental feeding program, but that additional public awareness activities be carried out in all concentrations of displaced persons.

It is recommended that the Ministry of Public Health be assigned overall responsibility for health education. It is also recommended that an experienced voluntary agency be contracted to provide support services to the MSPAS and to serve in areas where the MSPAS cannot work at present.

RECOMMENDED COOKING FACILITIES

FOR D.P. CAMPS

CAMP TYPE	INDIVIDUAL STOVES	STOVES FOR FEEDING CENTERS
Designated Camps		
Large (500 plus)	Lorena or D.R. Stove	Lorena Stoves
Small (499 plus)	Lorena or D.R. Stove	Lorena Stoves
Ad hoc Camps		
Small rectangular	Lorena or D.R. Stove	Lorena or D.R. Stoves
Linear	Lorena or D.R. Stove	Lorena or D.R. Stoves
Colonias	Lorena or D.R. Stove	N.A.
Occupied Buildings	Biogas Stoves	Biogas Stoves



Small-Scale Smokeless Stove Designed for Use in Latin America

SECURITY IN CAMPS RECEIVING ASSISTANCE FROM CONADES

Security -- the physical protection of DPs in camps from crime such as theft, intimidation, rape, murder and other non-military or terrorist violence -- varies greatly from camp to camp. As a general rule, the evaluation team found that most people felt their camps were relatively secure internally. In other words, very few persons residing in the camps would take advantage of, or threaten, other persons in the camp. Furthermore, with only a few exceptions, there were not widespread security problems posed by people from the surrounding communities taking advantage of or preying upon displaced persons. In many cases, persons residing in the camps said that they were well-treated and often helped by persons in the surrounding communities, many of whom are friends and neighbors. In San Francisco de Gotera, residents of one camp reported that they even received representation to the departmental government through their alcaldes (mayors) because the alcaldes were also desplazados living in the town and the government continues to recognize their status even through they have temporarily moved.

There are, however, several reported incidences of women and young girls having been molested by non-regular military forces. The DPs have indicated that these were non-political events; therefore, they are security rather than "protection" issues. It must be emphasized, though, that rape incidents have not been frequent in the camps.

Options for Improving Internal Security in Camps

Normally there are three ways of improving security inside a DP settlement. They are:

1. To design the camp in such a way that intrusions by outsiders are noticed by all and an alarm for protection can quickly be sounded. In most cases this would be difficult to do in the Salvadoran DP camps. Most are too small to rearrange in a design that would promote security; they are linear (i.e., laid out along roads or railroad tracks) and cannot be rearranged due to lack of land; or they are in permanent buildings which cannot be altered due to economic considerations. Several of the larger camps, however, could be rearranged, and some have sufficient land so that newer housing units could be placed in such a way as to provide more internal security. However, in these latter camps security problems have not been noted.

2. To install lights throughout these settlements. This is one of the best measures to promote security. Adequate security lighting and lights around facilities used at night such as latrines, washing stands and water supply areas can greatly reduce security problems. The lighting in all camps could be improved, especially in the linear camps and in the camps in the more rural areas.

3. To assign a police force or vigilance committee to patrol the camps. As a general rule, local security forces should be assigned to protective duties in camps located outside the limits of the towns. Military commanders, however, should take care to ensure that the soldiers assigned to this duty are well-disciplined and that records are kept indicating which soldiers have been assigned during specific watches. As a general rule, vigilance committees made of <u>desplazados</u> should not be encouraged. It is doubtful whether unarmed vigilance groups could deter an attack by an armed intruder and, given the problems with protection, it may be putting more lives in danger than necessary.

Recommendations

It is recommended that increased security lighting be installed in all DP camps, especially around all facilities that would be used at night.

It is recommended that camp desplazados concerned about possible security problems be encouraged to establish an informal alarm system.

It is recommended that CONADES be provided with technical information relating to camp planning so that if new, large DP camps are required, they can be laid out in such a way that internal security can be established.

It should be noted that an increased presence of voluntary agency personnel, especially international staff, in the camps may in itself help reduce incidents.

LAND LEASE FOR DISPLACED FARMERS

Many displaced persons are farmers. One project which could benefit these DPs would be to lease small plots of unused land near the DP settlements so that farmers could plant small gardens for subsistence foods as well as minor marketing. Land Lease Programs for refugees and disaster victims have proven successful in several countries. Land can usually be leased from absentee landlords or can be provided gratis by municipalities and/or churches. Tools and seeds could be provided for both men and women during the appropriate seasons. In some cases nutrition education and gardening instruction can be given together.

There are several voluntary agencies with extensive experience in land lease and refugee gardening programs. These include the Mennonite Central Committee, Church World Service,(whose local counterpart is CESAD), and World Vision.

In order to lease the lands, a special fund should be established which could be administered by the Program Unit. Once lands are identified, a local organization could lease the land for a period of 1 year with an automatic 1 year extension. Once the lease was signed, the works program could provide assistance in clearing the land and making necessary improvements such as terracing or subdividing. Farm families in the DP population could then draw lots to determine which ones would be permitted to work the land. Tools could be provided by the Program Unit and seeds, technical assistance and, if necessary, fertilizers and pesticides, could be provided by the Ministry of Agriculture through a special project agreement.