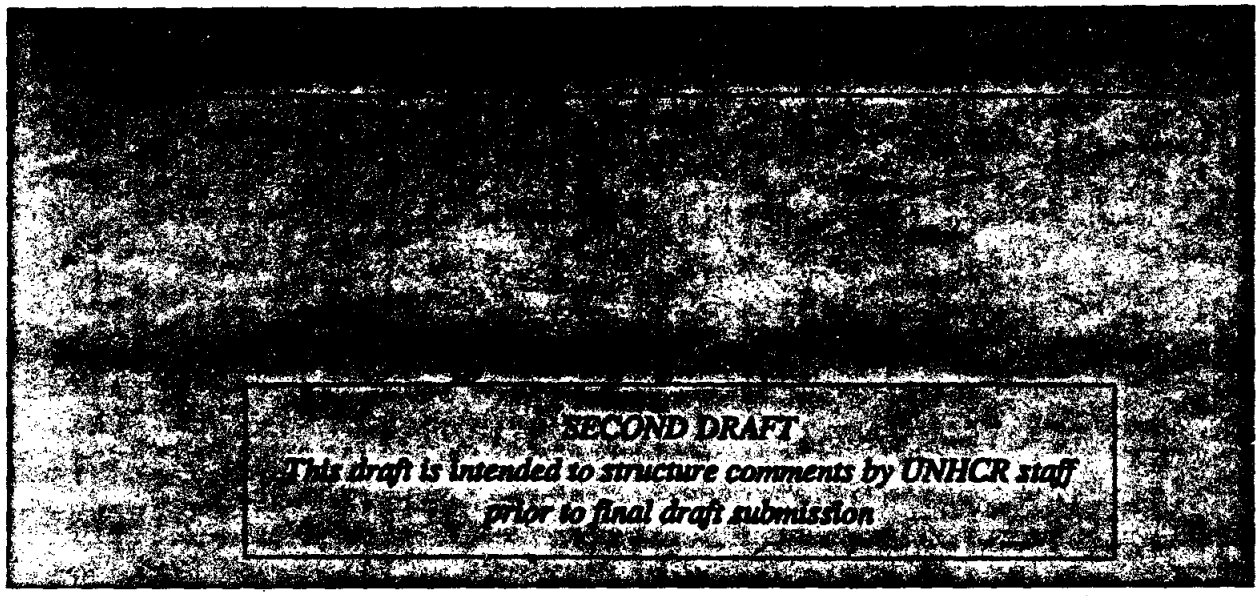
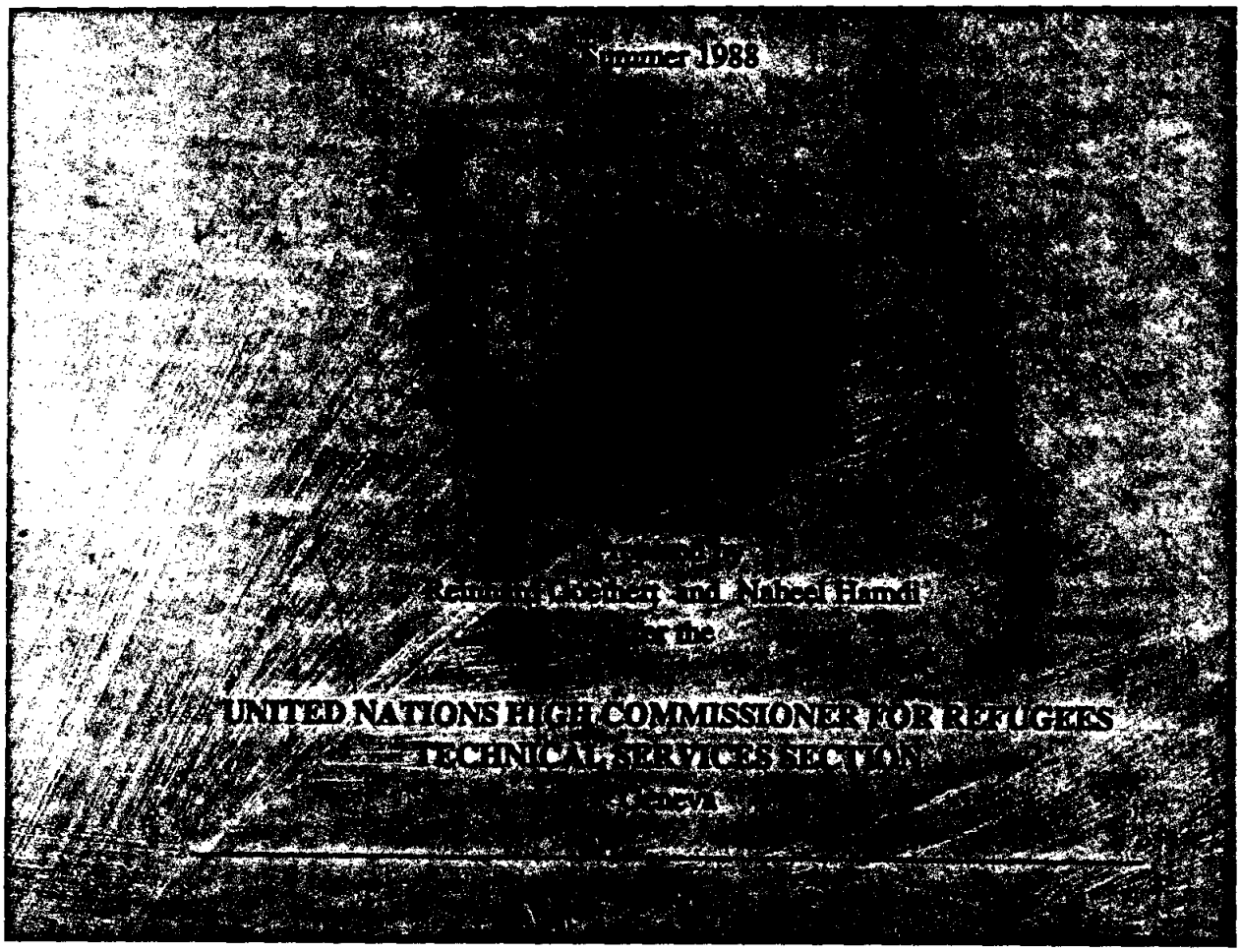



# REFUGEE CAMPS

## A Primer for Rapid Site Planning

Land, Shelter, Infrastructure, Services



*SECOND DRAFT*
*This draft is intended to structure comments by UNHCR staff prior to final draft submission*

# REFUGEE CAMPS

## A Primer for Rapid Site Planning

Land, Shelter, Infrastructure, Services

Summer 1988

Prepared by
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for the

UNITED NATIONS HIGH COMMISSIONER FOR REFUGEES
TECHNICAL SERVICES SECTION
Geneva

# FOREWORD

[redacted]

(To be prepared by the HCR)

# PREFACE

This handbook PROVIDES A BASIC AND GENERAL DECISION-MAKING STRUCTURE which can be filled in, in a variety of ways, on a site by site basis. It is not a "how to do" book, for the structure is less designed to tell what to do but rather, TELLS HOW TO DECIDE WHAT TO DO, and then how to find out how to do it. As such, its intention is to teach principles rather than to dictate solutions. It provides the opportunity for a coordinated response when preparing a site plan, which in view of the short time usually available, the enormous number of vested interests at stake, and the wide range of conditions encountered, is often difficult to achieve.

This handbook is organized in four basic parts. Part I establishes the context and sets some general principles of planning. Part II deals with the planning process itself. Each section outlines the steps one might take, and how to go about doing them, and provides the structure for preparing a response in the form of a worksheet, with things to consider as one proceeds. Part III, troubleshooting, has two purposes: first, to give a quick reference to dealing with problems which seem to be most prevalent; and second, it provides a format for continual documentation of experience, in the expectation that learning can be institutionalized and so constantly inform practice. A final part provides a technical resource with more detailed references.

This handbook has been based on observations of a variety of reception centers and settlements, predominantly in the Sudan, Somalia, Philippines, Mexico and Belize, and on intensive consultations with management staff, field staff, and refugees. Its structure, language and format have been kept purposefully simple, directed at generalists rather than specialists. Its content avoids a "comprehensive" approach to planning, and instead is focused selectively on critical steps and priority considerations during the various phases of planning and design. It is a **book of principles,** to be supplemented with regionally and more technically specific guidebooks.

We do not presuppose that the knowledge embodied here is not known by those who are actively practicing. This book should not appear to know more than they. Indeed, it is their experience and knowledge on which this book is based. What we have done is organize and give structure to what they know, in the anticipation that this will help those who must act, to act more effectively when planning sites.

Nor, unfortunately, will this primer reduce the burden of work on those responsible for planning. It is not a substitute for effective decision makers, but rather may simplify their tasks by improving the efficiency of the decision making process itself.

Finally, the effectiveness of what is contained in this book, and subsequently the success of the site planning process itself in meeting its objectives is premised on three general conditions which go beyond the range of influence of this book. First, that there is political goodwill in the country of asylum. Second, that there is basic compatibility between UNHCR and the asylum government policy, particularly with respect to the issue of durable solutions, integration and more general technical criteria for suitable sites. Third, that there is a willingness to adapt local standards in the asylum country to the special circumstances of the refugees.

Many individuals have lent advice and commentary in the preparation of this Primer. In particular, mention should be made of those at UNHCR Geneva from the Technical Support Services and Emergency units, UNHCR Regional and sub-offices in both Sudan and Somalia, members of the Commission on Refugees in Sudan and the National Refugee Commission in Somalia. A special thanks to the field officers who accompanied us on field visits in the various camps around Showak, Sudan, and Mogadishu, Somalia. We wish to acknowledge the assistance and comments of Dr. Edward Robbins, anthropologist, who was responsible for the sections on "Understanding Refugee Characteristics" and "Making Social Surveys", and prepared "Doing Socio-Cultural Analysis" in the Technical Supplements.

Reinhard Goethert, Nabeel Hamdi

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## PART II
## Physical Planning and Design of the Site

# DEFINITIONS AND ABBREVIATIONS

Every effort has been made to keep definitions consistent with the recommendations of the Project Management System (PMS) of the UNHCR. However, there is considerable variation in the words used to describe similar situations, particularly when comparing experiences from several countries. The terms as defined here tend to have more widespread agreement in their usage and will be used in this primer.

*Implementation partner /agency-* - The contractural agent who implements UNHCR-funded efforts.

*Reception center* - Temporary area where refugees are initially received and processed before shifting to camp or settlement.

*Camp* - Temporary refugee community providing political protection and basic subsistence from UNHCR.

*Settlement* - Permanent refugee community with sustaining economic base and integrated into regional structure.

*Services* - Facilities provided on a community-wide basis; for example, health services (clinic), educational services (schools), etc.

*Utilities/infrastructure* - The underlying support network for a community; for example, water provision, sewage disposal, electrical supply.

*Site* - The land designated for a camp.

*Cluster* - A grouping of shelters, lots, or families; generally parallels traditional social structures.

*Plot, lot* - A parcel of land assigned to each refugee family or family group, with definable boundaries and access to public circulation.

*Community* - A social designation of people living in a specific area, generally linked by common interests or of similar ethnic or religious ties.

*UNHCR* - United Nations High Commissioner for Refugees
*NGO* - Non-governmental organization
*LCO* - Local counterpart organizations

# LIST OF FIGURES

I

# PART I
## Setting the Context

*This part is arranged in two chapters. The first, an introduction, establishes the context, outlines how this manual is organized, and explains how it can be used.*

*The second chapter sets out the general principles for planning camp layouts, defines the key components, clarifies the actors and their responsibilities. The chapter concludes with a summary of key principles.*

# Chapter 1
# INTRODUCTION 1

## What is the manual about?

1.1 The focus is on the physical planning and design of refugee camps. It defines basic principles for planning and design and offers procedures and technical guidelines for its various phases of development: selecting the site; understanding refugee characteristics, and more critically their implications for physical planning; deciding the program, including the selection, sizing and location of each component of design, and their critical interrelationships; making the plan, including the preparation of the layout of each component of design; preparing the workplan, including phasing and clear delegations of who might do what, when and how. In its final section, it offers quick, easy to use tables for trouble-shooting, which are intended as an ongoing documentation of the most recurrent bottlenecks encountered during planning and design. The technical supplements provide specific and detailed data in support of all sections.

## Who is it intended for?

1.2 In general:
• *For Generalists,* to assist them in their tasks of planning, design and implementation, and to enable them to be familiar with the various specialist fields involved, to be more prepared to know what to ask, and to know what to check.
• *For Specialists,* to be aware of UNHCR policy and approach relative to refugee shelter and infrastructure considerations.

1.3 In particular:
• For UNHCR and related staff who will provide organizational assistance in planning, and who may need to monitor and coordinate the planning, design and implementation process.
• For local counterpart staff and UNHCR's other operational partners, who may need technical and procedural assistance during planning and implementation and will want to keep check on "things to consider" as work

proceeds. For management staff to assist in policy development and project coordination, and to ensure a tight and complementary fit between policy (what is desirable to do) and projects (what is actually doable). For regional or suboffice staff using the helpful references sections to build a resource library.

**Why do we need it?**

1.4 During the course of emergency, priorities inevitably focus on planning relief to save life. Site planing, under these conditions, ranks low in priorities, and remains, perhaps, necessarily ad-hoc. As reception centres consolidate, either by intention or by fact of their existence for longer than intended, and as sites are selected for new camps and settlements, consideration to improved site planning becomes of prime importance:
- It will minimize the need for difficult corrective measures, later on.
- It will lessen the burden on local administrations to manage and maintain services and utilities.
- It will facilitate the integration of camps, when possible, within the overall regional development plans.
- It will assist local administrations to manage their resources more effectively, particularly of land, services and utilities.
- It will ensure more effective utilization of land, especially in regions where land is at a premium.
- It will ensure the efficient planning of utilities networks and so save money on materials and fuel. And in the longer term leave open the option of connecting to regional infrastructure systems.
- It will help to link camp planning with its priority in resolving emergencies to settlement planning with its emphasis on longer term development.

**How is it set up?**

1.5 It does not prescribe any solutions. It provides a structure for decision making, to be completed on a site by site basis. It provides ample opportunity for site planning rules to be invented as one proceeds, to fit local circumstances. It keeps "planning" to a minimum, and "doing" to a maximum.

1.6 The process is not linear, and may be accessed at any one of the stages indicated. For example, if a site has already been selected, then it may be useful to use the section "Selecting the Site" to check its suitability, but in real terms one's entry into the planning process would be in the section on

programing to check their implications on physical planning, at the same time as proceeding with site selection and subsequently deciding on a program, making a plan, etc.



1.7 We would strongly recommend that the Sections "Understanding Refugee Characteristics" and "Deciding the Program" be undertaken, when possible, on location, in short "action planning" sessions with the direct participation of community members, local administrative counterparts, technical professional teams and other non-government organizations. Experience suggests that these highly participatory sessions serve to better understand problems and issues from the points of view of the various participants as well as their relative priorities. Potential hurdles can be quickly identified on the spot and dealt with. Information can be organized more quickly, and very often more accurately. The entire programming phase can be kept to within 1 or 2 days. For more procedural information on this technique see Making MicroPlans - A Handbook for the Implementation of Integrated Upgrading Projects (Hamdi, Goethert; 1988).

**What are the basic premises?**

1.8 The overriding objective is to improve the planning of camps. Its methodology has been designed on the basis of the following key considerations:

• *Coordination for management, flexibility for field staff* - to balance the need for a coordinated and planned response to development, with an equal need for maximum flexibility on the job to make locally specific responses. Too much planning will inhibit the ability to act quickly and spontaneously. Too little will be unsupportive of local decision makers and decisions will continue to be ad-hoc.

• *Common sense, drawing on experience and technical understanding.* The primer is no substitute for professional competence and resourcefulness. It avoids a linear, technically rational approach, as the only basis to making decisions. What one knows one must do, given the technical facts, is often not doable given the circumstances. Or, we need not only the skills, but also the capability to act. The primer helps structure these issues with its tables and checklists as a basis to making practical decisions.

• *Less what to do, and more on how to go about doing it.* Most management and field staff, more often than not know quite well what needs doing, given the conditions they encounter. The question is: how to get it done. This Primer provides structure to define the issues and components of planning, to identify alternative ways of dealing with them, to consider their relative tradeoffs and implications as a basis to knowing how to proceed, given local limits.

• *To be generally useful and locally relevant.* Handbooks which are too general lack the specificity to be locally useful. Those which are too specific have little general value. The primer avoids both gross generalizations and overly specific standards. Instead, it provides a structure which is general, built on commonly held principles of planning; and a content on program which is specific because it is locally derived and will be different for each place and each site.

• *Points directions rather than dictates solutions.* Problems cannot be solved generally. Problems can only be solved locally, with some general help. The primer is not a problem solving book. Instead, it indicates alternative paths that could be explored locally in search of solutions. It indicates how to proceed, and what to expect as one proceeds.

• *A tool for teaching, learning and doing.*
- For teaching to train local technical counterparts in principles and procedures of layout planning. This will establish program continuity once agencies are phased out.
- For learning, though continuous documentation. Decisions can be made explicit and trackable. Solutions to problems encountered can contribute to a more comprehensive approach to trouble shooting.
- For doing, because each stage leads to tangible and buildable results.

• *To interrelate teaching, learning and doing in the use of this primer.* Training goes hand in hand with implementation, following "learning by doing principles."

• *To consider the planning of camps during the emergency phase as a prelude to a more durable settlement,* rather than two discreet forms of refugee shelter.

## How is this manual organized?



1.9 The manual is organized in three parts:

- Part I introduces the manual and how to use it, and provides a background for understanding development planning in the context of refugees.
- Part II addresses three basic questions and develops a programme on the basis of:

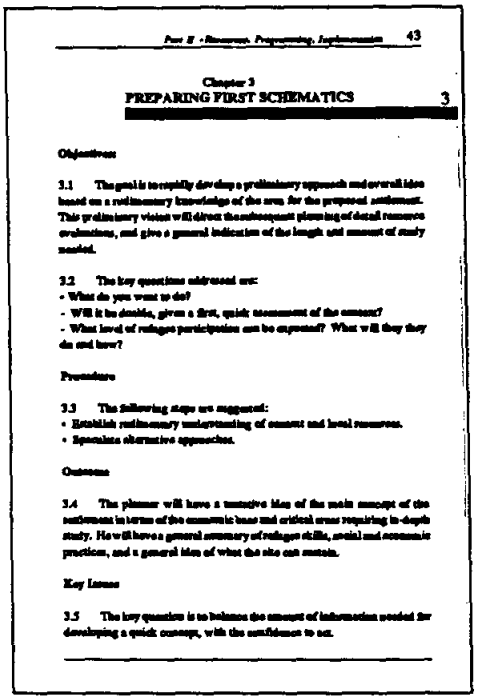
How to decide what to do? What is doable? What are the additional opportunities that present themselves?

- Part III provides a quick reference for the most common things which can go wrong, and provides some alternatives on how to correct them. This section is intended to be continuously added to, and to provide a structure for documenting experience.

1.10 Each chapter in Part II is organized to respond to the following questions:

- What is the *objective* of each chapter?
- What *procedure* is to be followed?
- What *worksheets* would be useful to help organize your information and to assist in decision-making, and to communicate with others?
- What *things to consider* should be taken into account? Are there standards or indeces which are helpful to measure the quality of proposals?
- What *linkages* should be considered among key physical, social and economic characteristics?

1.11 Each chapter in Part II is organized as follows:



Chapter 3
PREPARING FIRST SCHEMATICS 3

Objectives

3.1 The goal is to rapidly develop a preliminary approach and overall idea based on a rudimentary knowledge of the area for the proposed settlement. This preliminary vision will direct the subsequent planning of detail resource evaluations, and give a general indication of the length and amount of study needed.

3.2 The key questions addressed are:
- What do you want to do?
- Will it be doable, given a first, quick assessment of the context?
- What level of refugee participation can be expected? What will they they do and how?

Procedure

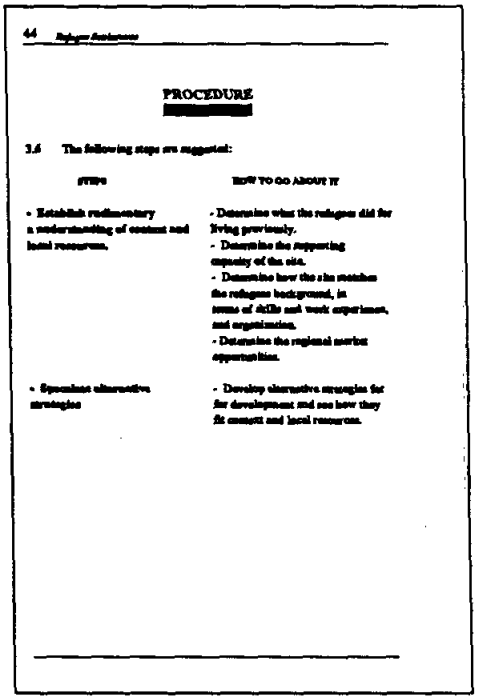
3.3 The following steps are suggested:
- Establish rudimentary understanding of context and local resources.
- Speculate alternative approaches.

Outcome

3.4 The planner will have a tentative idea of the main concept of the settlement in terms of the economic base and critical areas requiring in-depth study. He will have a general summary of refugee skills, social and economic practices, and a general idea of what the site can sustain.

Key Issues

3.5 The key question is to balance the amount of information needed for developing a quick concept, with the confidence to act.



PROCEDURE

3.6 The following steps are suggested:

| STEPS | HOW TO GO ABOUT IT |
|---|---|
| - Establish rudimentary understanding of context and local resources. | - Determine what the refugees did for living previously.<br>- Determine the supporting capacity of the site.<br>- Determine how the site matches the refugees background, in terms of skills and work experience, and organization.<br>- Determine the regional market opportunities. |
| - Speculate alternative strategies | - Develop alternative strategies for development and see how they fit context and local resources. |

**SUMMARY**

Objective, procedure, outcome, and key issue for the chapter.
This summary can be used as a reference or as an introduction to the information following.

**PROCEDURE**

Detailed procedure to follow.
The procedure is divided into two: the basic step, and detailed suggestions on how to go about it.

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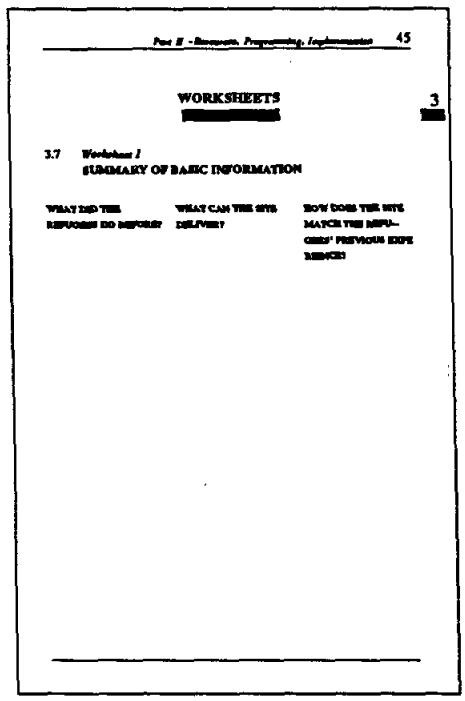
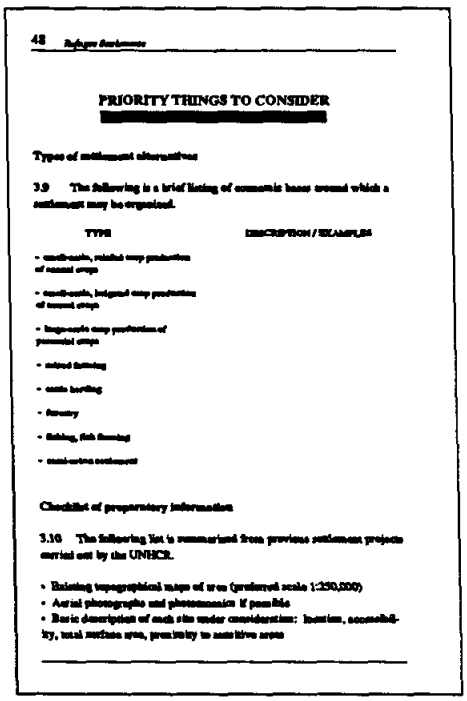


WORKSHEETS

3

3.7 *Worksheet 1*
SUMMARY OF BASIC INFORMATION

| WHAT DID THE REFUGEES DO BEFORE? | WHAT CAN THE SITE DELIVER? | HOW DOES THE SITE MATCH THE REFUGEES' PREVIOUS EXPERIENCE? |
|---|---|---|



PRIORITY THINGS TO CONSIDER

Types of settlement alternatives

3.9 The following is a brief listing of economic bases around which a settlement may be organized.

| TYPE | DESCRIPTION / EXAMPLES |
|---|---|
| • small-scale, related crop production of annual crops | |
| • small-scale, irrigated crop production of annual crops | |
| • large-scale crop production of perennial crops | |
| • mixed farming | |
| • cattle herding | |
| • forestry | |
| • fishing, fish farming | |
| • semi-urban settlement | |

Checklist of preparatory information

3.10 The following list is summarized from previous settlement projects carried out by the UNHCR.

- Existing topographical maps of area (preferred scale 1:250,000)
- Aerial photographs and photomosaics if possible
- Basic description of each site under consideration: location, accessibility, total surface area, proximity to sensitive areas

**WORKSHEETS**

Formats to use in reaching a decision. The worksheets are directly related to the steps outlined in the procedure. Additional worksheets may readily be added, or worksheets may be combined if it is found to more useful.

**PRIORITY THINGS TO CONSIDER**

Basic reference information. Information is not intended to be extensive, and only general guidelines are offered, usually in the form of checklists and standards.

**INTRODUCTION**

# Chapter 2
# GENERAL PRINCIPLES OF CAMP PLANNING 2

2.1 Two related sets of principles need consideration: 1) General principles of approach, establishing directions and attitudes to the planning of camps; and, 2) Principles of layout design, establishing a discipline for the planning process itself.

**What are the basic principles of approach?**

2.2 Five priority policy objectives need to be met, and their operational implications carefully considered:

- Build self-reliance through community participation.
- Develop sites at a speed and scale commensurate with demand and at a cost which is sustainable beyond the initial capital investment.
- Avoid a large disparity of standards, between refugee camps and local communities, and between standards and traditional habits of refugees.
- Insure that the special needs of refugees are met but with due respect to their prevailing needs and habits.
- Judge whether resources match needs: land, financing, and technical capacity.

2.3 *Build self-reliance through community participation.*

- Insure the full participation of refugees in planning and building.
- Identify community representatives - elders, religious leaders, etc., and build a community based development team.
- Identify clearly the limits of the participatory process - what can they not be a part of planning?
- If the community is known beforehand, organize groups in preparation for the move from reception centres to camps.
- Consider alternative self-management organizations, i.e., cooperatives, condominium, land banks.
- Undertake skills training in management, maintenance, building.
- Encourage inter-township trading and entrepreneurship.
- Provide land enough for cottage industries.

- Avoid establishing artificial income generating activities that have no market, or compete with local markets because they are subsidized (soap).
- Avoid generating industries which consume local resources (Kilns for brick making).
- Avoid building reliance on imported materials which
can not be sustained despite the apparent short term advantage (caustic soda for soap, prefabrication systems for building which cannot be easily modified, mechanical systems which require much maintenance, such as solar panels for water pumps).
- Ensure the political good will of local governments, by fitting to their overall regional development plans - i.e. no use promoting agriculture in an area earmarked for industry.

2.4 *Develop sites at a speed and scale commensurate with demand, and at an expenditure which is sustainable beyond the initial capital investment.*
- Avoid the comprehensive or master plan, by establishing a minimum physical framework only, i.e., avoid overly detailed design.
- Agree with local counterparts where best to start by agreeing priorities rather than attempting comprehensive agreement on all details.
- Establish who to contact for what.
- Determine expertise required and assemble team.
- Establish site office to tackle on the spot details of design and problem solving.
- Encourage the incremental development of the site, by building the minimum necessary.
- Establish a phasing schedule and ensure each phase is self-sufficient and buildable within the one year UNHCR funding cycle.
- Settle the site rapidly by installing low cost solutions at below minimum standards which can be upgraded.
- Avoid lengthy negotiations with local governments over major structural changes (i.e. standards or setting up new institutions).
- Where these may be required, avoid delays by adopting solutions which can be immediately agreed, while structural changes are being negotiated.
- Establish what might be appropriate in the short term for speed (i.e. water pumps) against what might actually work over a period of time (wells).
- Establish appropriate responses to problems by checking if the procedure

in place fits the circumstance encountered, i.e. For fire protection local vigilante groups with thrashers and hooks, rather than fire trucks relying on adequate water and good access.

- Balance the desire for speed with the need for sustainability of responses, by avoiding solutions which appear fast (prefab building) but which cannot later be easily maintained.
- Use local contractors and locally available skills where possible. This may be slower than foreign firms, but build continuity and therefore scale, and contribute to national economic development.
- Keep layouts simple (not simplistic) to simplify site operations, i.e., pegging out of roads, lots, buildings, etc. - Avoid expensive contrivances, i.e., zig zagged streets or staggered lot placements to create "variety".
- Ensure that any materials or techniques which have to be imported, can be developed locally, or can continue to be imported at the scale needed.
- Avoid making demonstration projects which tend to be treated as special cases, and which are difficult to expand in scale.

2.5 *Avoid a large disparity of standards between refugee camps and local communities, and between standards and traditional habits of refugees.*

- Start with minimum locally acceptable and internationally agreed upon standards, rather than those considered desirable by international companies.
- Observe regional conditions, do not rely only on official documentation of conditions.
- Where unavoidable, turn disparity into advantage. Refugee camps can become magnets to local villagers (for schools, health facilities for example) and help integrate camps regionally. In this respect, consider locational characteristics of basic facilities and markets.
- Similarly, consider local villages as magnets for employment. This puts pressure on local job markets and can result in local resentment.
- Local capacity for employment needs to be assessed, and employment generating activities considered on a regional basis. Consider the participation of other development agencies in this respect (i.e. UNDP, USAID, etc.).
- When introducing a standard for one component, i.e. water, consider its value with respect to habits of refugees. For example, clean water, but dirty containers, or clean water but river water is collected, because it's plentiful and can be sold.

- Discourage high standards when they are technically difficult to achieve, i.e., depth of pit latrines in rocky ground.
- Avoid any standard that cannot be enforced, i.e., wide roads for fire breaks which are encroached upon.

2.6 *Ensure tthat he special needs of refugees are met, but with due respect to their prevailing needs and habits.*
- Some ethnic groups will have a larger capacity
to self-organize than others. For these less "planning" will be required, reflected in a less regulated layout.
- Some refugee groups will resist the idea of permanency and therefore involvement and may not want to participate.
- Establish special demands of target group which will influence site solutions, i.e. female headed household.
- Establish whether conditions of geography, race, climate, density in the new settlement matches their traditional one. If not, cannot expect to replicate "traditions". Development and consolidation period is likely to be longer as a result, as people adjust to new conditions, habits, building methods etc.
- Ensure that layout characteristics, clusters, grids, type and form of sanitary facilities, fit social characteristics (extended families, nomadic families, etc.).

2.7 *Judge whether resources match needs: land, financing, and technical capacity.*
- Estimate the resources that will be needed, and determine if they match the needs.
- Can materials be secured in sufficient quantities and in sufficient time to be able to be used?
- Is the manpower available to carry out the construction?
- Is there sufficient administrative capacity to implement the project? How much reliance can be made on local labor?
- Are funds sufficient for both the initial construction costs and as well as the operational costs in the longer term?

**What are the basic principles of layout design?**



2.8 *General Principles:* Several key priority objectives guide the design of settlements:

• Design and build the minimum, and rely as much as possible on the refugees themselves.

• The key structuring element is the circulation network. It determines the location of the other components of a layout.

• Layouts should be oriented around natural functions to give quick identity and focus to a camp.

• Camps should be seen as small new towns, eventually self-governing and with a supporting economic base.

2.9 *Design and build the minimum, and rely as much as possible on the refugees themselves.*

- Refugees that traditionally manage their own physical arrangement should be encouraged to continue, and this can become a key design consideration when choosing among alternatives.
- Shifting responsibility toward the refugee community supports the goal of self-reliance.
- The camp can be built faster, since less needs to done, and the camp can be built larger, since the same efforts result in more output.
- Start simple!

2.10 *The key structuring element is the circulation network; it determines the location of the other components of a layout.*

- Once the main streets are determined, the remainder of the functions fall naturally into place.
- Careful consideration should be given to the location of the main street: locating the spine centrally allows easy access for the community.
- Main streets should be paved to accommodate vehicular traffic.
- Desirability of location parallels the street network. Desirability parallels market value, and must be considered when planning for a future independent durable community.

2.11 *Camps should be oriented around natural functions to give quick identity and focus to the community.*

- The key goal in a new area is the formation of a socially cohesive community. With refugees, this may become one of the most important measures, after life threatening considerations have been met.
- Schools, clinics, and other traditional public facilities provide a easy opportunity to bring a group together around a common interest.

2.12 *Camps should be seen as small new towns, with the potential for self-government and with a supporting economic base.*

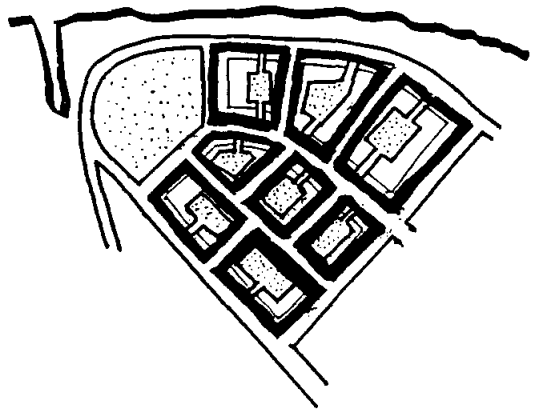
- The goal of self-reliance implies an independent free-standing community, dependent on its own resources in future endeavors.
- Land allocation becomes important, since all land not assigned to refugees becomes the future maintenance burden of the community. The more land deeded to refugees, the more taxable land in the future.
- Open spaces should be minimized, and unassigned land should be avoided.
- Maintenance considerations become important, since a self-governing community would assume the costs in the future.

**What are some detailed objectives when designing layouts?**



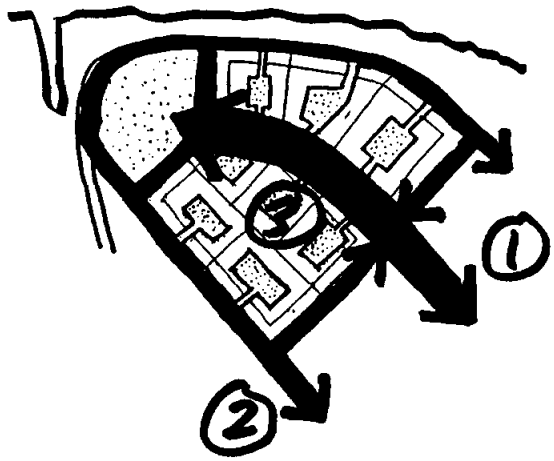
2.13 Several specific guidelines are suggested to assist in the detailed design of the components of a camp. These deal with the basic land subdivision, land utilization, circulation, infrastructure, community facilities and shelter.

2.14 Basic Land Subdivision: *Lots should be grouped into smaller cluster units which facilitate planning, administration, and often parallel traditional patterns.*

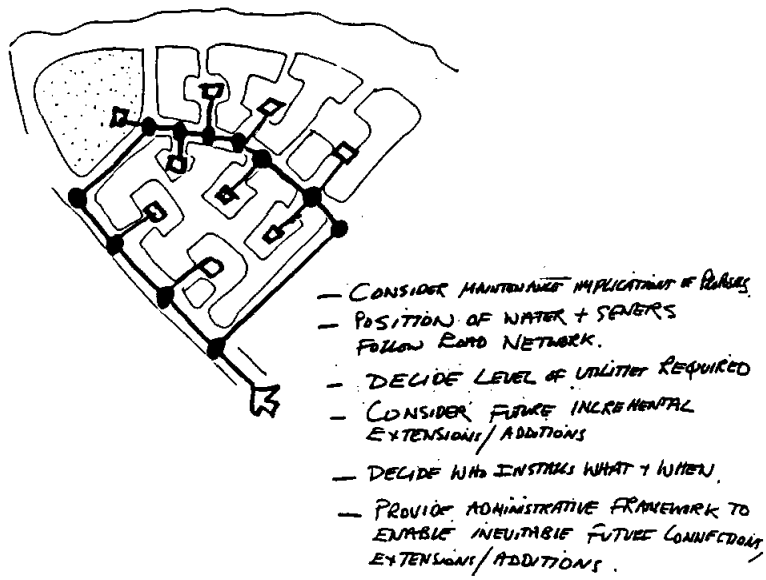


2.15 Land Utilization: *Minimize the land under the responsibility of the implementing agency, and maximize the land under the responsibility of refugees.*

2.16 Circulation: *Provide no more than three types of circulation; (1) a single central spine around which the community is oriented; (2) a system of wide vehicular roads which provide access to food and water distribution points; and (3) a narrow pedestrian network for access to the distribution points.*

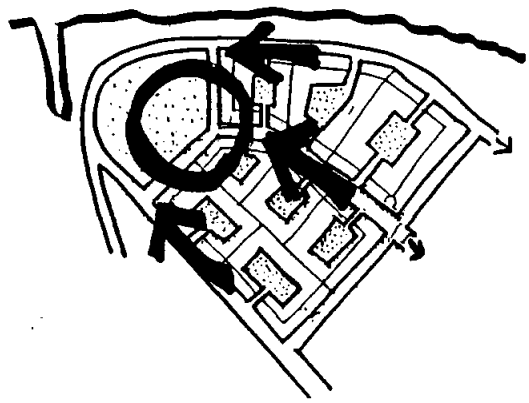



2.17 Infrastructure: *Provide the simplest possible which are parallel to the cultural traditions of the refugees, but recognize that the usually higher densities require non-customary designs and extensive educational programs.*

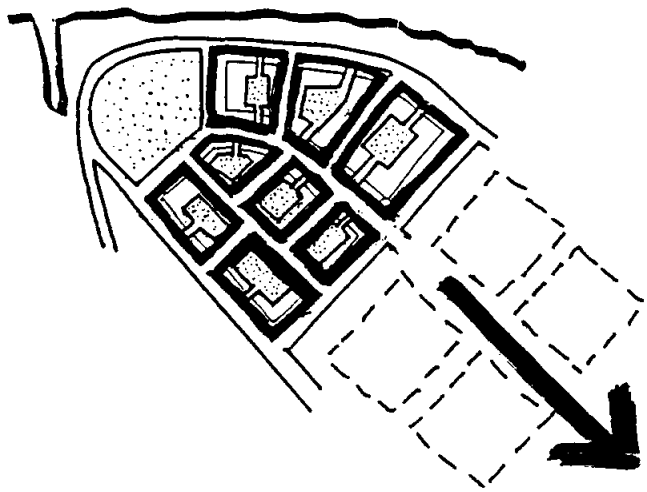


2.18 Community Facilities: *Concentrate facilities to reinforce a sense of community.*





2.19 Expansion: *Consider both the continued growth of the camp, as well as potential contraction.*



## What are potential conflicts of interests among the major actors?

2.20 One of the most common bottlenecks in site planning is how to resolve conflicts among those parties with vested interests in the project. Differences in objective, unless they are resolved during the planning phase, can delay and can often lead to solutions not in the best interest of the refugees themselves.

| UNHCR | HOST GOVERNMENT | REFUGEES |
|---|---|---|
| | **Site Location** | |
| Away from border. Close to urban/rural centers. | Away from border. Away from centers. | Close to border. Close to Centers. |
| Close to natural resources. | Away from natural resources. | Close to resources. |
| | **Layout Characteristics** | |
| Organized to facilitate monitoring and protection. | Organized to facilitate management. | Prefer to be organized around cultural or village groupings. |
| Should lead to permanency and self-sufficiency. | Should not be seen as permanent. | Wants option whether permanent or not. |
| Centralized administration, warehousing, and essential services; decentralized washing, schools, and community centers. | Centralized public facilities for ease of management; decentralized water and washing facilities. | No interest in efficiency, interest in convenience and personal gain. |
| | **Standards** | |
| Minimum but upgradeable. | Fit national norms. | Fit cultural norms |

| | | |
|---|---|---|
| | **Development** | |
| Want self-reliance and self- sufficiency | Hesitant about self sufficiency, main goal often aid funds. | Unclear |
| Want to phase out assistance. | Want to phase in wider assistance. | |
| | **Prime Responsibility** | |
| Coordination, protection and assistance. | Implementation, and management. | Participation |
| | **Delivery of Utilities** | |
| Want to be close to water source for economic and health reasons. | Want settlement to be away from water sources to avoid contamination and away from other reasons. | Want to be close for convenience and personal gain. |

## How do refugee projects differ in emergency and post-emergency phases?

2.21 The geography of refugee projects can best be understood by comparing the characteristics grouped into organizational categories and their impact on planning.

ORGANIZATIONAL CHARACTERISTICS

| EMERGENCY PHASE | POST-EMERGENCY PHASE |
|---|---|
| Centralized facilities to facilitate management. | Localized facilities to facilitate development. |
| High level of tolerance relative to poor site accessibility, poor quality of water, flooding, inadequate privacy, etc. | Less tolerance of conditions which affect quality of life. |
| Camps are worse off in terms of health and basic services than local communities. | Camps are often better off in terms of health, nutrition and basic services than local communities. |

| | |
|---|---|
| Fragmented physically and often socially as well, difficult to identify patterns. | Integrated physically with clearly defined site boundaries and social groupings after substantial informal mobility which integrates families and ethnic groups. |
| Temporary construction: tents, makeshift materials, blankets. | More permanent construction: wood, mud, thatch, etc. |
| Placement of facilities to serve refugees. | placement of facilities to integrate refugees with neighboring communities. |
| Relief agency in provider role: total care and maintenance. | Relief agencies in support of local communities and counterpart organizations to build self-sufficiency. |
| Clear pattern of regimented streets and location of shelter to facilitate registration and monitoring. | Pattern of encroachment on streets; more clustered family compounds; pattern of spontaneous subdivision as people move in, out and around to extend, to rent, and cultivate gardens. |
| High capital costs tolerable in addressing emergency situation, with low priority of economic substainability. | High capital and maintenance costs unacceptable; cost benefits over time and life cycle costing become key issues. |
| Short-term design horizon, 2-4 years: disposable. | Long-term design horizon, 15+ years: upgradeable and durable. |
| Objective to save life. | Objective to plan for regionally integrated development. |
| Shelter defined as relief effort. | Shelter defined in context of family development with clear links to national policy. |

**How to deal with refugee participation?**

2.22 Refugee participation is an essential part of relief operations. However, meaningful participation of refugees is a long way from being realized, despite the clear advantages to a settlement and the efforts of agencies.



2.23 Participation has several important advantages:
- *Participation enhances normal coping processes.* It builds self-esteem, rebuilds self-confidence, reduces feelings of isolation, and reduces lethargy, depression and despondency.
- *Participation is cost-effective.* Aside from providing cheaper labor, it leads to avoidance of mistakes.
- *Participation promotes protection.* It helps build the values and sense of community that reduces protection problems.
- *Participation leads to self-sufficiency.* It is the basis for all programs leading to self-sufficiency and is especially important for integration.

2.24 A failure to involve refugees could lead to several negative consequences:
- Increasing lethargy on the part of refugees, leading to serious social problems.
- Increase in costs, since many tasks will have to be carried out by paid workers from outside the camp.
- Decrease in avenues of communication between agencies and refugee community.

(It should be warned that participation is generally not appropriate in making technical decisions.)

2.25 Some issues to consider include:
- *Accountability:* often international organizations do not view themselves as being accountable to the refugees but rather to their donors and to the host country.
- *Determining appropriate leaders:* relief agencies often find that it is easiest to work with younger, bilingual, educated 'westernized' people, who often are not traditional leaders. Sometimes it is necessary to develop leaders, particularly where severe disruption has occurred. Sometimes the first arrivals become leaders, and this causes confusion when traditional leaders

arrive.
- *Volunteer vs salaried workers:* Evidence suggest that few people are willing to work for long periods of time without pay.
- *Changes in leadership:* A high turnover rate of leadership is not unusual, and backup people should be trained.

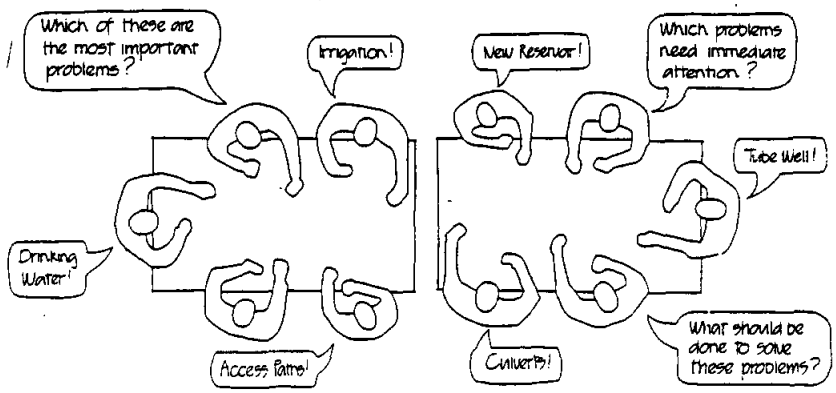
2.26 Constraints to refugee participation.
- Official constraints: Three concerns are prominent: government fear of losing control, reservation of benefits for host country nationals, and participation and full employment may create permanency, obstructing repatriation.
- Many believe that paid labor activities compete for scarce funds.
- There is a fear that participation will cause delays and increase costs because of organizing and training refugees.
- Emphasis on voluntary work soon leads to fewer and fewer people participating.
- Often the military is in charge of camps and participatory activities run counter to their ideas on how to run camps.
- Need for administrative efficiency to respond quickly effectively eliminates refugee participation.
- Host country often harbours fears about refugees and does not encourage participation.
- Paternalism often exists, and mitigates against meaningful participation.
- There is uncertainty by refugees about their future, which limits the extent to which they want to get involved.
- Refugees become too accustomed to relief subsistence without participation.
- There is a lack of information about how to integrate refugees and there is only vague concept of what should be done.

2.27 Opportunities for refugee participation:
- *In needs assessment,* working groups of refugees could identify information for relief agencies, and provide necessary two-way communication.
- *In project planning,* refugees can be involved in overall planning, as well as in planning more specific operational projects. Examples of specific activities include: planning the makeup of labor forces; advising on the design and camp layout; advising on design and controls of food distribution

system; advising on special needs program (for elderly, unaccompanied, etc.); and identification and planning of self-sufficiency projects.

- *In project execution*, participation should be at maximum. Examples include: direct involvement in day-to-day operations and maintenance; development and execution of programs such as schools, adult education and cultural activities; development and execution of self-help programs; development and execution of self-sufficient program in food and cash income; and planning and execution of special programs for women, children, elderly, handicapped, etc.
- *In project monitoring*, by planning and carrying out evaluations.

*(Source: Refugee Participation in Emergency Relief Operations, F.C. Cuny)*



**Where to look for more information?**

2.22 The following sources are suggested to provide additional, more detailed information:

HANDBOOK FOR EMERGENCIES. UNHCR, Geneva, 1982. *Preparatory guidebook for dealing with refugee emergencies. Particularly useful for "Setting the Context", but includes general notes on site layout as well.*

URBANIZATION PRIMER. Horacio Caminos and Reinhard Goethert. The MIT Press, Cambridge, 1978. *Detailed reference for site planning; includes project assessment procedures, site analysis, and design criteria for layout and infrastructure. Particularly useful for "Selecting the Site", Deciding the Program", and "Making the Plan".*

MAKING MICROPLANS. A Participatory Action Planning Approach. Reinhard Goethert, Nabeel Hamdi. Intermediate Technology Publications, London, 1988. *Detailed guidelines for consensus workshops in developing a program and developing a workplan. Particularly useful for "Preparing the Workplan".*

APPROPRIATE TECHNOLOGY QUARTERLY. An Intermediate Technology Publication. 9 King Street, London WC2E 8HW. *State of the art ideas in infrastructure using local resources. Includes more general articles on a wide range of development issues.*

APPROPRIATE SANITATION ALTERNATIVES: A PLANNING AND DESIGN MANUAL. Kalbermatten, Julius, Gunnerson, and Mara. Published for The World Bank by The John Hopkins University Press, Baltimore, 1982.

INQUIRY BY DESIGN. John Zeisel. Brooks/Cole Publishing Company, Monterey, California, 1981.

METHODOLOGY OF SOCIAL IMPACT ASSESSMENT.
Kurt Finsterbush. Hutchinson Ross, 1981. (2nd Edition)

WOMANS ROLE IN THE PROVISION OF SHELTER. Kate Gass. Appropriate Technology Quarterly, Volume 13, Number 4, March 1987. (pp. 21-25)

PROBLEM SEEKING: AN ARCHITECTURAL PROGRAMMING PRIMER. William Pena. Cahners Books International, Boston, 1977.

CONSTRUCTION REFERENCE MANUAL - A Source Book for Use in Local Materials in Construction. The Experimental Press, 1985.

EMERGENCY CAMP PLANNING. Guidelines prepared for the T.S.S. (undated)

II

# PART II
## Physical Planning and Design of the Site

*This part deals with the planning process. Three basic questions are addressed: How to decide what to do? What is doable? What are the additional opportunities that present themselves? Each chapter outlines the steps one might take, and how to go about doing them, and then provides the structure for preparing a response. Each chapter includes helpful information or "things to consider" as one proceeds.*

*In Chapter 3, the social and cultural characteristics of the refugees and their physical implications are identified. Chapter 4 establishes criteria and evaluates tradeoffs for the critical step of site selection. In Chapter 5, the programmatic requirements of the physical elements are developed, particularly locational and dimensional parameters. Chapter 6 structures the site layout based on consideration for the social structure of the the refugee community, component interrelationships and component location. Chapter 7 considers how best to get the job done in the implementation of the camp.*

*A last section reflects on the decisions which were made and reviews the links between the design and the refugee characteristics.*

# SUMMARY OF SITE PLANNING STEPS

## Chapter 3 UNDERSTANDING REFUGEE CHARACTERISTICS

**Issues:**

- What cultural characteristics should be considered in the design of the layout and the physical components?
- How will these considerations shape the site layout and the design of components of the site?

**Procedure:**

- Identify social characteristics related to issues and goals set for site.
- Undertake a quick survey of representative refugee reception areas, and determine social-cultural characteristics.
- Translate characteristics into their physical implications.

## Chapter 4 SELECTING THE SITE

**Issues:**

- What should be considered when choosing a site?
- How does one decide among several alternative sites?

**Procedure:**

- Prepare list of criteria.
- Prioritize the criteria list.
- Determine site characteristics through field visit.
- Assess layout implications.
- Rate the sites and select the most suitable.

## Chapter 5
## DECIDING THE PROGRAMME

**Issues:**

- What should be included in the plan and how is it expected to work?
- What will be the dimensional and locational characteristics, and the general strategic approaches of each physical element?

**Procedure:**

- Develop a list of physical elements and their programmatic requirements.
- Develop a general planning strategy for each.
- Define the programmatic requirements and their layout implications.

## Chapter 6
## MAKING THE LAYOUT

**Issues:**

- What hierachy of groupings are appropriate?
- What interrelationships of components are key in structuring the layout?

**Procedure:**

*For entire site:*
- Divide site into community areas.
- Locate facilities for entire site.

*For each community:*
- Allocate communal components.
- Connect main community components with vehicular network.
- Allocate areas for smaller cluster groups.
- Connect cluster groups with pedestrian network.
- Further subdivide cluster groups.

*For components:*
- Size and sketch components, and provide specifications.

**SUMMARY - SITE PLANNING STEPS**

## Chapter 7
## PREPARING FOR IMPLEMENTATION

**Issues:**

- How do you expediate construction?
- What can you do to support the growth of the community?
- How can the process be monitored?

**Procedure:**

- Make a list of things to be done.
- Make a list of actions to take.
- Determine who will act and how actions are to be carried out.
- Determine linkages among things to be done, both opportunities and problems.
- Rank thing to be done, and identify pivotal components.

## Chapter 8
## TROUBLESHOOTING

**Issues:**

- Does it all make sense when one steps back and reviews the entirety?
- Is it doable?
- Would the proposal have any adverse impacts which have gone unnoticed?

**Procedure:**

- Identify symptoms, problems, and possible causes.
- Consider alternative actions and implications.
- Decide most suitable course of action.

# SUMMARY CHECKLIST

*Things to observe about site:*
Layout and organization
Overcrowding
Cleanliness
Excessive feces on ground
Waste receptacles
Signs of gardens, cottage industries, etc.
Refugees' freedom to enter/leave camp
Signs of flooding/drainage problems
Level of agency activities

*Things to note about people:*
Overall condition - health, activity, etc.
Friendlieness, hostility, fear
Presence of men
Presence of children less than 5 years age
Activity levels of women and children
Wounds
Fuel-gathering off-site
Presence of food and draught animals
Presence of weapons

*Things to note about shelter:*
Type of construction
General condition
Overcrowding
Ventilation
In-shelter cooking
Sleeping/living outside of shelter
Cleanliness of inside/outside area
Flooding/drainage problems

*Things to observe about water:*
Source
Discolouration
Shortage and distribution points
Method of transport to camp

*Latrines:*
Type, number
Signs of use, level of use
Cleanliness, feces outside
Lighting
Distance to water supplies, to shelters
Maintenance/disinfecting

*Warehouse:*
Size
Supplies on hand
Cleanliness
Condition of food stores/pest evidence
Storage: on ground or on pallets?
Security
Record-keeping

*Food distribution:*
What foods distributed?
Methods of distribution
Orderliness of food distribution
Condition of food (fresh, moldy, etc.)
Registration system

*Health facilities:*
Types
Conditions
Utilization/overcrowding
Staff
Equipment

*Reception facilities:*
Presence of agencies
Registration/screening process
Cleanliness

*Security:*
Fences, lighting

*Special food centers:*
Facilities
Preparation, distribution
Waste disposal
Cleanliness of site

*Source:* Undated UNHCR mimeo on Emergency Camp Planning

## SUMMARY - SITE PLANNING STEPS

# Chapter 3
# UNDERSTANDING REFUGEE CHARACTERISTICS 3

## Objectives

3.1 To understand the social and cultural characteristics of refugees (cooking, sanitation, leadership and ethnic groupings) and to link these to physical planning, and to the ability of refugees to adapt to unfamiliar contexts. To establish the self-organizing potential of refugee groups, which could minimize the amount of planning which will be needed.

3.2 The following key questions are addressed:
- What cultural characteristics should be considered in the design of the layout and the physical components?
- How will these considerations shape the site layout and the design of components of the site?

## Procedure

3.3 The following basic steps are suggested:
• Identify social characteristics related to issues and goals set for site.
• Undertake a quick survey of representative refugee reception areas, and determine social-cultural characteristics
• Translate characteristics into their physical implications

## Outcome

3.4 Information establishing the social and cultural determinants of the physical plan and its components (streets, plot size, open space, means of commerce and trading, etc.)

# PROCEDURE

3.5 The following steps are suggested:

| STEPS | HOW TO GO ABOUT IT |
|---|---|
| **1. IDENTIFY SOCIAL CHARACTERISTICS RELATED TO ISSUES AND GOALS SET FOR SITE.** | - Identify detailed questions which are useful to answer in determining a suitable site plan. Refer to "Priority Things to Consider" section to assist in determining pertinent questions.<br>- Consider how the information will be gathered, either by direct interview of potential refugees in reception camps, direct observation of how refugees are living, interviewing local experts, or reviewing available reports. |
| **2. UNDERTAKE A QUICK SURVEY, of representative refugee reception areas which are slated to move into the site, and determine social-cultural characteristics.** | - Assemble survey team. This would consist, as a minimum, of you and a translator if necessary. Local personnel, or refugees trained in interview techniques, are recommended to undertake the survey.<br><br>- Carry out survey of representative refugees (see "Making Quick Surveys" in Technical Supplement) in reception areas. Refer to previous list of information to be gathered in focusing questions. |

- Prepare list of social characteristics relevant to site planning issues, as noted from the survey. Notes as well as sketches of how refugees live are suggested.

**3. TRANSLATE CHARACTERISTICS INTO THEIR PHYSICAL IMPLICATIONS on the site design.**

- Identify the specific planning implications of the observations. For example, knowing how the families construct their shelter will give an indication of skills training needed and the type of materials to provide each family.

# REFUGEE SURVEY WORKSHEETS

## 3.6 *Worksheet 1*
## QUESTIONS RELATED TO SITE PLANNING

Identify questions which are useful in addressing issues related to site goals. Then consider how the questions may be answered.

| WHAT TO FIND OUT | HOW TO FIND OUT |
|---|---|
| SHELTER + LOT | |
| - WHO BUILDS + WHAT IS THEIR CUSTOM | - INTERVIEW REFUGEES. |
| - WHAT MATERIALS ARE THEY USED TO. | - OBSERVE CURRENT HABITS |
| - HOW IS SHELTER USED | - IDENTIFY HABITS AT PLACE OF ORIGIN |
| - HOW IS LOT USED | - WHERE POSSIBLE, MEASURE + RECORD AMOUNT OF SPACE USED FOR EACH FUNCTION + ITS LOCATION. |
| - WHAT ARE THEIR CULTURAL HABITS RE OWNERSHIP. | |
| SOCIAL ORGANISATION | |
| - ARE LEADERS IDENTIFIABLE | - ASK FOR ELDERS, RECOGNISED LEADERS. |
| - ARE THEY TRIBAL OR VILLAGE OR OTHER GROUPING | - INTERVIEWS WITH REFUGEES. |
| - HOW WERE HOUSEHOLDS ARRANGED ON SITE IE DENSITY, ORGANISATION ETC. | - OBSERVE PATTERN OF ARRIVAL |
| EDUCATION | |
| - WHAT FORM OF EDUCATION WAS OFFERED IN COUNTRY OF ORIGIN | - DIRECT OBSERVATION. |
| - WHO UNDERTOOK TEACHING (PRIEST, WOMAN ETC.) | - INTERVIEW + SURVEY. |
| | - COUNTRY DESCRIPTION OF PLACE OF ORIGIN. |

3

## 3.7 *Worksheet 2*
## SOCIAL CHARACTERISTICS AND PHYSICAL IMPLICATIONS

List the observations from a quick field survey and the interviews. Consider how these observations may affect site planning.

| SOCIAL CHARACTERISTICS | PHYSICAL IMPLICATIONS |
|---|---|
| SHELTER + LOT: | |
| - LOT USED FOR ANIMALS, COOKING, SLEEPING, STORING BUILDING MATERIAL STORING WATER + FUEL. | - MIN SHELTER, MAXIMUM LOT SIZE (10 sqm per pers.). |
| - SHELTER FOR PRIVACY OF SLEEPING + FOR PROTECTION FOR YOUNG CHILDREN. | - LOCAL CLAY INADEQUATE FOR BUILDING MATERIAL, ASBRICKS CONSIDER WATTLE + DAUB. |
| - SCREENING FOR MEN/WOMEN DURING SOCIALISATION | - ARRANGE SHELTER, WITH ACCESS AWAY + PRIVATE FROM ACCESS TO LOT — SCREEN IF NECESSARY. |
| - TRADITIONAL CONSTRUCTION MUD BRICK SUN DRIED, RAFTER ROOF + THATCH. | |
| SOCIAL ORGANISATION | |
| - GROUPS VERY IDENTIFYABLE & SELF ORGANISED | - LEAVE MAX FLEXIBILITY FOR GROUP TO DECIDE ITS OWN ALLOCATION OF LAND |
| - RURAL ORIGIN + UNUSED TO HIGH DENSITIES. | - LESS SPACE ON LOT DUE TO HIGH USE OF PEOPLE, BUT COULD PROVIDE COMMUNAL FARMS ON SITE PERIPHERY. |
| - ELDERS & POLITICAL APPOINTED HEADS OF GROUPS | |
| EDUCATION: | |
| - Capacity to organise own TEACHING OF 7-12 YEAR OLDS | - SPACE FOR TEACHING WITHIN CLUSTER FACILITIES FOR SMALL CHILDREN. |

# PRIORITY THINGS TO CONSIDER

3.8 The following information structures the linkage between the social and cultural background of the refugees and the implications on the physical design. For assistance in structuring the surveys, the reader is directed to the Technical Supplement "Making Social Surveys" for detailed information. This section contains: who should be respondents for the survey, how many respondents to interview, when should the interviews be done, who should do the interviews, and some general cautionary remarks.

## What are the physical implications of observations?

3.9 The following table relates the questions asked in observations and their probable use in physical planning.

| WHAT TO FIND OUT | PHYSICAL IMPLICATIONS |
|---|---|
| **General Background** | |
| In what kind of groups did refugees arrive; e.g., kin group village group, etc.? How large was the group? | - Opportunity for self-structuring of camp; size and relation of clusters in camp; whom to locate where. |
| Reasons for migration, intentions about resettlement e.g., how long do people believe they will be in camps? | - Degree of potential involvement in development and maintenance of camps; commitment to adjustments made necessary by camps. |
| How strongly do arriving refugees identify with political, religious or ethnic groups and do they actively affiliate with one another. | - Opportunity to locate people within clusters of similar group affiliations; location of groups in clusters and location of clusters to avoid potential conflicts, e.g., in terms of religious, ethnic or political loyalties and social patterns. |

| | |
|---|---|
| How did refugees provide their livelihood? | - Size and location of lots and clusters in relation to income -generating activities; e.g., area set aside for agriculture or small crafts, etc. Degree of planning and support needed. |

**Social Organization and Structure of Leadership**

| | |
|---|---|
| Does the refugee group have known leaders? How are authority and power defined, and in what areas of life do theses leaders have power? | - Identification of individuals who can help organize and administer camp. |
| What form do the various social groupings take among the refugees; e.g. family type, clan structure, tribal or village groups etc. What size are they on the average? | - Identification of possible cluster groups and sizes. Identification of lot sizes and relational patterns. Identification of who might best be placed in adjoining lots and clusters for most efficient forms of cooperation and self-management. |
| How large - population and land areas - were traditional settlements? How were households arranged, e.g. densely, scattered, etc.? | - Potential for self-organization in new situation. Identification of possible problem areas owing to necessity of reorganization of traditional settlement patterns given size and density of camp; e.g., inability of refugees to cope with high densities, inappropriateness of traditional social or work patterns, etc.? |

**Shelter and Lot**

| | |
|---|---|
| How was the traditional shelter built, who built it? | - Potential for self-construction of shelter or need to provide shelter built by contractor. |
| How long do refugees think they will remain in camp? What was their previous tenure arrangement? | - Potential motivation to build shelter or improve shelter in place. Possible inducements for more (or less) active involvement in shelter construction, shelter and lot maintenance and upgrading. |

| | |
|---|---|
| What kinds of materials were used in traditional shelter? What tools and other equipment were used in construction? How was labor provided, and how were materials for building obtained in refugee indigenous settlement? | - What materials, tools and equipment and skills need to be provided if refugees are to participate in building? What materials may be available on site? What critical mass of persons are needed for refugees to build own shelter; e.g. village group, extended family? |
| What are the customary uses of the shelter; e.g., sleeping, eating income- generating, animal shelter, etc. | - Size of shelter, area and shape of shelter. |
| Configuration of families in . residence in the traditional household and the adjoining compounds; e.g. nuclear family, extended family, etc. | - Area of lot, location of families in lots, relation of lots to each other. |
| Were residences traditionally rental, bought and sold, or owned by larger social group(clan, tribe, for example) of which household group is a part? How were households secured or tenured? | - Mechanisms by which lots might be assigned and tenured. |
| What activities were carried out in the area outside the shelter, e.g. cooking, washing, raising animals, planting, income-generation, etc. | - Area and shape of lot. |
| How did households traditionally define or bound (set-off) their living areas; e.g., fences, ritual markers, spatial distance, orientation, pathways, configurations of shelter, etc.? | - Area and shape of lot, orientation of lots, clusters between lots; location of roads and camp clusters. |
| How did refugees traditionally growth or fragmentation of family or other social groups; e.g., intensification of land use, migration, etc.? | - Configuration of lots, provision allow for of open space, relation of clusters to each other. Identification of where to provide room for possible expansion in order to avoid social conflict or familial disintegration. |

**Water Provision**

| | |
|---|---|
| How did the refugees previously obtain water? What was the source, who fetched and carried it, if necessary, and how was it carried? | - Location of water taps, maximum walking distance, methods for providing water (tap, well, river, etc. |
| To what uses was water put; e.g., washing self, clothes, etc. and where was various water-based activities carried out; e.g., in compound, by a river, etc.? | - Amount of water needed to be provided per capita, location of water points, design of water points; e.g., clothes washing area, closed or open bathing areas, etc. |
| What are their notions of, and their knowledge about water and hygiene | - Education about use of water sources, hygiene; policing, maintenance and design of water locations. |

**Sanitary Habits**

| | |
|---|---|
| How do refugees deal with issues of bodily cleanliness and defecation; e.g., what taboos or social avoidances were observed? What facilities were traditionally provided and who was allowed to use them. | - Types of facilities to provide; e.g., communal or family, type of social group to be connected with latrine or bathing area, design of such areas; e.g., open or closed, inside or outside a settled cluster area, separated bathing facilities from latrine areas, etc., areas specific to gender, or religious or ethnic group. |
| To what extent did traditional settlement type differ from present camp? | - Need for education about sanitary habits, emphasizing new living situation, densities, facilities etc. |

**Educational Facilities**

| | |
|---|---|
| How were children educated, in what place, and by whom in indigenous community? Are there differences by age, gender or social group; e.g., class, status, caste. | - Type, if any, of public school facility or facilities to provide. Size and location of school facilities. |

| | |
|---|---|
| Were centers of education provided by religious groups, political organizations, or national governments? | - Types of schools and design; e.g., symbols or markers for school, social facilities, etc. |
| What are attitudes about education and do they vary for different members of refugee community; e.g., gender, age, etc. | - Need for schools, who might attend, who will not attend. Potential programs to encourage schooling, design of facilities which are multi-purpose to attract children and adults to educational programs. |

**Health Facilities**

| | |
|---|---|
| How did refugees deal with injury and disease in their indigenous settlements? | - Familiarity with public clinics and hospital and western medical practices. Design of health facilities to make more accessible to refugees. Location and size of clinics. |
| What are their taboos, prohibitions and attitudes about healing. | - Design of health centers which recognize religious or social avoidances or prohibitions; e.g., gender separation, etc. Design of multi-purpose centers to attract groups who might not otherwise use health facilities. |
| Who were the traditional healers and users? | - Potential for involvement of refugees in health maintenance and outreach. Guidance in design of health centers. |

**Funeral Activities**

| | |
|---|---|
| How were the dead disposed of traditionally? | - Need for cemeteries, crematorea, public area to mourn, etc. |
| If dead were buried, where were they buried. | - Need for cemeteries, size and location. Need for larger lot size to accommodate burial? |

**Religious and Ritual Activities**

| | |
|---|---|
| What religious or ritual activities were practiced and in what kind of place or building. | - Need for and type of public spaces, or buildings for practice of traditional workshop or ritual. |

| | |
|---|---|
| Are religious or ritual practices of various refugee groups in a camp a potential conflict? | - Location of religious or ritual places; configuration of roads or pathways to and from these places. |



**Cooking Activities**

| | |
|---|---|
| How did refugees traditionally prepare food and where? | - Design of shelters, size of lots, location of stoves, firebreaks. |
| What types of fuel were used and how was it obtained? | - Potential for support of traditional cooking practices; need for redesigned stoves which use more efficient or readily available fuels. |

## What are some survey hints regarding activities and locations?

3.10 A survey is another way to quickly discover how refugees live. It will provide information to help in planning a refugee camp or to understand how to re-educate refugees about new ways of living necessary when necessary in some situations.

3.11 Ask respondents to locate an activity by: 1) getting an answer, 2) asking then to point out the activity on a map (or diagram) of the previous settlement, and 3) have them indicate whether the activity is in a shelter, in a set-off place, or in an open space. Remember some activities may occur outside the household compound and some outside the settlement, so leave space to record such activities. Note: the plan should be drawn together with a member of the refugee community. Also, many refugees may not be able to relate to drawn plans, and the interviewer may have to locate the activity on the plan.

3.12 Some question topics for respondents:

| *I. Food Places:* | *II. Personal Places:* |
|---|---|
| 1) Preparation | 1) Sleeping |
| 2) Cooking | 2) Storage |
| 3) Eating | 3) Bathing |
| | 4) Defecation |

3.13 Some question topics for each member of a household:

*III. Social Places: activities with -*

1) Nuclear family
2) Extended family
3) Household
4° With kin
5) With non-kin
6) With strangers

*IV. Prohibited places: activities -*

1) By gender
3) With family group
4) With kin group
5) With non-kin
6) With strangers

*V. Ritual places:*

1) Ceremonial
2) Sacred

*VI. Work places:*

1) With animals
2) Planting
3) Craft work
4) Trading or buying and selling


COOKING and FOOD PREPARATION

# Chapter 4
# SELECTING THE SITE 4

## Objective

4.1 To establish criteria, evaluate tradeoffs and reach consensus among the UNHCR, host government, and refugees for the critical step of selecting a site. To understand key site determinants (e.g., accessibility, water, health hazards, drainage, distance form border) to avoid expensive, inappropriate choices. This section assumes that options exist for the location of camps, but, if not, this section will identify the shortcomings in the given site and alert the planner to potential problems.

4.2 This section addresses the following questions:
- What should be considered when choosing a site?
- How does one decide among several alternative sites, assuming a choice is available?

## Procedure

4.3 The following basic steps are suggested:
- Prepare list of criteria.
- Prioritize the criteria list
- Determine site characteristics through field visit.
- Assess layout implications
- Rate the sites and select the most suitable.

## Outcome

4.4 A summary of key criteria and priorities for reviewing a site from the perspective of each of the key actors, and a detailed, itemized documentation of potential sites and their characteristics. A review of available sites with respect to criteria established.

# PROCEDURE

4.5 The following steps are suggested:

| STEPS | HOW TO GO ABOUT IT |
|---|---|
| **1. PREPARE LIST OF CRITERIA which should be considered when reviewing a site.** | - Decide categories for selection: accessibility, availability of water, distance from border, drainage, etc. Refer to "Basic References" for list of categories, and add or delete as appropriate.<br><br>- Discuss categories with local officials and refugee representatives (if available) for relation to policy and local circumstances. A work-shop format may be useful to brain-storm a final list of criteria, and add categories if they arise during con-sultations. |
| **2. PRIORITIZE THE LIST according to the actual and assumed perspectives of each of the actors.** | - Rate each of the criteria from the standpoint of each of the actors (UNHCR, government, refugees) as to "fundamental" or "desirable". Refer to "Priority Things to Consider" as a reference for deciding. (It is suggested to attach a value to the criteria to assist in reaching a decision: 1- clearly fundamental; 2 - not fundamental, but more than desirable; and 3 - desirable.)<br>* Note that it is conceivable that a criteria may be "1" for each of the actors (1,1,1) or top priority for two of |

| | |
|---|---|
| | the actors and low for the other (1,1,3), or other variations (3,3,3), (1,3,3).<br>- Agree on overall weighting with all of the parties. (By adding values, the totals indicate the collective priority of the actors.)<br>- Note: local circumstances may not enable criteria to apply as prioritized. It may be necessary to establish at the outset, those criteria that will be applied irrespective of consensus, i.e., those considered not negotiable. |
| **3. DETERMINE SITE CHARACTERISTICS AND VALIDATE INFORMATION through field visit.** | - Use checklist in "Priority Things to Consider" section to identify things to look for in sites. Add or delete items as appropriate to the potential sites.<br><br>- Assemble a team of specialists drawn locally if possible.<br>- Visit the potential sites to survey and validate information in person.<br>- Note: avoid a comprehensive survey, focus mainly on validating the site on the basis of the priority criteria.<br>- Sketch a plan of each site, annotated with key site characteristics. |
| **4. ASSESS THE LAYOUT IMPLICATIONS OF THE SITE CHARACTERISTICS.** | - List the site characteristics, and use the checklist in "Priority Things to Consider" to judge likely impact each of the characteristics will have on the layout. |

**5. RATE THE SITES according to the criteria, and select the most suitable.**

- Judge whether the conditions encountered satisfy the priorities set, and to what degree, by comparing the sites. (Use a rating system of 1-3 to help decide; 1 - good; 2 - adequate; and 3 - poor. Rate each site against criteria, and total ratings.
- Decide suitability of available sites.
- Note: the weighting system, as well as other facts, are only a guide to making a final selection. However, in view of all the variables, the final decision is usually judgemental, and may be politically biased. This does not invalidate the suggested process of site selection, but rather, enables contingency plans to be drawn up based on knowledge of potential limitations of a site.

# SITE SELECTION WORKSHEETS 4

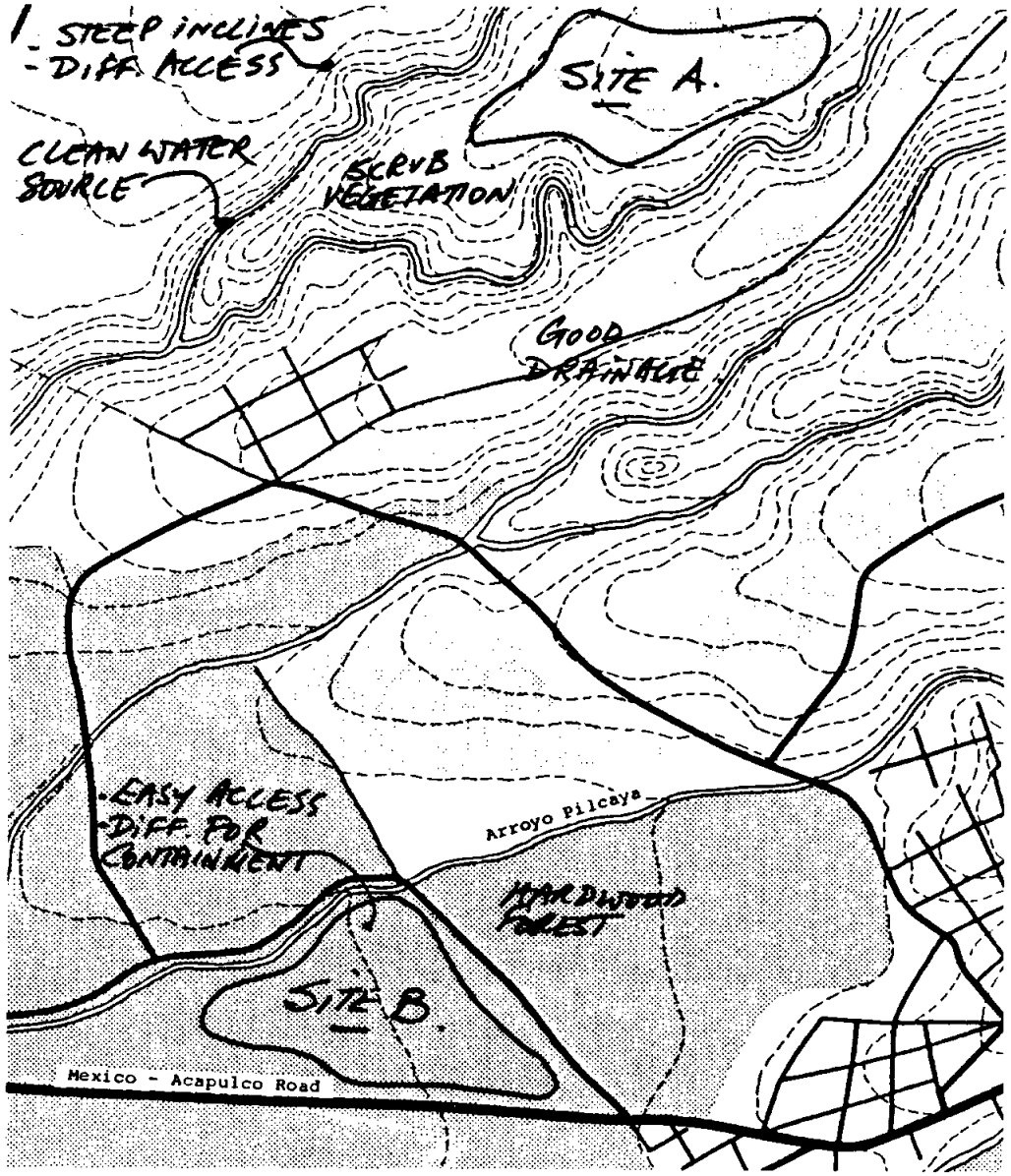
## 4.6 *Worksheet 1*
## CRITERIA AND PRIORITIES

This worksheet provides a structure for selecting suitable sites for refugee camps. It is suggested to prepare this chart with all of the parties responsible for the various aspects to be developed. A workshop format is particularly appropriate for reaching a decision.

| CRITERIA | PRIORITIES | | |
|---|---|---|---|
| | UNHCR | Government | Refugees |
| • ACCESSABILITY TO SITE (3) | HIGH<br>- REDUCES COST OF TRANSPORTATION<br>- GUARANTEES SUPPLY YEAR ROUND / | HIGH<br>- ABILITY TO CONTROL ACCESS. / | UNCLEAR.<br>- EASE OF COMMUNICATION TO NEARBY RESOURCES. 3 — 5 |
| • AVAILABILITY OF WATER. (1) | HIGH.<br>- CONTINUOUS LOCAL SUPPLY<br>- AVOID TRUCKING<br>- CONTROL QUALITY / | HIGH.<br>- CONTROL CONTAMINATION OF LOCAL SOURCES / | HIGH<br>- QUANTITY MORE THAN QUALITY<br>- ENOUGH FOR ANIMALS & CULTIVATION. / 3 |
| • DRAINAGE/ TOPOGRAPHY. (2) | HIGH<br>- AVOID FLOODING<br>- CUT COST OF SITE WORKS / | LOW<br>- PREFER LESS DETERIORABLE SITE (CAN MEAN COSTLY SITE WORKS.) 3 | LOW<br>- CAN USUALLY FIT AS NEEDS. 0 — 4 |

## 4.7 *Worksheet 2*
## SITE CHARACTERISTICS FROM FIELD VISIT

Prepare a sketch of EACH OF THE SITES, annotated with pertinent information. As a guide, follow the checklist in "Priority Things to Consider" when reviewing the sites.



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## 4.8 *Worksheet 3*
## LAYOUT IMPLICATIONS OF SITE CHARACTERISTICS

4

For each potential site, list the applicable characteristics and consider their implications on the site development plan.

| SITE CHARACTERISTICS | LAYOUT IMPLICATIONS |
|---|---|
| SITE A | |
| - FOUR MILES FROM MAJOR RD ACCESS<br>- FLAT CLAY BASED SOIL<br>- PRONE TO FLOODING 2/3 MONTHS PER YEAR | - COSTLY ACCESS RD NEEDED, ELEVATED TO AVOID FLOODING |
| - NO NATURAL VISIBLE SOURCE OF WATER WITHIN 5 MILE RADIUS<br>- WATER TABLE 6/10 M. BELOW,<br>- BEDROCK AT 5M.<br>- POOR DRAINAGE DURING RAINY SEASON<br>- FLAT + LITTLE OR NO VEGETATION | - PROBABLY NEED TUBE WELLS<br>- WATER POINT WILL BE INFLUENCED BY EASE OF DRILLING OR DIGGING IF PREF. AT 6M. DEPTH AWAY |
| SITE B. | |
| - SITE 2 MILES FROM RD (TO EAST) (10 MILES FROM BORDER) 5 MILES FROM NEAREST VILLAGE<br>- ACCESS THROUGH THICK UNDERGROWTH<br>- SOIL DRAINS WELL, NO INDICATION OF SERIOUS FLOODING<br>- STREAM ALONG N. BOUNDARY (DRY IN JULY/AUGUST<br>- WATER TABLE + 5M. BELOW. | - APPROACH FROM EASTERLY DIRECTION WILL INFLUENCE MAIN LINE OF ACCESS.<br>- WORK LAYOUT AROUND USE VEGETATION FOR SHADE WHERE POSS.<br>- CONSIDER LOCATING COMMUNAL FACILITIES CLOSE TO STREAM. |

## 4.9 *Worksheet 4*
## SITE RATING AND SELECTION

Summarize the key characteristics of each of the potential sites following the FUNDAMENTAL CRITERIA and any applicable DESIRABLE CRITERIA. This does not automatically result in a decision, and the judgement of the staff remains of key importance. Generally, however, tradeoffs have been sufficiently clarified to facilitate a choice of sites.

| CRITERIA | RATING OF SITES | | | |
|---|---|---|---|---|
| | A | B | C | Etc. |
| AVAILABILITY OF WATER | | - NO VISIBLE SOURCE.<br>- WATER TABLE 6/10 M.<br>- BEDROCK 5M.<br>2 | - STREAM (DRY JULY/AUG)<br>- WATER TABLE 5.<br>1 | |
| DRAINAGE/ TOPOGRAPHY. | | - DENSE CLAY SOIL<br>- FLAT, NO VEGET.<br>2 | - UNDULATING SITE<br>- THICK VEGETATION<br>- GOOD DRAINAGE.<br>2 | |
| ACCESSIBILITY | | - 4 MILES TO MAIN ROAD.<br>- ACCESS FLOODS 2/3 MONTH A YEAR<br>3<br>(7) | - 2 MILES TO RD<br>- THICK UNDERGROWTH.<br>2<br>(5) | |

# PRIORITY THINGS TO CONSIDER 4

## What are fundamental location criteria?

4.10 The following table lists criteria that are considered fundamental when selecting sites and must take priority.

| CRITERIA | LAYOUT IMPLICATIONS |
|---|---|
| **Accessibility** to site at all times by vehicle | An all-weather road must exist or be built for any site to be considered. |
| Availability of **water** | Appropriate sources are wells and streams; trucking of water is only appropriate on a temporary basis when starting a development. |
| **Security** and protection | Adequate distance from border, and easy access for monitoring by UNHCR |
| Suitability of **drainage** (topography) | Site should not be subject to flooding during rainy season |
| Free from **health hazards** (disease, contamination) | May be minimized by proper orientation in case of air pollutants; or location of dwellings could be adjusted to avoid hazard |

## What are other desirable location criteria?

4.11 The following are criteria that should also be considered but have less priority, although still important.

| CRITERIA | LAYOUT IMPLICATIONS |
|---|---|
| Sufficient size for camp; in Sudan, 10,000 people and more | The minimum size for a camp is often 10 hectares. |
| Access to building materials for shelters | Minimizes need for major storage areas for building materials if are they available on demand. Space must be provided for materials to be stored on each lot. |
| Site layout fits in with regional plans, if available | Density controlled to fit with surrounding region; economic development activities planned to parallel and reinforce programs |
| Close proximity to village or urban area | Communal facilities (schools, clinics, etc.) may be located to integrate with neighborhood villages. Sizing must consider a larger population than in the refugee community only. |
| Soil conditions adequate for cultivation | Allows potential farming activities, either in communal farms or on individual lots: affects sizing of lots |
| Topography flat and free of forestation | Avoids expensive site work in cut and fill for leveling; avoids time consuming and expensive clearing of vegetation. |

## What is a useful checklist of site characteristics?

4.12 The following list relates site questions and their potential layout implications. 4

| SITE CHARACTERISTICS | LAYOUT IMPLICATIONS |
|---|---|
| **Location context** | |
| What is the relation to surrounding:<br>- land uses<br>- land values<br>- income groups<br>- dwelling types | - Site layout should parallel characteristics of surrounding area to avoid future difficulties. |
| **Approaches, accesses** | |
| Which is the best direction of of approach considering the topography? Is the access likely to be hindered by flooding? will approach roads cross private land? | - Direction and phasing of camp.<br>- Location of major access and subsequent pattern of layout.<br>- Difficulties in providing access: easements, extensive fill, etc. |
| **Topography** | |
| Is the site heavily contoured? Will natural vegetation leave obstacles in layout? Will low lying land pockets cause flooding? | - Contours will strongly influence layout pattern.<br>- Tradeoff needs to be considered between vegetation (shade, fuel, etc.) and influence on site layout.<br>- Low lying land makes certain locations of facilities and shelter difficult, and may require fill. |
| **Soil conditions** | |
| Will soil support cultivation and of what kind? Does it limit the kind of sanitary disposal? Can soil be used for building material, (mud brick...etc.)? Will soil potentially be an environmental hazard (dust storms...etc.)? Does soil allow adequate drainage? | - Location of prime cultivatible land for farming uses.<br>- Influences size of lot (if home gardens) and site.<br>- May dictate sanitary disposal system.<br>- May allow income generation.<br>- May require screening and influence. orientation<br>- Runoff slope dictates layout orientation |

**Boundary conditions**

| | |
|---|---|
| Do boundaries on plans agree with reality? Do administrative boundaries match natural physical boundaries? | - Ill-defined boundaries can cause delays.<br>- Artificial boundaries (ie, not related to physical characteristics) make structuring site difficult, and control of growth problematic.<br>- Phasing should avoid construction along boundaries if ill-defined. |

**Hazards**

| | |
|---|---|
| Are there natural hazards?<br>Are there man-made hazards<br>Is site affected by environmental pollutants, (pesticides or chemicals in rivers, plants affected with toxins)? | - May reflect poor location of site<br>- May require expensive efforts at chemical removal, or water treatment<br>- Affects location of site layout: schools located away from polluted streams, etc.<br>- Locate away from rivers prone to flooding, or provide embankment. |

**Legal constraints, land ownership**

| | |
|---|---|
| Who owns the land now?<br>Are restrictions placed on development? Are there cultural/ legal requirements? | - Could land be owned individually or collectively by refugees, which would influence physical pattern of layout: clusters, grouped lots, etc.<br>- Type of tenure that could be offered to refugees: collective tenure an option? |

**Existing structures**

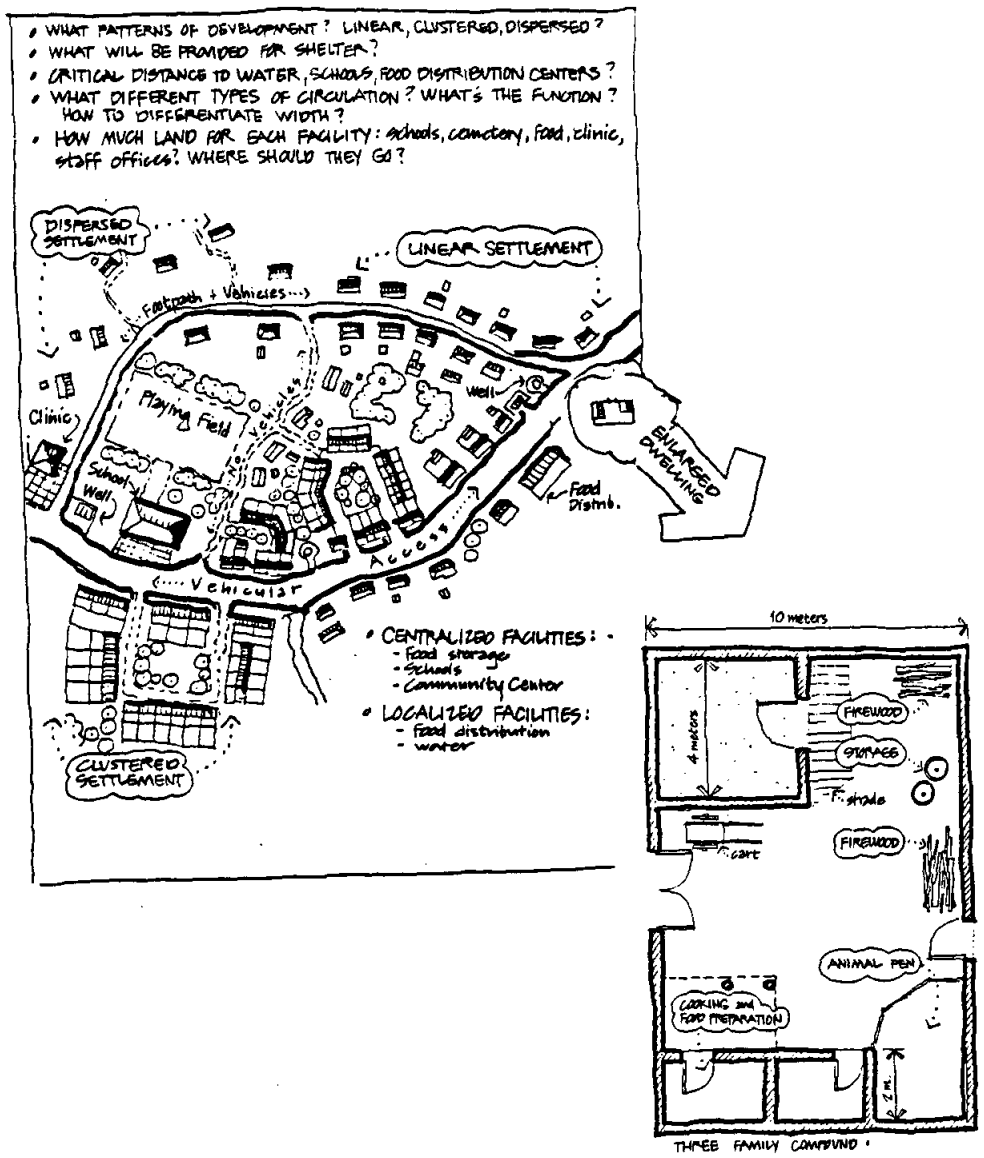
| | |
|---|---|
| Are there any structures which could be preserved or must be demolished? are there any that could be used temporarily or permanently? are there squatters, settlers or nomads? | - Existing structures may influence location and construction of needed facilities.<br>- Policy of integration or removal of existing settlers on site must be established, or layout developed around it; i.e., land may need to be regulated. |

**Micro Climate**



Is the vegetation - if any - providing extensive shade and cooling? What is the direction of prevailing wind - if significant - and how does it vary from season to season? Is there adequate rainfall? What is the flooding history?

- Will suggest desirable orientation for wind.
- Limited rainfall may dictate extensive storage of water and irrigation.
- Layout should avoid damaging vegetation, which may influence pattern of development.
- Communal building may need to be grouped to provide screening from wind.
- Openings of lightweight warehouses should be facing away from prevailing wind.


• WHAT PATTERNS OF DEVELOPMENT? LINEAR, CLUSTERED, DISPERSED?
• WHAT WILL BE PROVIDED FOR SHELTER?
• CRITICAL DISTANCE TO WATER, SCHOOLS, FOOD DISTRIBUTION CENTERS?
• WHAT DIFFERENT TYPES OF CIRCULATION? WHAT'S THE FUNCTION? HOW TO DIFFERENTIATE WIDTH?
• HOW MUCH LAND FOR EACH FACILITY: schools, cemetery, food, clinic, staff offices? WHERE SHOULD THEY GO?
DISPERSED SETTLEMENT
LINEAR SETTLEMENT
Footpath + Vehicles
Clinic
Playing Field
Vehicles
Well
School
Well
ENLARGED DWELLING
Food Distrb.
Access
Vehicular
CLUSTERED SETTLEMENT
• CENTRALIZED FACILITIES: -
- Food storage
- Schools
- Community Center
• LOCALIZED FACILITIES:
- Food distribution
- water
10 meters
4 meters
FIREWOOD
STORAGE
stools
cart
FIREWOOD
ANIMAL PEN
COOKING and FOOD PREPARATION
2 m.
THREE FAMILY COMPOUND

# Chapter 5
# DECIDING THE PROGRAMME 5

## Objectives

5.1 To develop a list of physical components which will feature in a camp, and to understand their strategic importance in the design of camps. To define for each component its location, dimensions, quantity, and quality (standards).

5.2 This section addresses the following questions:
- What should be included in the plan and how is it expected to work?
- What will be the dimensional and locational characteristics, and the general strategic approaches of each physical element?

## Procedure

5.3 The following basic steps are suggested:
- Develop a list of physical elements and their programmatic requirements.
- Develop a general planning strategy for each.
- Define the programmatic requirements and their layout implications.

## Outcome

5.4 An agreed LIST OF PERFORMANCE REQUIREMENTS for key physical elements in a camp. The key dimension and location parameters, and the general strategic objective for each physical element.

# PROCEDURE

5.5 The following steps are suggested:

| STEPS | HOW TO GO ABOUT IT |
|---|---|
| **1. DEVELOP A LIST OF PROGRAMMATIC REQUIREMENTS which need to be defined in designing the site.** | - Make a list of physical elements which are likely to feature in the layout. Include the overall site development, the hierarchy of groupings, circulation, facilities, infrastructure, and shelter. |
| **2. DEVELOP A GENERAL PLANNING STRATEGY or objective for each programmatic requirement.** | - Determine the general approach to be followed in the design of each of the components. For example, for shelter, how much would be provided: how much land will be involved, how much self-helpcontribution? |
| **3. DEFINE THE PROGRAMMATIC REQUIREMENTS AND THEIR LAYOUT IMPLICATIONS in sufficient detail to provide guidance to a designer.** | - Establish the DIMENSIONAL characteristics of each of the components; for example, for lots: size, how many each size, proportion, expected uses on lot, location of shelter on lolt, etc. Similar characteristics need to be identified for all of the components.<br><br>- Establish LOCATIONAL characteristics of each of the components; for example, for lots: where to locate the different types of lots, bigger lots along larger streets, smaller lots on walkways? |

- Seeing what exists and how things are done in similar situations is the recommended form of defining requirements. This may be done through: 1) direct observations, and 2) through discussions with local experienced respondents.

- Consider the following as the basis for the dimensional and locational parameters: 1) social-cultural needs of the refugees; 2) previous experience from other camps and settlements; 3) national and local standards; 4) special requirements from the UNHCR. In all situations, the parameters must be matched to the available technical, financial, and administrative resources.

-Consider potential incompatibilities between the needs of refugees and the demands of agencies.

# PROGRAMME WORKSHEETS

## 5.6 *Worksheet 1*
## PROGRAMMATIC REQUIREMENT

This worksheet helps structure decisions when deciding a program for a specific site. It is suggested to prepare this chart with all parties that will be involved in the development of the camp. A workshop may be particularly appropriate, which could include quick field observations of similar situations and interviews with local experts.

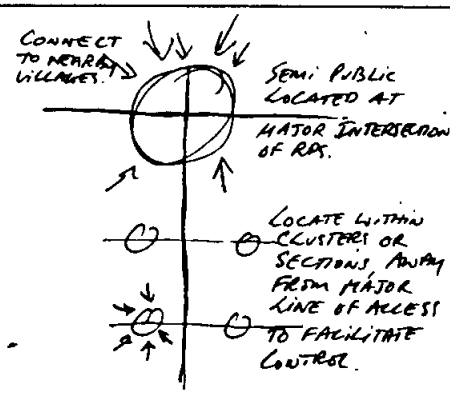
| PROGRAMMATIC ITEM | GENERAL STRATEGIC OBJECTIVES |
|---|---|
| COMMUNITY CENTRE/ SCHOOLS | - USE + CREATE FACILITY TO SERVE NEIGHBOURING CLUSTER.<br>- DOUBLE UP COMMUNITY CENTRE WITH PRIMARY SCHOOL<br>- PROVIDE SMALL COMMUNITY (CLUSTER) BASED FACILITIES/LAND FOR NURSERY + INFORMAL MEETING PLACE. SHOULD BE MULTI PURPOSE<br>- ENCOURAGE COMMUNITY GROUPS TO ORGANISE LOCAL CENTRES.<br>- USE CENTRAL COMMUNITY CENTRE FOR VOCATIONAL TRAINING - NEED WORKSHOP SPACE<br>- PROVIDE ADMINISTRATION OFFICES IN OR ADJACENT. |
| LOTS/HOUSE. | - DEFINE DIFFERENTIAL LOT SIZES<br>- PROVIDE ONLY CLUSTER PERIMETER FOR SELF ORGANISED GROUP (20% OF APP. 4/5TH 3,000 PEOPLE) IN GROUPS OF 200 EACH + ALLOW EACH GROUP TO DECIDE ITS OWN LOT BOUNDARIES. |

5

| DIMENSIONAL PARAMETERS | LOCATIONAL PARAMETERS |
|---|---|

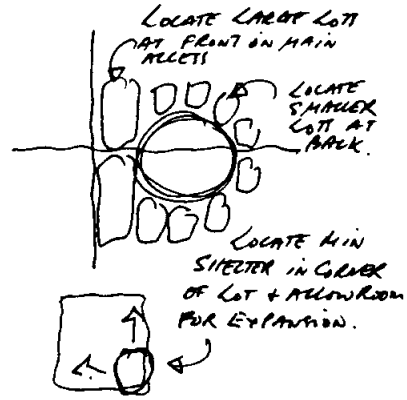
COMMUNITY CENTRE/ SCHOOL

FOR CENTRAL FACILITY
PROVIDE: 3000 Sq M OF FLOOR AREA TOTAL.
3 OFFICES 150 Sq M EACH.
LIBRARY 400 Sq M
1600 Sq M OF MULTI PURPOSE AREA. 150 Sq M FOR STORAGE
LOCAL FACILITY MAKE AVAIL. 1000 Sq M OF LAND FOR BUILDING + OTHER COMMUNAL ACTIVITIES.




LOTS / HOUSE

- ALLOW 3.5 Sq M PER PERSON FOR MIN SHELTER.
- PROVIDE 2 LOT SIZE:
  LARGE 20 x 30
  SMALL 5 x 15
- PROVIDE ADJACENT LAND FOR CULTIVATION



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# PRIORITY THINGS TO CONSIDER

5.7 The following is provided as basic information for determining attributes of the parameters of a site. Only a general structure is given, and the reader is directed to the Technical Supplements at the end or to the indicated sources for detailed information.

## What are some general strategic objectives?

5.8 The following table lists issues to be addresed when setting strategic objectives.

| PROGRAMMATIC ITEM | GENERAL STRATEGIC OBJECTIVE |
|---|---|
| General site development | - What layout patterns are culturally appropriate: linear, clustered, or dispersed?<br>- Is there space for growth?<br>- How will the growth be phased?<br>- What are the critical components which will generate the layout and should therefore be built first?<br>- How will the land be allocated between refugees and agencies?<br>- What level of flexibility is offered for varying groupings of lots and lot sizes?<br>- How will the focus of the community be created? |
| Hierarchy of groupings | - How will the layout reflect the social structure?<br>- Should the groupings be pre-determined or remain flexible until settlement?<br>- How should the groupings reflect the administrative organization for delivery and maintenance of service utilities? |
| Circulation | - What categories of circulation should be designated between vehicular and pedestrian?<br>- How will the maintenance be handled?<br>- What level of construction will be appropriate for each?<br>- How will the various types of circulation be used? |

| | |
|---|---|
| Facilities | - Who will control and maintain the facilities?<br>- Are the existing structures temporary or can they be used again?<br>- How will facilities be phased out when their use ends? (for example, staff offices)<br>- Will some facilities be accessible to the wider community?<br>- What special conditions will each facility need to cater for? |
| Infrastructure | - What kind and what level of provision will be made?<br>- Will the infrastructure be phased? How will it be upgradable?<br>- How much of what will be provided by the community, and how much by the families or cluster groups?<br>- Who will maintain what?<br>- Who will operate what?<br>- Who will pay for what? |
| Shelter and lots | - What will be provided: land, land+services, land+services+minimum shelter, permanent roof or core unit?<br>- What will be the mode of development: self-help, contractor, or both?<br>- What is the special role of women in construction, and what is their potential for income generation?<br>- Will training and technical assistance be required, and in what form?<br>- What role will local materials play, or will all materials need to be imported?<br>- What strategy will be adopted to prevent fire, provide privacy, and to reflect cultural norms?<br>- How will the special needs of children be met? |

## What are some dimensional and locational parameters?

5.9 The following table outlines some issues to be addressed in determining programmatic parameters.

| DIMENSIONAL PARAMETERS | LOCATIONAL PARAMETERS |
|---|---|
| **General site layout** | |
| - What densities are appropriate to safeguard health and to be culturally appropriate?<br>- How many families should be housed in total?,<br>(Experience suggests groupings of 10,000 to 12,000 is the max. to facilitate management).<br>- How much land will be allocated to the various functions?<br>(Generally, no more than 20-25% should be allocated for streets and walkways, and the rest divided between lots and public facilities. | - What are the critical distances to water sources, roads, and other facilities?<br>- How is the site related to the region: roads, bus routes, etc.?<br>- What parts of the site should be avoided for specific uses because of site conditions?<br>(for example, shelter should be avoided in flood areas.) |
| **Hierarchy of groupings** | |
| - What should be the size of each grouping?<br>- How much land is allocated to what uses: Public, Private...etc?<br>- How are the boundary groups defined? | -Where are the groupings established relative to lines of access?<br>- How are the groupings arranged relative to walking distance to facilities? |
| **Circulation** | |
| - What is the width of each type?<br>- How does the width allow for encroachment, if any?<br>- How does the width reflect the use as a firebrake?<br>- How does the width cater for emergency vehicles?<br>- How does the width reflect other activities commonly occurring in streets?<br>- How does the width change on major streets when commercial activity is anticipated? | - Where will each type go?<br>- What is the frequency of each type?<br>- Which street will become the major line of access?<br>- How will the location be modified by topographic considerations or existing structures? |

**Facilities**

- What standards are appropriate are appropriate for sizing?
- How much land will be needed for the facilities?
- Which facilities will be centralized and which will be localized? In the case of some, both central and local are appropriate: for example, food distribution.
- Can facilities in neighboring villages be used?
- Which facilities must be located near vehicular access roads?
- Which facilities must take into account security considerations in location and in breaking-proof construction?

**Infrastructure**

- How will the anticipated usage reflect in the sizing of the services?
- Must quantities of water include servicing animals?
- What are the special dimensional needs for each type of facility: pit latrine, septic tank, etc.?
- How many of each communal facility will be needed?
- What is the maximum walking distance to each communal facility?
- How will control and maintenance affect the location choice?
- How will cultural acceptability affect the location choice?

**Shelter and lots**

- How much space is needed for: age of water, housing of animals, storage of building materials, storage of fuel, storage of food, small- scale, on-lot industries, and pit latrines, (if provided).?
- How much area should be allocated for outside sleeping, cooking, and socializing?
- What sizes are culturally acceptable for the shelter?
- In some situations, shelter can be minimal because most activities take place outside; for example, in parts of Sudan a min. shelter of 4 meters in diameter is adequate.
- How will the lots be arranged: cluster, stor-linear?
- How will the circulation pattern influence the layout pattern to minimize the walking distance?

## What should be considered for each of the components of a layout?

5.10 Consider the following:

| COMPONENT | THINGS TO CONSIDER |
|---|---|
| Main features of site | location context<br>approaches<br>topography<br>boundaries<br>hazard<br>legal restrictions<br>easements, existing structures |
| Land utilization | government land (streets, walkways)<br>government land (open spaces, play areas)<br>settler land (lots)<br>settler land, shared (common courts) |
| Circulation network | function<br>width<br>surfacing<br>location<br>spacing<br>hierachy |
| Blocks, lot groupings (clusters) | size<br>number of families<br>dimensions<br>legal covenents |
| Lots | expected shelter type<br>expected uses on lot<br>position on site<br>position in block<br>area, width, length, proportion |
| Utility infrastructure | communal vs individual<br>what provided<br>location, distance to lots<br>technical standards |
| Community facilities | schools<br>community center<br>clinics<br>parks<br>administration |
| Community focus | coherence between elements<br>reinforcement among elements<br>physical and legal measures |

## What are some "rule of thumb" parameters?

5.11 These basic references are provided as general guides. *Source: "Emergency Handbook" unless otherwise noted.* 5

| | |
|---|---|
| Site: | - Location: site with minimum of 3 meters over water table.<br>- *Total area per person:* 30 square meters.<br>- *Persons per smaller section:* 1000 |
| Facilities: | - *Persons per communal facility:* 35 persons, or 7 families<br>- *Clinic:* 1 per 5000 refugees<br>- *Health Center:* 1 per 5000 refugees, in support of clinics (Note: a health center includes education facilities, post and pre-natal care.)<br>- *Hospital:* 1 bed per 2000 refugees |
| Water supply: | - *Maximum walking distance:* 100 meters from farthest shelter<br>- *Water per person:* 15-20 liters per person per day, excluding communal needs<br>- *Standpipes:* 1 tap per 200-250 refugees<br>- *Handpumps:* required to lift 5 meters<br>- *Quality of water:* reasonable 0-10 faecal coliforms per 100 ml; polluted 10-100; very polluted over 1000<br>- *For health centers:* 40-60 liters per patient per day<br>- *For food distribution centers:* 20-30 liters per person per day |
| Latrines: | - *Location:* within 50 meters but 6 meters from shelters<br>- *Users:* 1 per 20 people if public<br>- *Distance from water source:* miminum 15 meters, better 30 meters |
| Shelter: | - *Size:* 3.5 square meters minimum floor area per person |
| Land Utilization:* | - *Lots:* 50 - 60%<br>- *Streets, walkways:* 20 - 25%<br>- *Public facilities, open spaces:* 15 - 20% |
| Circulation length/area ratio:* | - Desirable: 150 meters per hectare (with clusters)<br>- Maximum: 285 meters per hectare |
| Density:* | - Net density (lots only): 600 - 800 people per hectare (highly variable: dependent on customary lot size and family size; see Urbanization Primer, pp. 62-65, and 84-85, for more information.) |

**Source: Urbanization Primer, Horacio Caminos and Reinhard Goethert, The MIT Press, 1978.*

# Chapter 6
# MAKING THE LAYOUT 6

## Objective

6.1 To structure the site layout based on consideration for the social structure of the refugee community, easy management, component interrelationships and component location. To decide facilities appropriate to the size and scale of development (i.e., should one provide a clinic, a hospital, or both?)

6.2 Key questions addressed are:
- What hierachy of groupings are appropriate?
- What interrelationships of components are key in structuring the layout?

## Procedure

6.3 The following steps are suggested:
*For entire site:*
• Divide site into community areas; • Locate facilities for entire site.
*For each community:*
• Allocate communal components; • Connect main community components with vehicular network; • Allocate areas for smaller cluster groups;
• Connect cluster groups with pedestrian network; • Further subdivide cluster groups, as needed.
*For components:*
• Size and sketch components, and provide specifications.

## Outcome

6.4 An overall LAYOUT PLAN OF THE SITE with circulation networks and necessary facilities. A SKETCH DESIGN of each of the components tailored to the needs of the camp.

# PROCEDURE

6.5 The following steps are suggested:

| STEPS | HOW TO GO ABOUT IT |
|---|---|
| *For entire camp:* | |
| **1. DIVIDE SITE INTO COMMUNITY AREAS, for example, 10,000 people in Sudan.** | - Break up site into areas measuring 300-350 meters on a side. Try to balance the areas into equal segments |
| **2. LOCATE FACILITIES SERVING ENTIRE SITE, and connect to site access road.** | - Identify components from "Deciding the Programme" which relate to the whole site. Note the number needed and area for each.<br><br>- Divide components into two groups: those to be located in a CENTRAL location to facilitate access by all of the communities, and those to be located on the PERIPHERY because of health, smell, or safety reasons.<br><br>- Components to be located centrally include: central administration offices, vehicular parking area, central warehousing, market and main clinic.<br><br>- Components to be located on or away from the periphery include: refuse disposal area (by burning or land fill), burial areas, water storage tanks (dependent on water source), UNHCR staff quarters, etc. |

- Tentatively position components and mark off their approximate areas needed in the site.
- Connect central components to site access road. Mark off sufficient width to facilitate vehicular access.

*For each community*

**1. ALLOCATE COMMUNAL COMPONENTS, centrally to minimize walking distance.**

- Select components from "Deciding the Programme", noting the number needed and area required for each. These include food distribution points, water points, clinics, schools.
- Components used by all are grouped centrally to focus and give identity to community. Some components may be dispersed through out the community to minimize walking distance, particularly when carrying is necessary: for example, water and food stuffs. 100m-150m is a good maximum walking distance for planning purposes.

**2. CONNECT MAIN COMPONENT WITH VEHICULAR NETWORK to central site components.**

- Only include those components where vehicular access is necessary Generally these roads are developed at right angles to a central spine in order to avoid irregular shaped lots.

- Note that utilities generally follow the vehicular network, and once the circulation is determined, the utility main networks are also determined.

**3. ALLOCATE AREAS FOR SMALLER CLUSTER GROUPS, dependent on cultural patterns of refugees.**

- Note number families appropriate to a cluster grouping from "Deciding the Programme", and approximate size.
- Tentatively position cluster groups throughout the remainder of the community area.

**4. CONNECT CLUSTER GROUPS WITH PEDESTRIAN NETWORK, to central circulation network and communal components.**

- Orient walkways at right-angles to main circulation, to avoid irregular, difficult-to-use areas. Also consider sun and prevalent wind situations in positioning clusters and walkways.

**5. Further SUBDIVIDE CLUSTER GROUPS if needed dependent on self-organizing cultural tradition of settlers.**

- Divide clusters into lots for each family. Refer to "Deciding the Programme" and "Refugee Characteristics" for appropriate sizes.

- Some refugees are accustomed to organizing their areas, and do not require further division into lots. Nomadic tribes, particularly, have their own customs for land allocation.

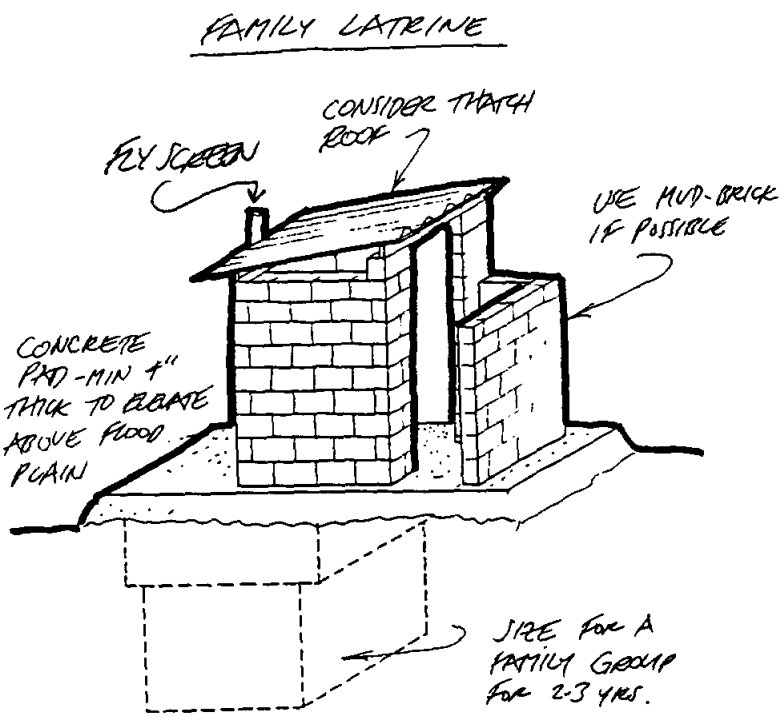
- Each cluster group may be considered for future upgrading by providing each with a water tap, and, if socially appropriate, communal latrines.

*For components*

**1. SIZE AND SKETCH COMPONENTS, appropriate to specific site demands.**

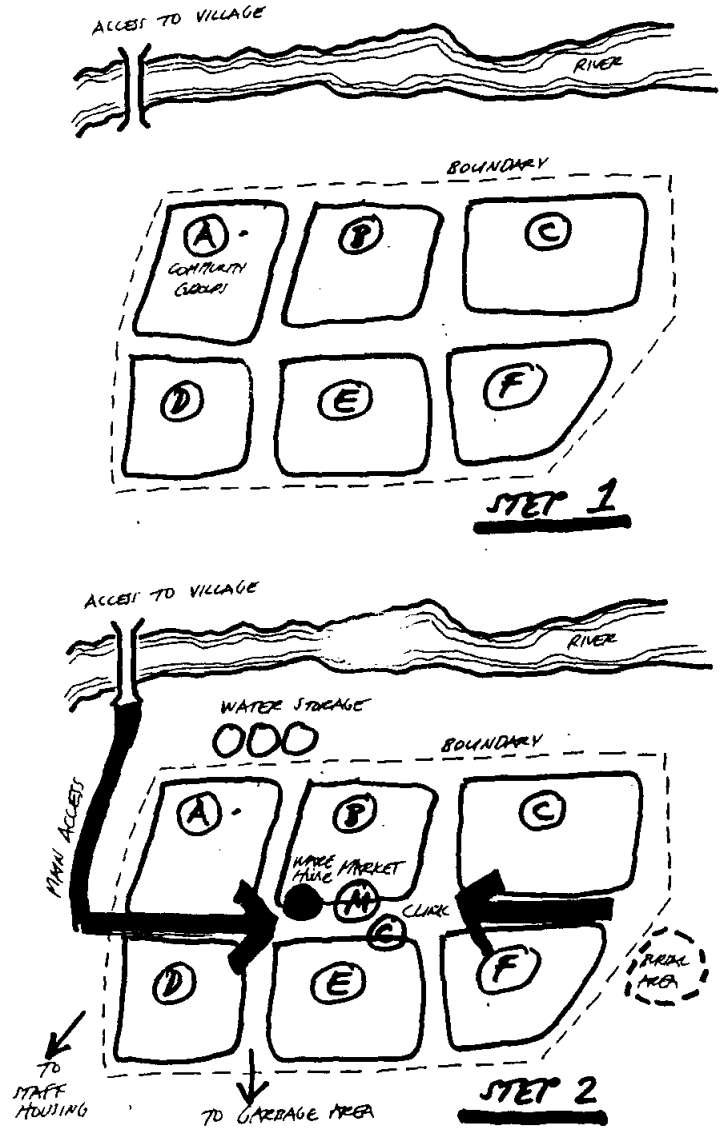
- Refer to "Basic References" and Technical Supplements for examples of previous designs. **6**

- Note that detailed designs will generally be prepared by specialists. A basic understanding, however, is necessary to monitor construction and to identify culturally and area appropriate designs, materials, skills required, maintenance issues, cultural acceptability, political acceptability, and climatic dictates.



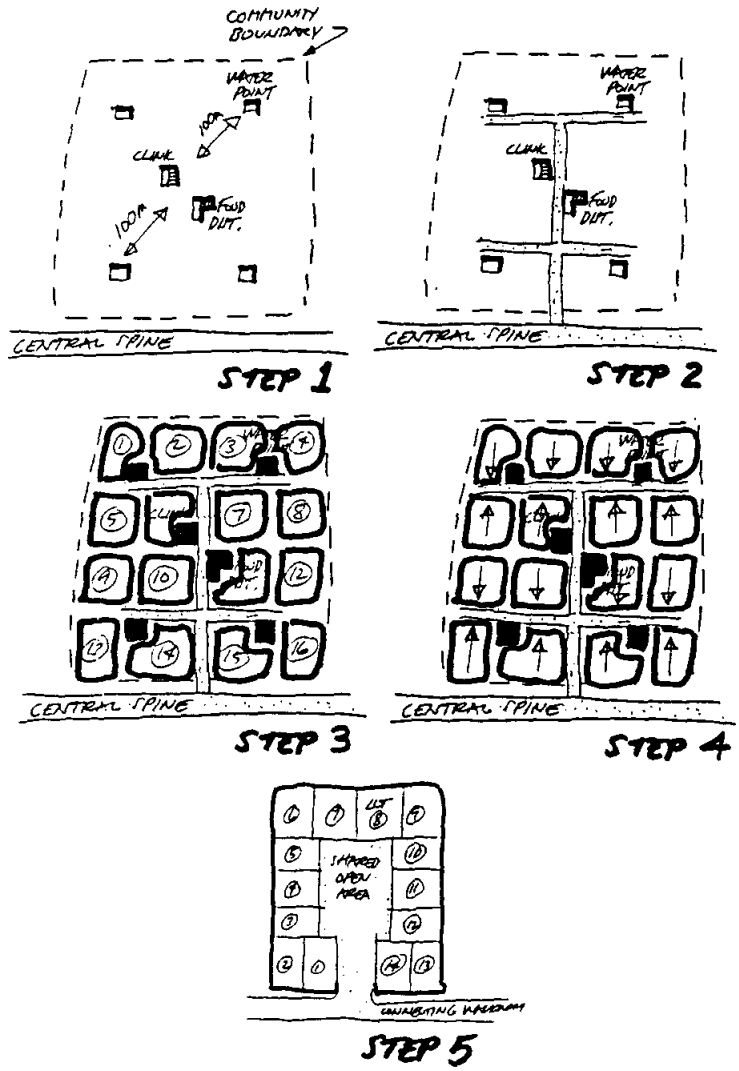
# DESIGN WORKSHEETS

## 6.6 *Worksheet - For entire site*
## SITE DESIGN



6

## 6.7 *Worksheet - For each community in site*
## COMMUNITY DESIGN



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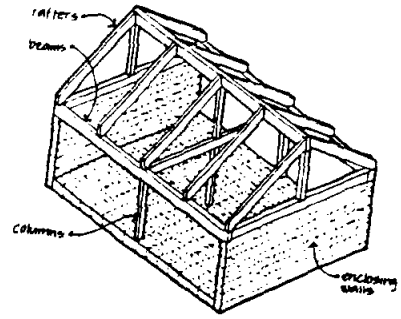
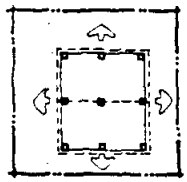
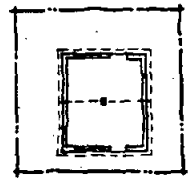
## 6.8 *Worksheet- For each component*
## COMPONENT SKETCH

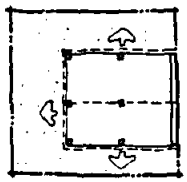


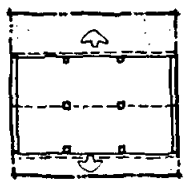
A. Columns and roof are positioned near the center of the lot to provide the opportunity for extension in any direction.



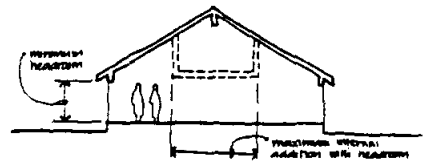
B. Providing a basic shell inhibits extensions whatever the position.



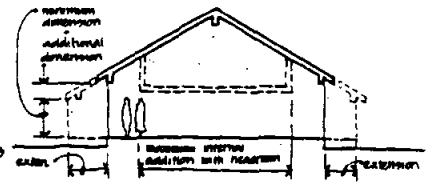
C. Walls may be used in combination with columns to control extensions at one edge (e.g. lot line).



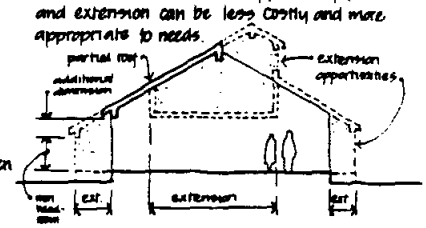
D. An arrangement of "party walls" at the lot lines may facilitate decision-making between neighbors, and will allow extensions at the front and back.



^ Minimum headroom dimensions at the overhangs limits extensions and internal arrangements



v More than minimum headroom dimensions at the overhangs facilitates extensions and varied internal arrangements.



v A minimum provision of roof provides families with immediate shelter. Future opportunity for addition and extension can be less costly and more appropriate to needs.



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# PRIORITY THINGS TO CONSIDER 6

6.9 The following information assists in locating and designing the components of a layout. The information is divided into two parts: considerations in determining locational parameters, and considerations in designing the specific components. Only a general outline is given, and the reader is directed to the Technical Supplements at the end or to the indicated sources for detailed information.

**What are some key layout considerations for components?**

6.10 LAYOUT considerations include the following:
- the components involved
- the number of components needed
- the area needed for each of the components
- the appropriate location for each.

The following components should be considered in the layout: shelter and lot, sanitary facilities, water points, warehousing, adminstration facilities, and community use centers, clinics, schools, garbage dumps and incinerators, and cementeries.

**What are some component design considerations?**

6.11 Design considerations, independent of its location in the development, are as follows:
- simplicity of construction
- cost effectiveness
- technical feasibility

For each of these aspects, keep in mind the following more detailed considerations: availability of local materials, skills required, maintenance issues, cultural acceptability, political acceptability, and climatic dictates.

**What are some layout considerations for the shelter and lot?**

6.12 The following layout alternatives and their implications should be kept in mind:

| ALTERNATIVES | IMPLICATIONS |
|---|---|
| Traditional lot arrangement in blocks | - Focuses on single household as social structure, rather than group<br>- Assumes more centralized services<br>- Can be more expensive to provide services<br>- Little control of services and utilities by individual groups<br>- Appropriate if lots larger and small farm holdings envisioned |
| Clustered lots (grouped) | - Greater group identity and control<br>- Group control over maintenance<br>- Allows decentralized community services<br>- Greater flexibility in use pattern, individual clusters can have greater variety of lot and shelter types<br>- More difficult to monitor families<br>- Sometimes difficult to determine proper cluster size |
| Clusters only, no lot differentiation | - Target group must be self-organizing<br>- Each group allocates land for shelter<br>- Greater flexibility offered to families and groups<br>- Speeds up layout process<br>- Has all advantages of clusters<br>- Less control by administration over renting to outsiders, and further subdivision |
| Differentiated lot sizes | - Large lots on major circulation routes provides opportunity for commerce and more direct access to utilities; value tends to be higher<br>- Smaller lots on walkways mainly for shelter; value tends to be lower<br>- Larger lots off walkways better for agriculture activities<br>- Requires more care in layout<br>- Can cause problems in allocation if no clear procedure developed |
| Undifferentiated lot sizing | - Easiest method in allocation |

| | |
|---|---|
| | - Less considerate of family variations inherent in any development<br>- Less considerate for individual and social family patterns for differing ethnic groups |
| Location of shelter on lot | - Maximize usage of lot; avoid placing in center<br>- Avoid small leftover spaces between shelter and lot boundary<br>- Families tend to build boundary fences, and resultant spaces should be considered when locating shelter<br>- Temporary shelters invariably shift position when rebuilt, and have little resemblance to initial pattern |



## What must be determined in design of shelter and lot?

6.13 The following details should be specified:
- sizes of spaces and component materials
- details of construction
- locational characteristics
- details of utilities
- quantities of materials
- construction sequence .

## What are some layout considerations for communal facilities?

6.14 The following general layout considerations apply for all of the communal components: schools, clinics, food and water distribution points, and other community use facilities. Tradeoffs will need to be considered between central and local location of facilities, and the balance achieved when planning the site.

| ALTERNATIVES | IMPLICATIONS |
|---|---|
| Central location | - Generally increased walking distance for refugees. Creates long lines and crowded conditions.<br>- Simple provision of services.<br>- Easier adminstration.<br>- May allow combining distribution point with warehouse location. |
| Section by section locations | - Distribution adminstratively more involved.<br>- Less walking distance for refugees.<br>- Reduced congestion, shorter lines.<br>- Each distribution point may be easier to manage, but requires more staff.<br>- More subject to loss, for example, of foodstuffs in food centers. Reguires in creased control. |

## Specific considerations for facilities



6.15 The following pages provide general specifications for the major facilities to be provided in a camp. Each includes a general description, the major components and equipment found in the facility, the level of utility services required, and any special considerations to be aware of. Where appropriate, a sketch is included to help clarify the interrelation among the components.

6.16 The following facilities are included:
- Refugee processing center
- UNHCR administration facility
- Primary school
- Camp clinic
- Small neighbourhood clinic
- Communal washing facility
- Communal toilets
- Warehouse
- Central food storting facility
- Food sorting and distribution facility
- Neighbourhood food distribution shed
- Community center
- Motor pool

## 6.17 Refugee Processing Center

Refugees arrive to camp, either by foot, truck or bus, and are directed to processing facility for: registration, assignment to shelter area, rudimentary medical check if necessary, and are given provisions and basic household items.

| *Components:* | *Description; Equipment* |
|---|---|
| Waiting area | benches, seats; access to drinking water and toilet facilities; notice board |
| Baggage storage area | lockable, no windows |
| Processing area | tables, chairs; notice board |
| Medical screening area | optional, for non-routine situations |

*Type sand level of services:*

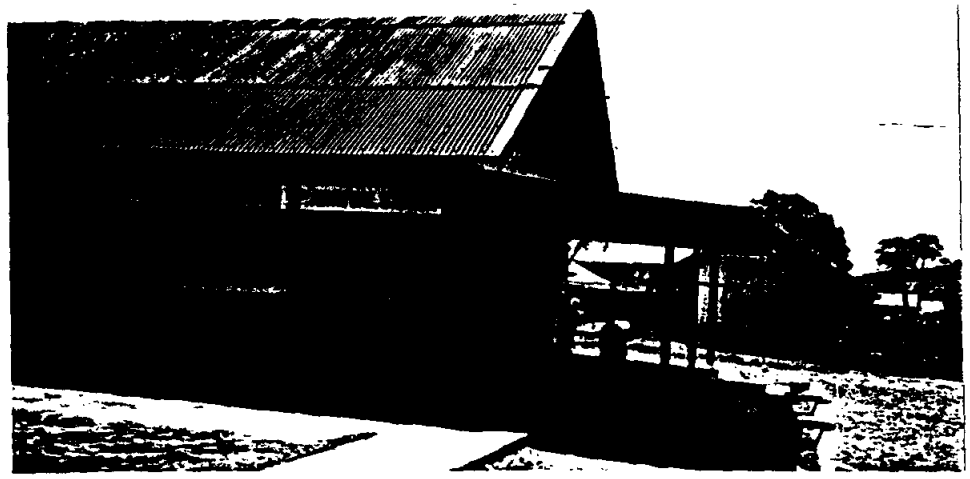
Water: for drinking only; can be provided in contain

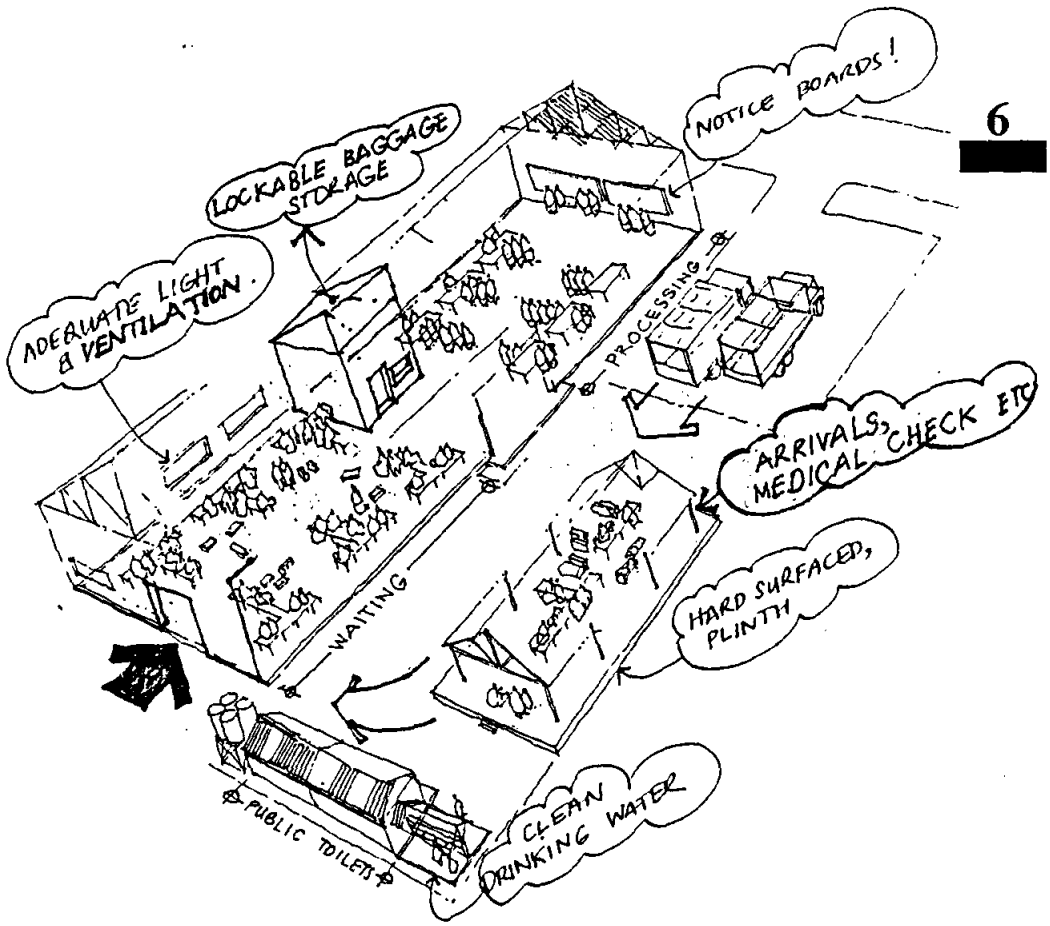
Toilets: Communal provision, may be pit latrine or other temporary solution

Electricity: optional; generally processing occurs during daylight hours

*Special considerations:*

Structure could have dual useage as community center or other needed facility for camp use.




NOTICE BOARDS!
6
LOCKABLE BAGGAGE STORAGE
ADEQUATE LIGHT & VENTILATION
PROCESSING
ARRIVALS, MEDICAL CHECK ETC
WAITING
HARD SURFACED, PLINTH
PUBLIC TOILETS
CLEAN DRINKING WATER

## 6.18 UNHCR Administration Facility

Facility is office for UNHCR representative and place where family screening takes place by UNHCR and other outside agencies.

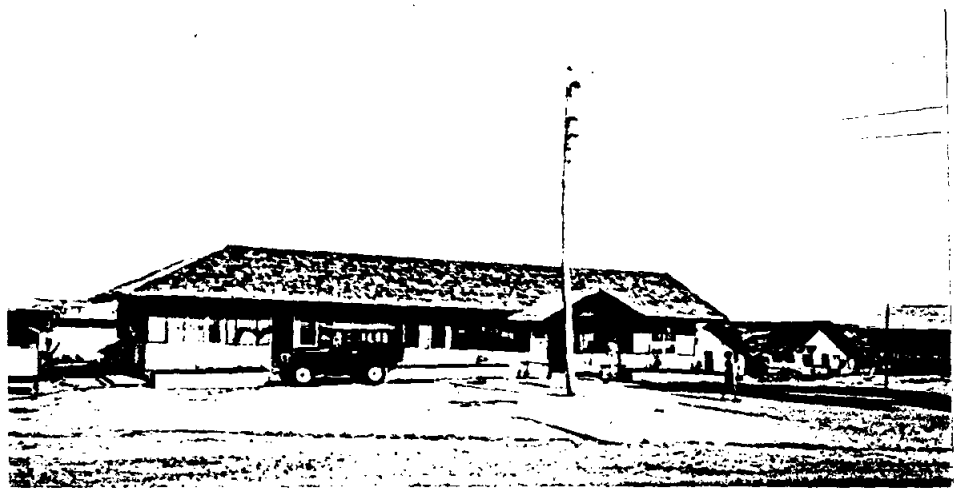
| *Components:* | *Description, Equipment* |
|---|---|
| UNHCR office | office furniture; office equipment including copy machine; telephone or short wave radio |
| File storage | storage cabinets; contains records of all refugees |
| Waiting area | benches; either inside or ourtside |
| Preliminary screening area | tables and benches; area for routine processing |
| Interview rooms | table, benches sufficient to contain complete family; privacy must be provided |

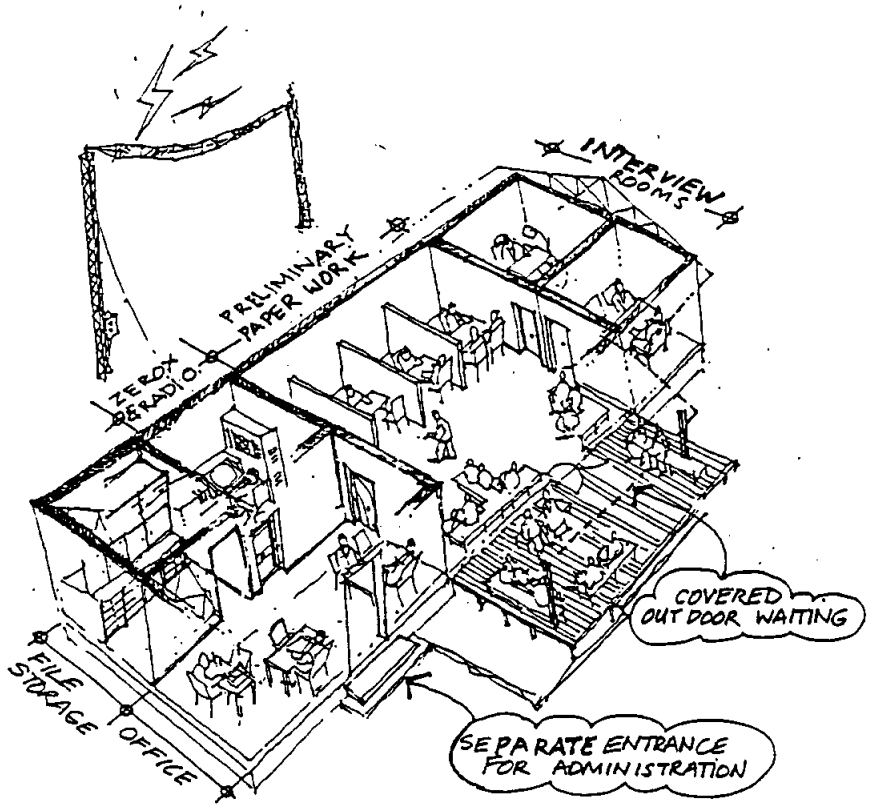
*Types and level of services:*

Electricity: optional; for lighting and to run copy machines

*Special considerations:*

Security of files should be maintained at all times; electricity for security lighting and office use is recommended.




INTERVIEW ROOMS
PRELIMINARY PAPER WORK
ZEROX & RADIO
COVERED OUT DOOR WAITING
FILE STORAGE
OFFICE
SEPARATE ENTRANCE FOR ADMINISTRATION

## 6.19 Primary School

Education of children should start immediately. Multiple uses of school could be considered to include community meeting area, adult education, etc.

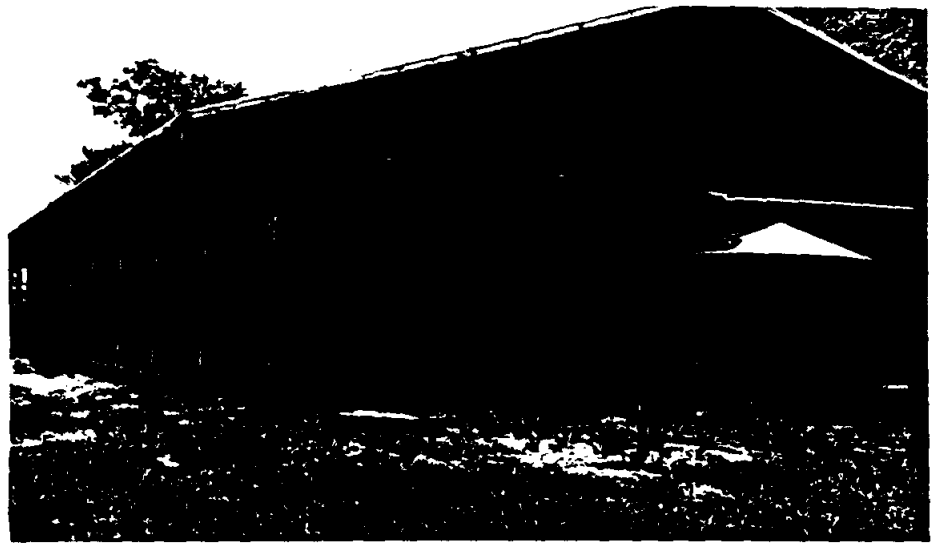
| *Components:* | *Description, Equipment* |
|---|---|
| Classrooms | desks for children; blackboard |
| Teachers room | tables, storage files |
| Meeting room | benches for children; classroom could be used instead |
| Toilet facilities | (existing camp facilities may be used) |

*Types and level of services:*

Water: drinking water must be provided; could be trucked in

*Special considerations:*

Theft may sometimes be a problem and the teacher's room could be made lockable to secure potential theft items.



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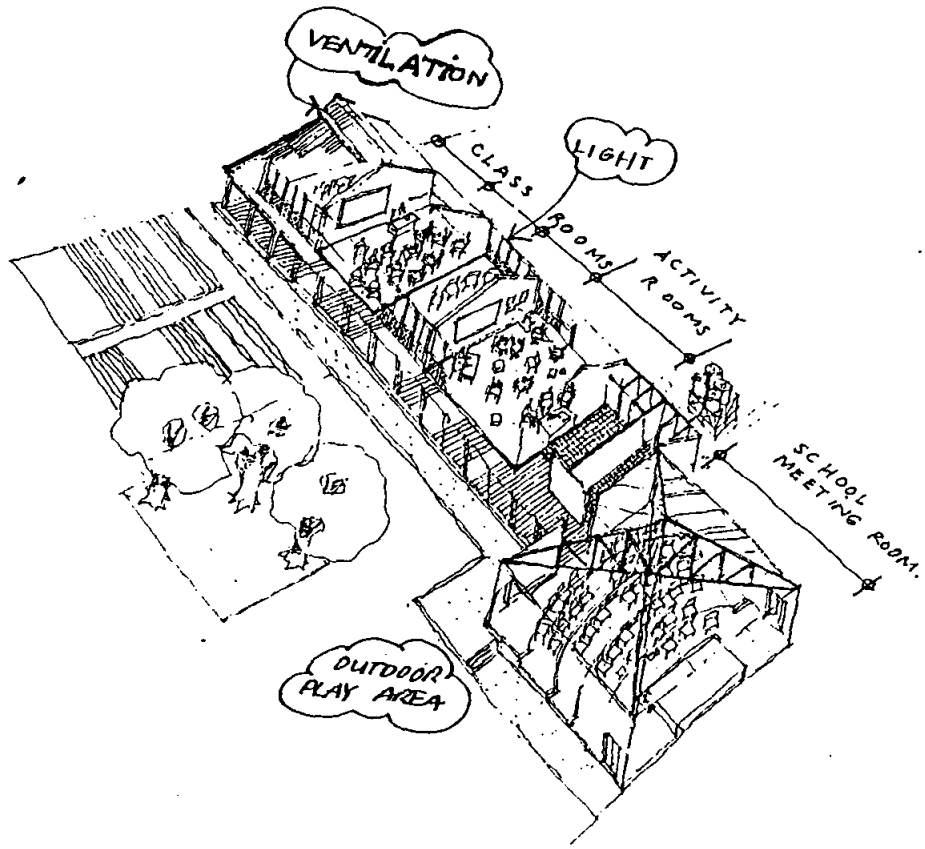
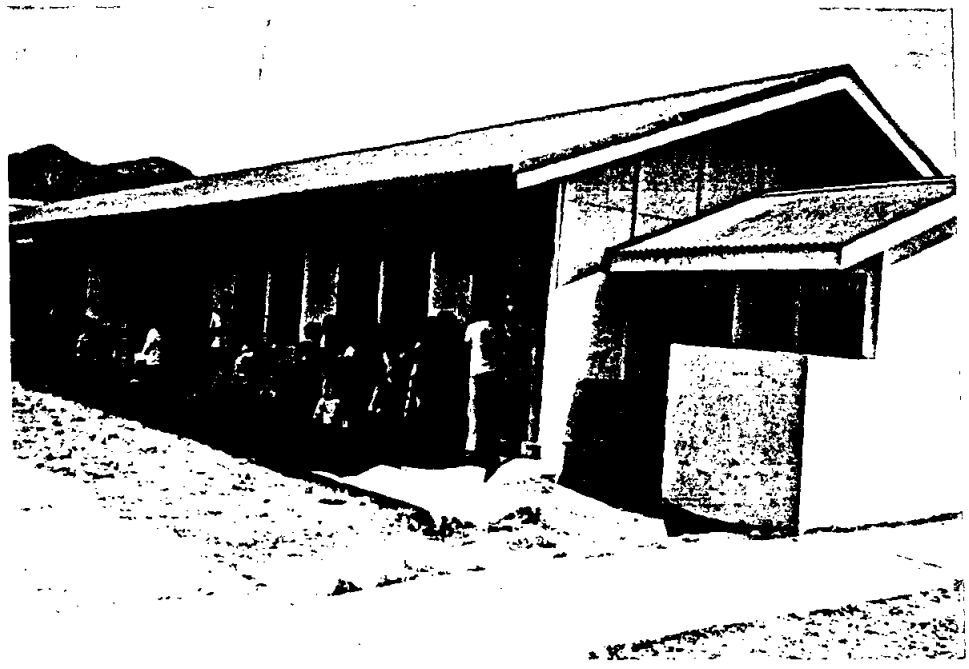

VENTILATION
LIGHT
CLASS ROOMS
ACTIVITY ROOMS
SCHOOL MEETING ROOM.
OUTDOOR PLAY AREA



## 6.20 Camp Clinic

A larger clinic needs to be provided in a camp to serve immediate health needs, and, if camp is of sufficient size, a hospital should be considered.

| *Components:* | *Description, Equipment* |
|---|---|
| Reception area | desk and chair; benches for patients; file storage for receptionist; bulletin board for announcements |
| Examination rooms | bed, storage shelves |
| In-patient room | bed, storage shelves |
| Pharmacy | storage shelves |
| Waiting area | benches |
| Public health education room | benches, blackboard |
| Toilets | |
| Parking, vehicle access | for temporary parking of emergency vehicles and occasional mobile specialized clinics |

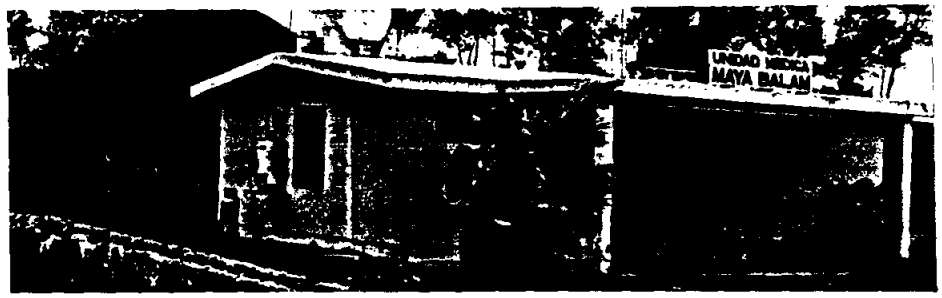
*Types and level of services:*

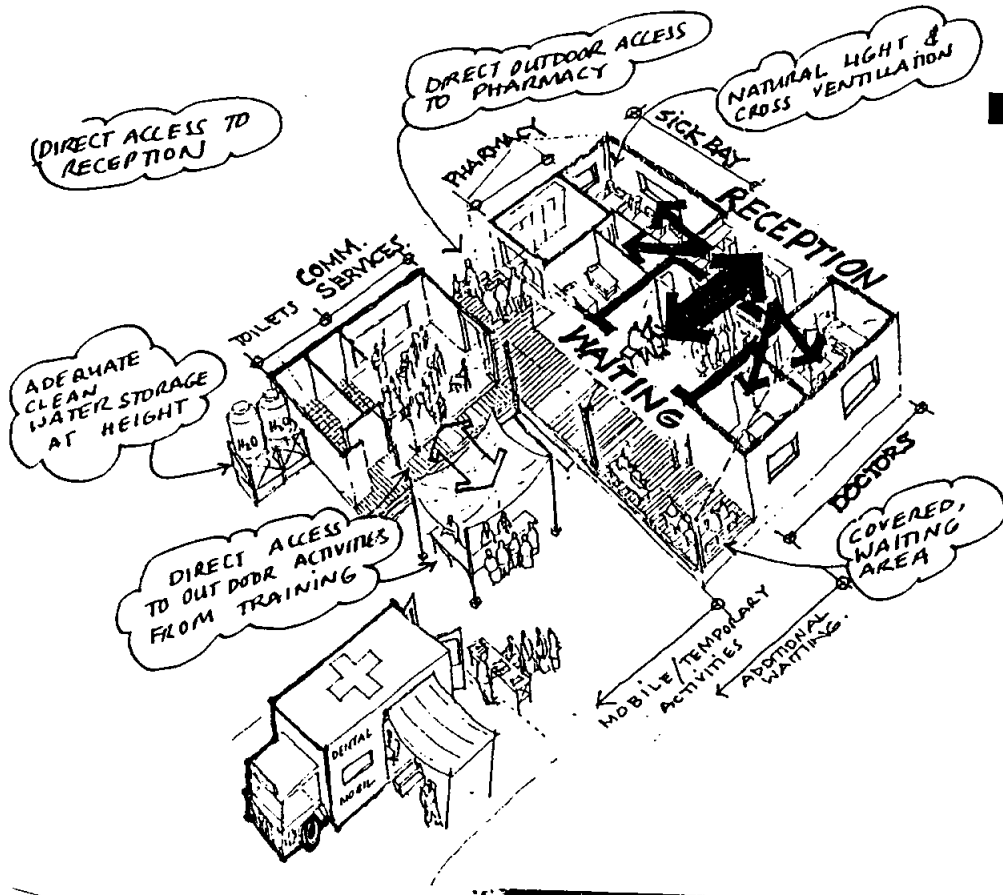
Water: optional, may be stored in containers

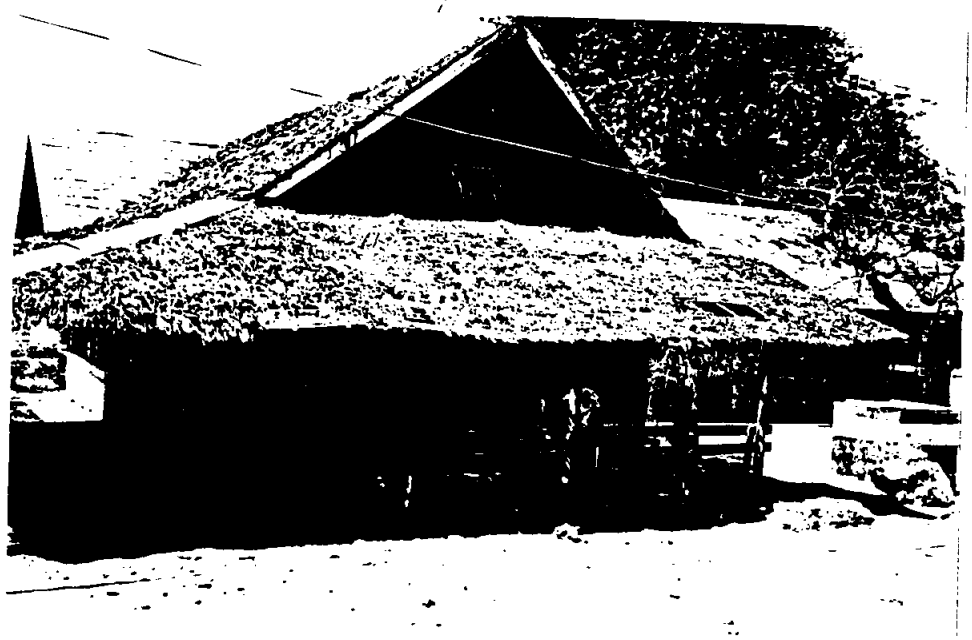
Electricity: optional; lamps may be used for light; but useful for refrigeration of some medicines

*Special considerations:*

A centrally located reception room makes for a highly efficient layout.




DIRECT ACCESS TO RECEPTION
DIRECT OUTDOOR ACCESS TO PHARMACY
NATURAL LIGHT & CROSS VENTILATION
PHARMACY
SICK BAY
RECEPTION
COMM. SERVICES
TOILETS
WAITING
ADEQUATE CLEAN WATER STORAGE AT HEIGHT
DOCTORS
DIRECT ACCESS TO OUT DOOR ACTIVITIES FROM TRAINING
COVERED WAITING AREA
MOBILE/TEMPORARY ACTIVITIES
ADDITIONAL WAITING
DENTAL
MOBILE



## 6.21 Communal Washing Facility

Communal facilities provide an economical and quick solution for washing clothes while providing adequate drainage. Maintenance is simplified by limiting locations to a few central areas. Dependent on cultural practices, bathing also will take place, and it will become an unintended water source for families.

| *Components:* | *Description, Equipment* |
|---|---|
| Washing area | Hard surface, sloped for drainage, adequate water run-off provisions |
| Water source | Elevated tanks filled by truck or piped source |

*Types and level of services:*

Water: potable; available 24 hours

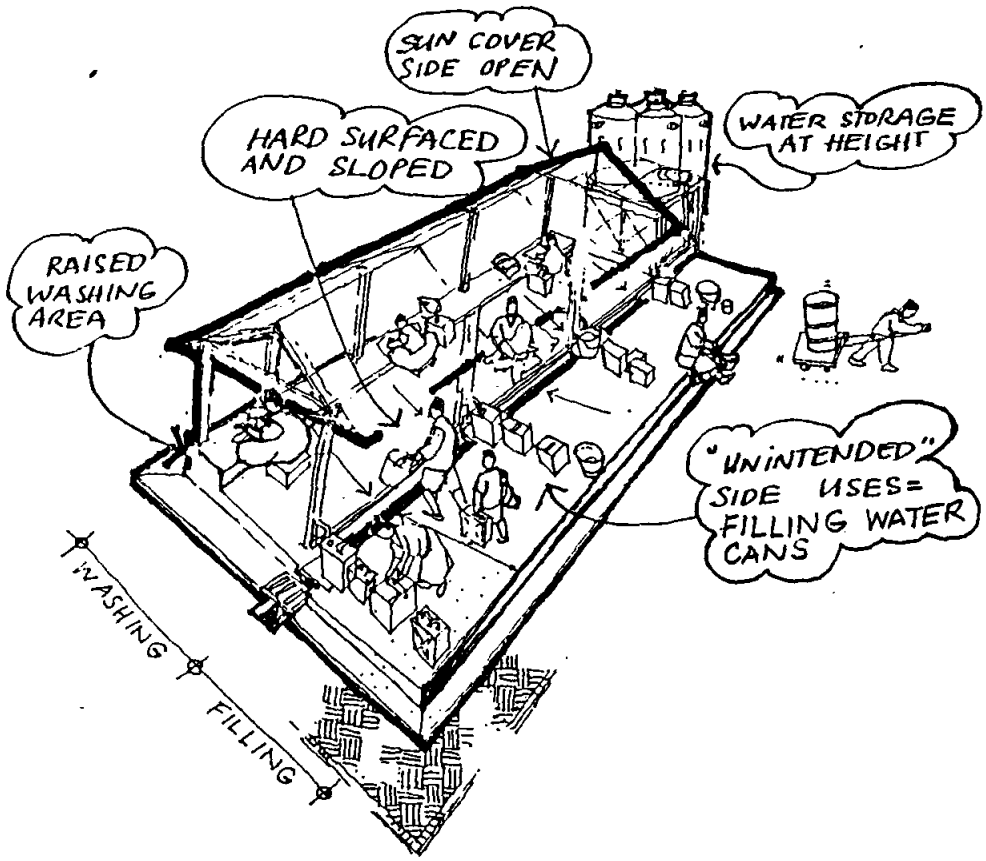
Drainage: provisions must be made for dealing with large amounts of water and spillage around facility

Electricity: not imperative but lighting would allow evening use

*Special Considerations:*

Drainage is the critical concern in the facility.

6


SUN COVER SIDE OPEN
HARD SURFACED AND SLOPED
WATER STORAGE AT HEIGHT
RAISED WASHING AREA
"UNINTENDED" SIDE USES= FILLING WATER CANS
WASHING
FILLING

## 6.22 Communal Toilets

Communal facilities provide an economical and quick solution, when social-cultural traditions permit their use. Maintenance is simplified by the focus on the relatively few locations. Often toilets are combined with washing areas and water points.

| *Components:* | *Description, Equipment* |
|---|---|
| Toilet areas (individual) | "Squat plates" or fixtures (water source as necessary, dependent on practice of anal cleansing), easy to clean surfaces imperative |
| Water points | Well drained surface, sufficient size |
| Washing areas | Well drained surface, privacy as customary |

*Types and level of services:*

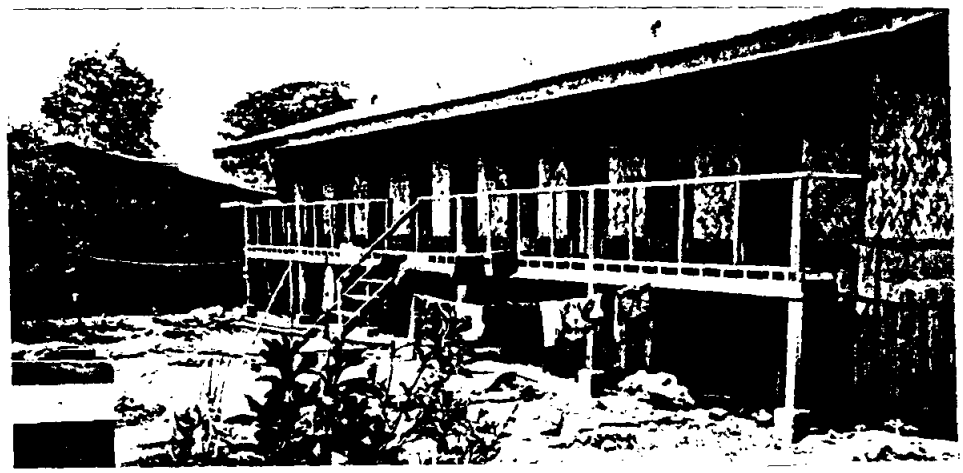
Water: for cleaning of area; for anal cleansing if traditional

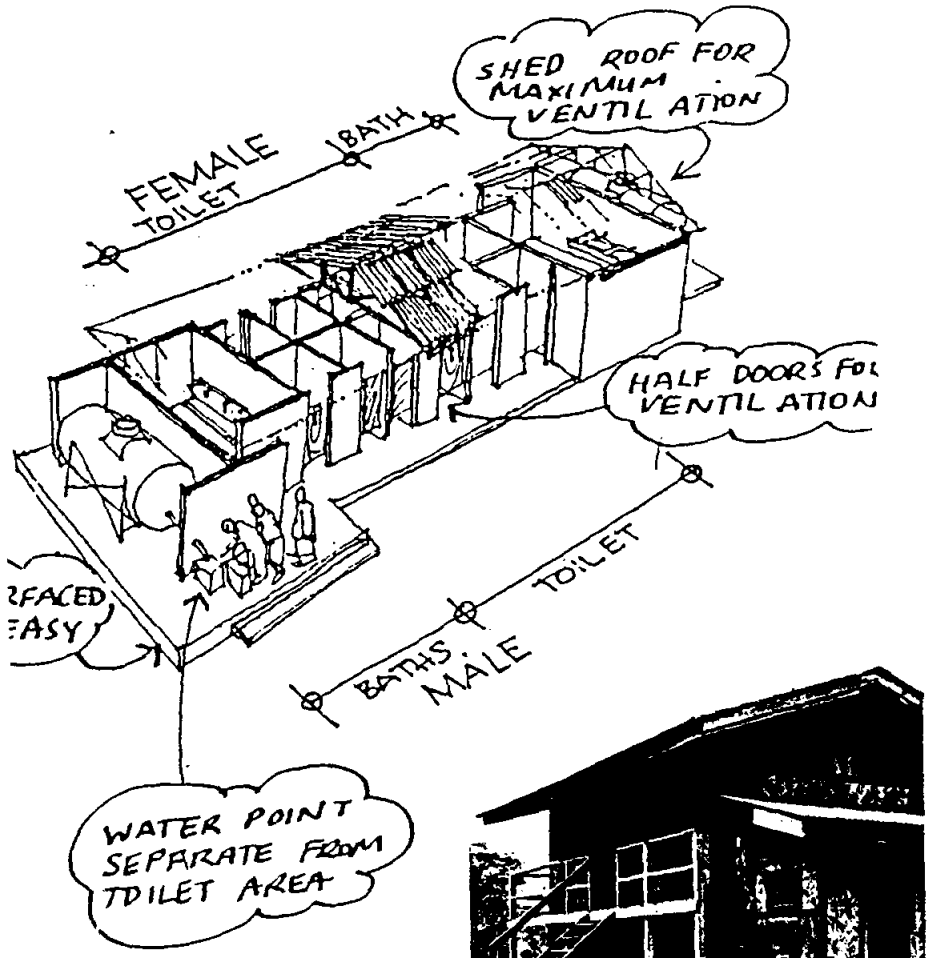
Drainage: important for maintenance

Electricity: useful, but not imperative; allows night use

*Special considerations:*

Customs of refugees dictate if communal facilities are appropriate, and the level of amenty provided.




SHED ROOF FOR MAXIMUM VENTIL ATION
FEMALE TOILET
BATH
HALF DOORS FOR VENTIL ATION
BATHS MALE
TOILET
WATER POINT SEPARATE FROM TOILET AREA

## 6.23 Small Neighbourhood Clinic

Small clinics inside of neighbourhood staffed by single person (nurse or paramedic) provide simple curative services, referral services, and public health classes to neighbourhood.

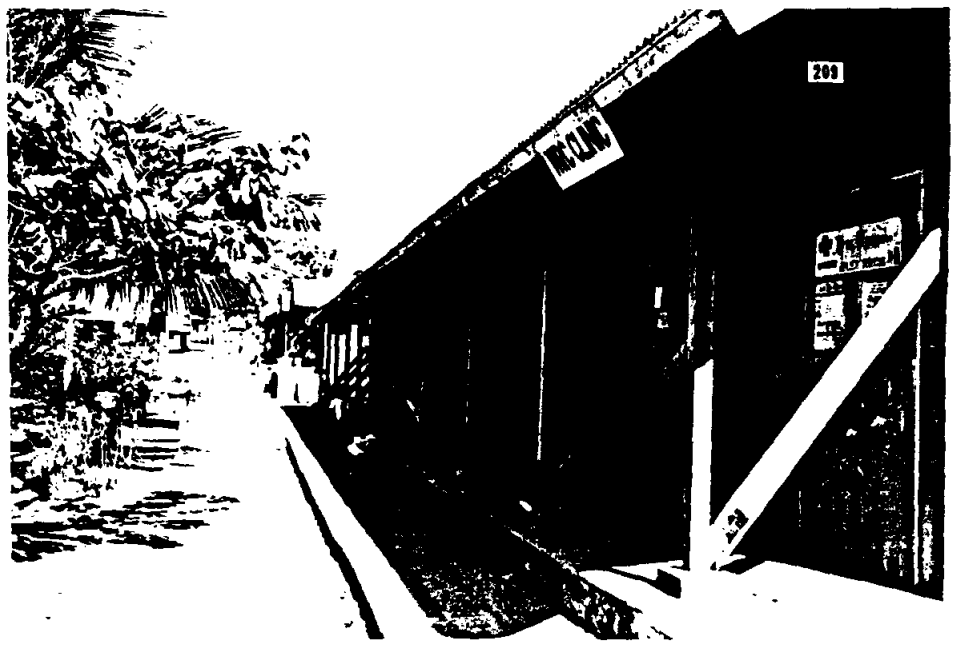
| *Components:* | *Description, Equipment* |
|---|---|
| Examination room, nurse's room | bed, desk, chair, storage shelves |
| Public health training room | benches, blackboard; may double as reception and waiting room |
| Storage | shelves |
| Toilet | |

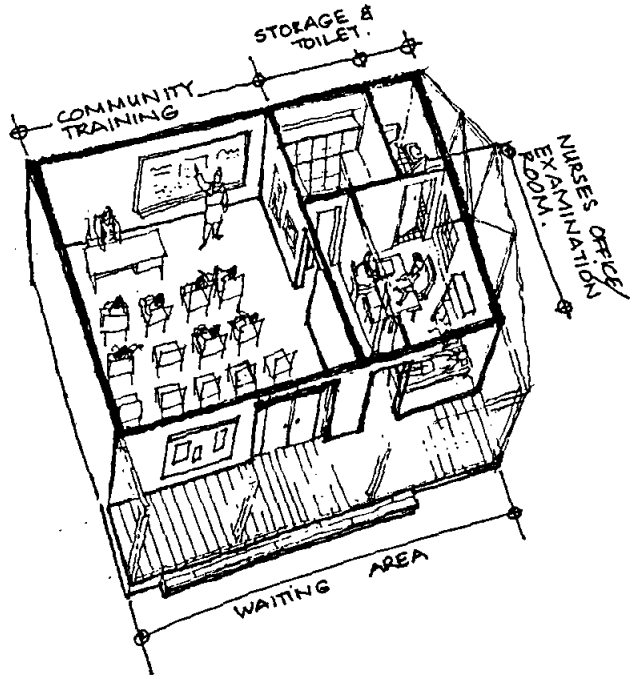
*Types and levels of services:*

No special services required.

*Special considerations:*

Location should be readily accessible within each neighbourhood group. Structure can be very makeshift.




STORAGE & TOILET.
COMMUNITY TRAINING
NURSES OFFICE/ EXAMINATION ROOM.
WAITING AREA

## 6.24 Warehouse

Food delivered in bulk is stored in large warehouses for eventual sorting and distribution to refugees. Generally this includes grains and other bulk items not subject to easy spoiling.

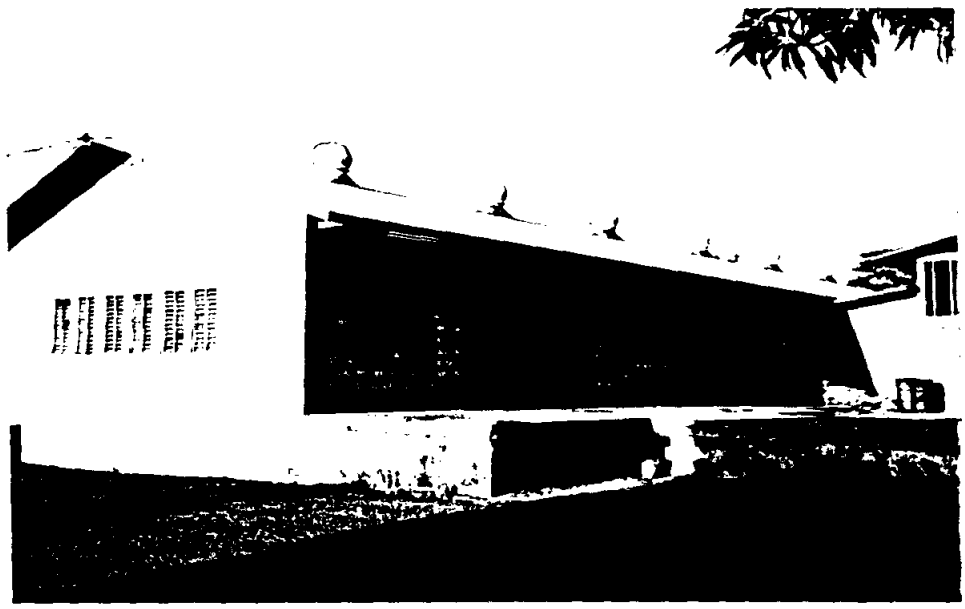
| *Components:* | *Description, Equipment* |
|---|---|
| Storage area | large unobstructed space, protected from rodents, well-ventilated, lock able; easy access with large doors |
| Delivery area | ramps or high plinth for easy truck unloading; compacted, well-drained area for vehicle delivery |
| Office | small area for bookkeeping |

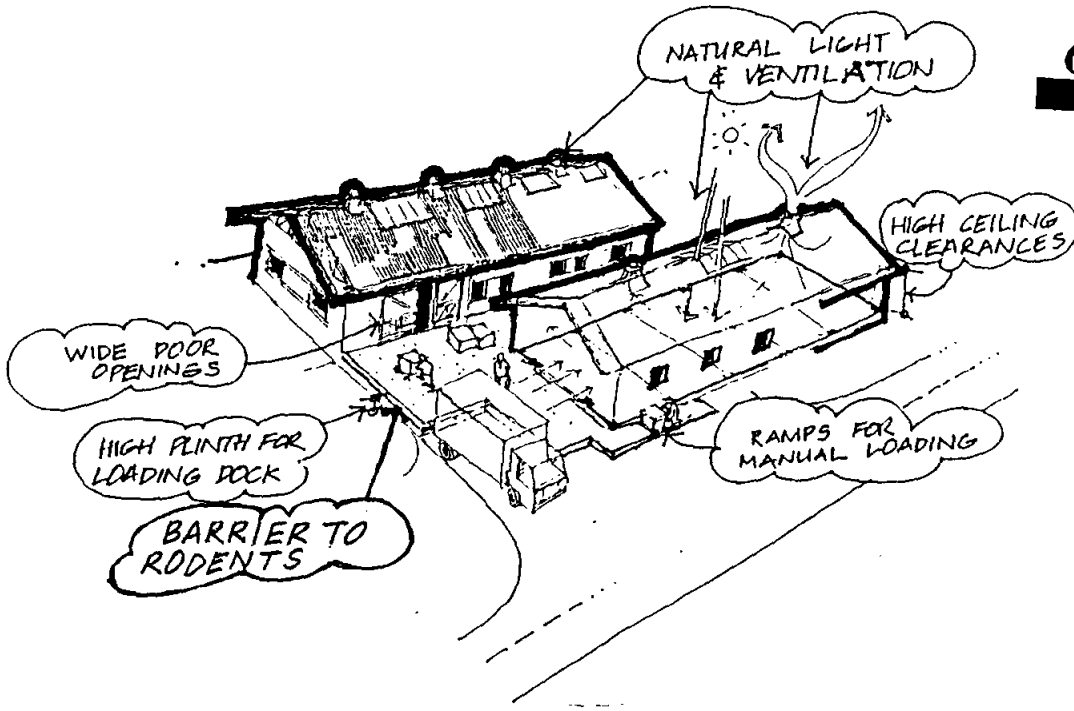
*Types and level of services:*

Electricty: desireable for security lighting

*Special considerations:*

Protection against rodents is a prime concern, as well as spoilage from other sources, i.e., dampness.




NATURAL LIGHT & VENTILATION
HIGH CEILING CLEARANCES
WIDE DOOR OPENINGS
HIGH PLINTH FOR LOADING DOCK
RAMPS FOR MANUAL LOADING
BARRIER TO RODENTS

## 6.25 Central Food Storting Facility

Food is delivered to camp from outside suppliers and divided into smaller amounts for delivery to neighbourhood distribution centers. Occasionally small amounts of food are stored here on a short term basis.

| *Components:* | *Description, Equipment* |
|---|---|
| Truck delivery area | hard surfaced, well-drained |
| Sorting area | hard surfaced, preferably raised for easy truck unloading and drainage; contains scales, sorting tables |
| Administration room | office furniture, files |
| Short-term storage | lockable space; sometimes a freezer area for fresh foods |

*Types and levels of services:*

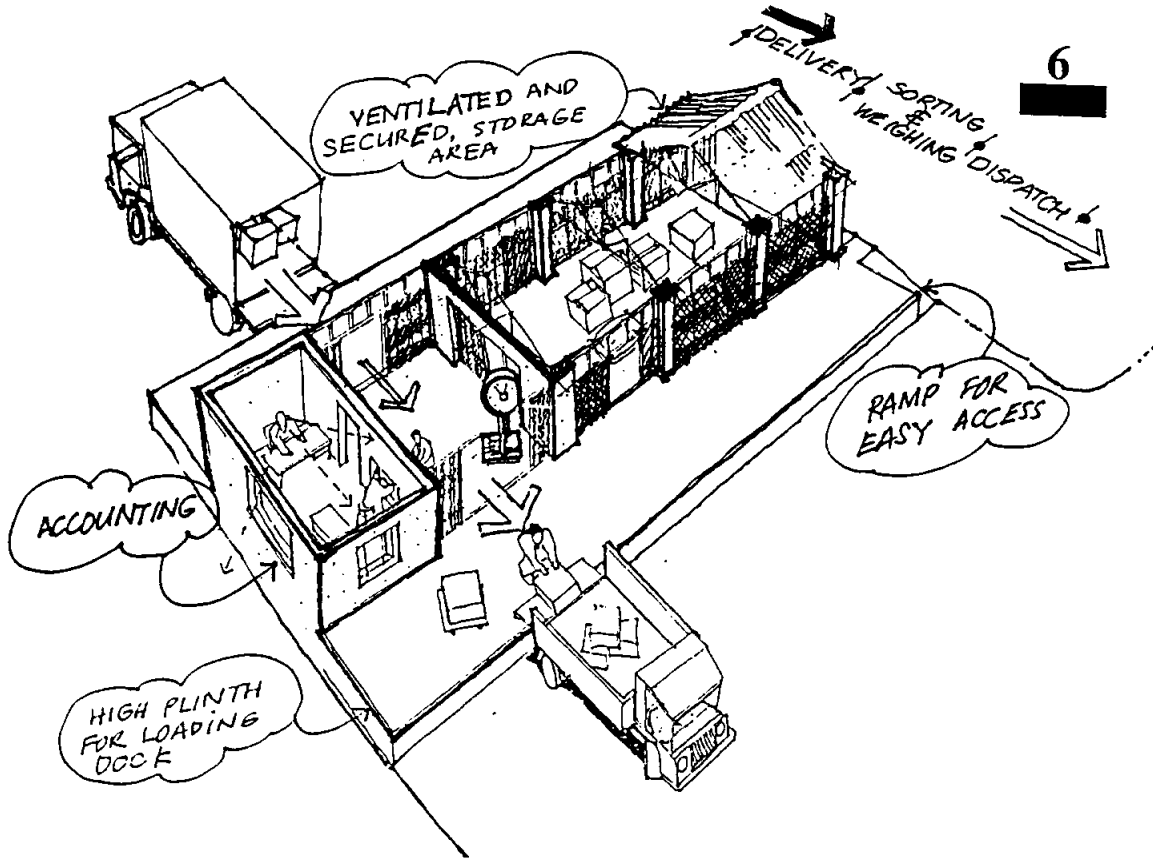
Water: for cleaning purposes

Drainage: for run-off from cleaning

Electricity: optional; needed if freezer facilities necessary; good for security at night

*Special considerations:*

Cleanliness is a prime consideration at all times.
Monitoring and oversight necessary for control of foodstuffs.
Security an issue if food stored in facility.


6
DELIVERY
SORTING & WEIGHING
DISPATCH
VENTILATED AND SECURED, STORAGE AREA
RAMP FOR EASY ACCESS
ACCOUNTING
HIGH PLINTH FOR LOADING DOCK

## 6.26 Food Sorting and Distribution Facility

Food is received from central warehouse, or if fresh, sometimes directly from supplier, and then distributed among refugees. Generally no food is stored here.

| *Components:* | *Description, Equipment* |
|---|---|
| Distribution area | clean, large, hard surface |
| Food preparation area | cutting tables, preparation tables, washing basins |
| Truck loading/unloading | raised platform a convenience |
| Office | table, chair, file cabinet |
| Food storage (optional) | lockable area |

*Types and level of services:*

Water: cleaning of fresh food, several taps

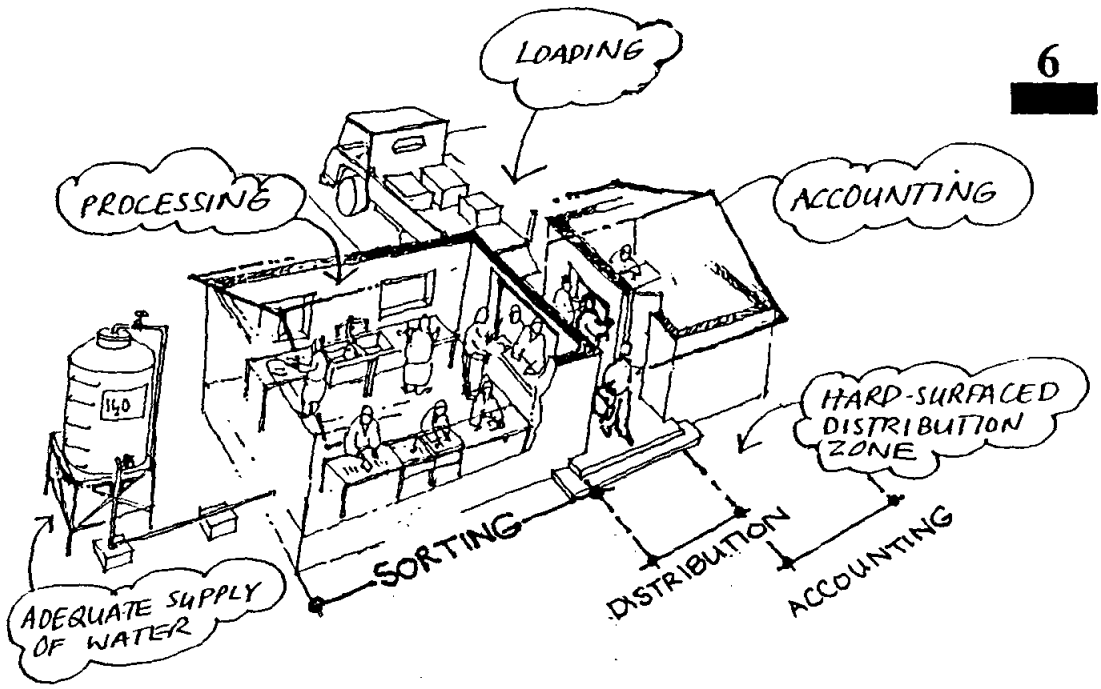
Drainage: provision for water run-off

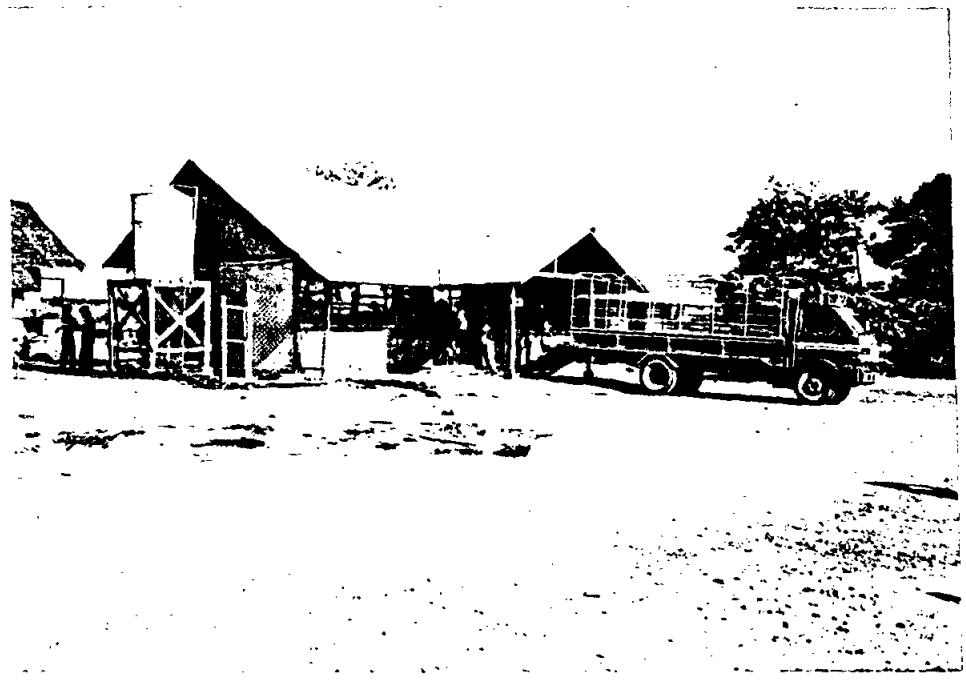
Electricity: security lighting, only if food stored in facility

*Special Considerations:*

Cleanliness: must be easy to wash

Monitoring: must be easy to observe all activities = no walls (wire mesh?)


LOADING
PROCESSING
ACCOUNTING
HARD-SURFACED DISTRIBUTION ZONE
140
SORTING
DISTRIBUTION
ACCOUNTING
ADEQUATE SUPPLY OF WATER



## 6.27 Neighbourhood Food Distribution Shed

After food is sorted into smaller amounts for individual neighbourhood groups, it is taken to small distribution sheds located in each neighbourhood where it is received by designated group representatives, or distributed directly to families. Generally no food is stored here.

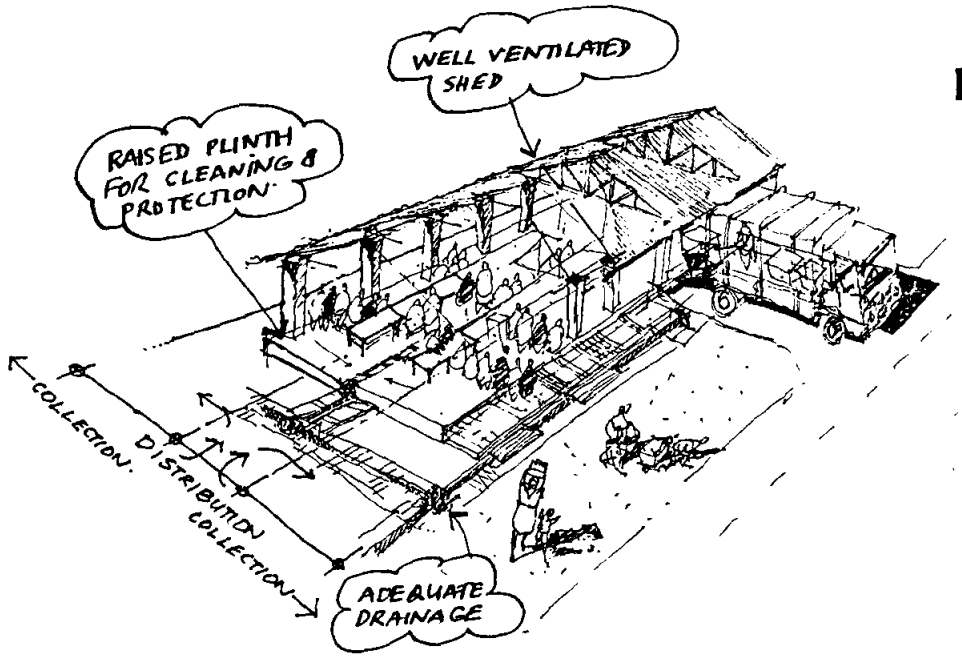
| *Components:* | *Description, Equipment* |
|---|---|
| Delivery area | sufficient access for vehicles; compacted surface, well drained |
| Distribution area | hard surface, drained; advantageous to raise plinth for easy unloading from trucks; covered againist rain and sun |

*Types and levels of services:*

None necessary

*Special considerations:*

Shed may be used for neighbourhood activities, i.e., play area during rain, meeting place for neighbourhood, etc. Lighting would be advantageous in these circumstances for evening use.


WELL VENTILATED SHED
RAISED PLINTH FOR CLEANING & PROTECTION
COLLECTION
DISTRIBUTION
COLLECTION
ADEQUATE DRAINAGE

## 6.28 Community Center

This facility is the focus of refugee organized activities. Information is distributed: mail, official and personal messages; the refugee steering committee has their office here; and camp meetings take place inside if small meeting and outside if the entire camp is assembled.

| *Components:* | *Description, Equipment* |
|---|---|
| Community room | benches, desks, bulletin board |
| Mail room | shelves |
| Notice board | sheltered from rain |
| Outside assembly area | well-drained, compacted; flagpole? lights? loudspeakers? |

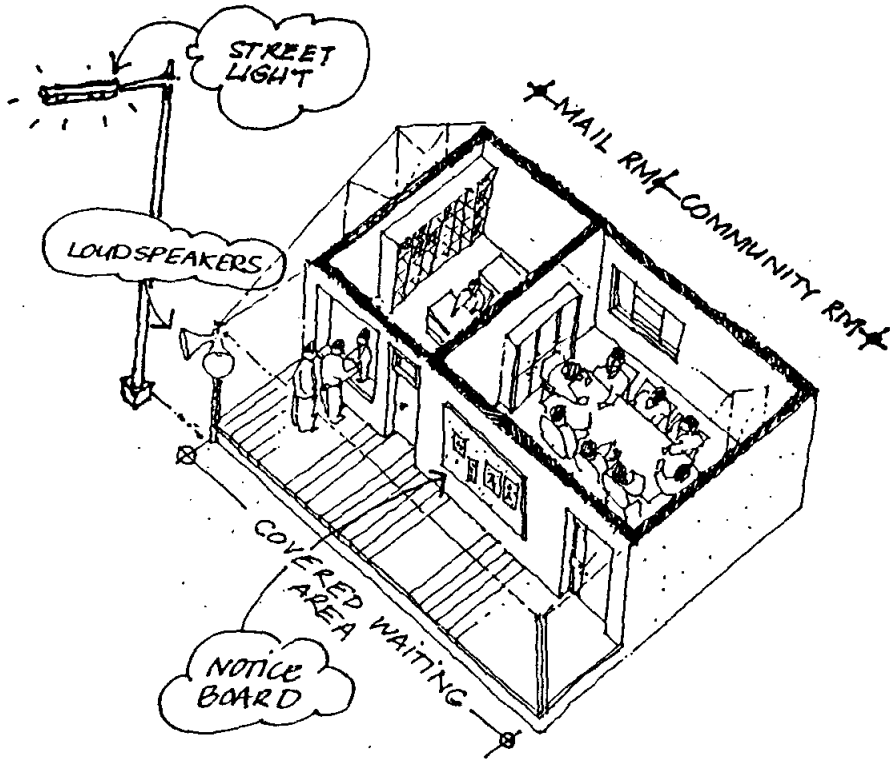
*Types and level of services:*

Electricity: optional, batteries could be used for loudspeakers; latterns for light; street lights allow extension of activities into night, desirable in very hot climates

*Special considerations:*

Facility should be centrally located for visability and access by refugees.

6


STREET LIGHT
LOUDSPEAKERS
MAIL RM
COMMUNITY RM
COVERED AREA WAITING
NOTICE BOARD

## 6.29 Motor Pool

Space is required for the storage and maintenance of vehicles in the camp. Vehicles to be considered include: trucks, for food, materials, and refugees; jeep-like vehicles, for agency staff transport; tankers, for water; buses, for refugee transport.

| *Components:* | *Description, Equipment* |
|---|---|
| Parking, covered | |
| Maintenance and repair bay | lockable equipment storage, means for accessing underneath of vehicle (trench pit or elevated ramps) |
| Petrol storage | safe location |
| Office | furniture |
| Open parking area | hard surfaced, drained |

*Types and level of services:*

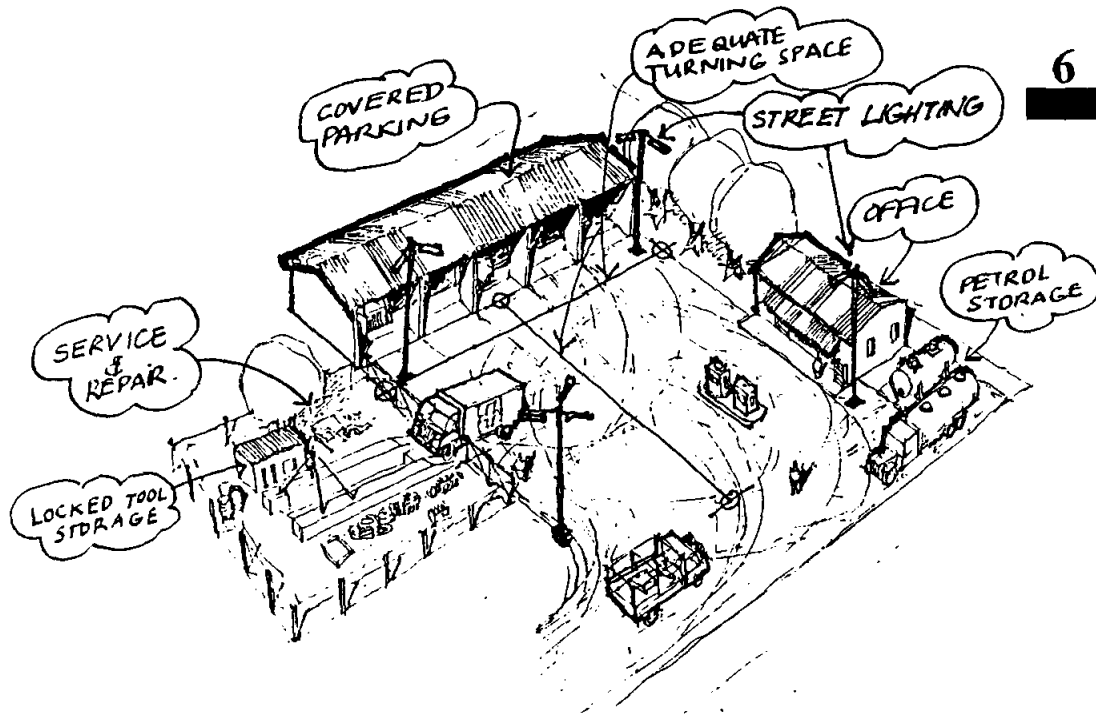
Electricity: necessary for security, night work, and tools

Water: necessary for maintenance, not necessary to be piped

Drainage: adequate provision to allow vehicular movement

*Special considerations:*

Security is one of the most important concerns.


ADEQUATE TURNING SPACE
COVERED PARKING
STREET LIGHTING
OFFICE
PETROL STORAGE
SERVICE & REPAIR
LOCKED TOOL STORAGE

6

# Chapter 7
# PREPARING FOR IMPLEMENTATION 7

## Objectives

7.1 To develop a STRATEGY AND RUDIMENTARY WORKPLAN for site development. The focus is on: 1) defining what actions to take; 2) in what order to take them; 3) who has the responsibility; and 4) which are the critical steps.

7.2 Key questions addressed include:
- How do you expedite construction?
- What can you do to support the growth of the community?
- How can the process be monitored?

## Procedure

7.3 The following basic steps are suggested:
- Make list of things to be done.
- Make a list of actions to take.
- Determine who will act and how actions are to be carried out.
- Determine linkages among things to be done, both opportunities and problems.
- Rank things to be done, and identify pivotal components.

## Outcome

7.4 An outline program for site development which includes: 1) ACTIONS to take, who will take them, and how they will go about it; 2) LINKAGES among actions, either as opportunities or as problems; and 3) CRITICAL STEPS in order to focus efforts.

# PROCEDURE

7.5 The following steps are suggested:

| STEPS | HOW TO GO ABOUT IT |
|---|---|
| **1. Make LIST OF THINGS TO BE DONE.** | - Divide things to be built or done in 2 groups: for camp as a whole, and for each community within the whole camp. For example, for the camp as a whole, include access road, central warehouse, main clinic, market, etc. For each community, include food distribution points, water points, smaller clinics, laying out of lot boundaries, etc. All of the components considered in "Making the Plan" should be included in one of the two groups. |
| **2. Make LIST OF ACTIONS to take, Include both physical and non-physical items.** | - For each thing to be built or done, list the steps needed to get it built. Order the steps in sequence: what first, what second, etc.<br>- Consider delivery of materials, storage of materials, contract documents, approvals and notifications necessary . |
| **3. DETERMINE WHO WILL ACT AND HOW actions are to be carried out.** | - Identify what contributions each of the following would make: the refugees, the government authorities, UNHCR and other agency as applicable.<br><br>- Determine what specialists would be needed. |

- Determine the roles and specific tasks of each of the groups.
Note: determine the easiest, most reliance on imported, outside inputs - both people and materials.

7

**4. Determine LINKAGES among things to be done both OPPORTUNITIES and PROBLEMS.**

- Prepare matrix listing things to be done and their actions across top and side. Evaluate the matching actions and determine potential opportunities and problems.

OPPORTUNITIES are matches that 1) further strategic objectives of the development: self-reliance.For example, garbage collection may be handled by community groups as a form of income generation. Or, 2) actions that can serve for several items; for example, laying out the lots can be done at the same time as laying out the streets.

PROBLEMS are matches that conflict. For example, use of imported materials in shelter often allows speedy construction but does not build self reliance and requires continued supply of materials over the long term. Another example: use of clusters often parallels cultural patterns but makes monitoring more difficult for agency.

**5. RANK things to be done, and identify PIVOTAL COMPONENTS.**

Develop ranking for the following aspects: 1) which items are depend on others in terms of sequence of construction; 2) which items take the longest to build; 3) which items are

the most difficult, or expensive; 4) which items are the minimumnecessary for the functioning of the development. Other lists may be developed as needed: for example, items that require most import materials. This will assist in deciding priorities of items and where to put the most effort.
For "1": make matrix of things to be done, listing same items across top and side. As you read across, for each item, ask: "must this item be done before the other can be done?"
For "2": list items in terms of time to build. Consider planning, delivery of materials and construction.
For "3": list items in terms of the most difficult or expensive first. Consider the skill level needed, imported items, degree of risk.
For "4": list items in terms of their indispensability in the development. For example, water provision is a vital necessity in all cases.

(Note: a simple numeric method may be used to determine a final ranking: assign a value of "1" to the first, "2" to the second, etc. for the items of each list. Determine the total for each of the items, adding the values from each of the lists. The lowest value item becomes the most critical, the next lowest the next critical, etc. However, a final ranking will always dependent on judgement, and the values are only to assist in deciding).

7

# WORKSHEETS

## 7.6 *Worksheet 1*
## ACTIONS AND WHO AND HOW CARRIED OUT

### LIST OF ACTIONS FOR EACH COMPONENT

(1) ESTABLISH POSITION OF BOUNDARY TO EACH CLUSTER OR GROUPING

(2) MARK OUT + PEG BOUNDARY POSITION TO LOTS (WHERE APPROPRIATE)

(3) MARK OUT LOCATION OF SHELTER (WHERE APPROP.)

(4) ARRANGE TO LET SUB CONTRACT FOR CONSTRUCTION OF SHELTER

(5) BUILD SHELTER

IN CASE OF SITES WHERE SHELTER IS TO BE ARRANGED ON A SELF-HELP BASIS;

DO STEPS (1) + (2) AS ABOVE THEN:

(3) ORGANISE CO-OPERATIVE MATERIALS SUPPLY (+ MANUFACTURE)
- SUN DRIED MUD BRICK.
- PALM MATTING FOR ROOFING.

(4) ESTABLISH SUPPLY/DEMAND FOR NON LOCALLY AVAILABLE MATERIALS + TOOLS – NAILS, STEEL WIRE, CEMENT ETC

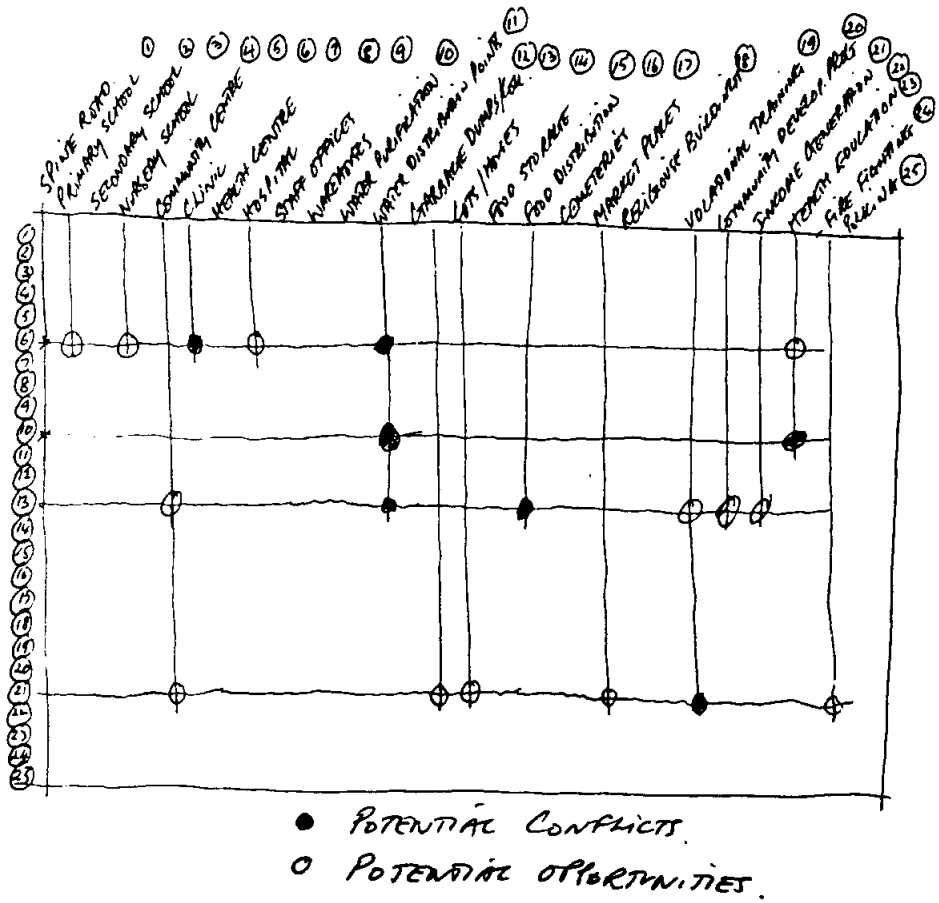
(5) SUPPLY/ORGANISE TECHNICAL ASSISTANCE

(6) SETTLE FAMILIES IN MANAGEABLE GROUPS, SAY 1000/DAY.

7

| HOW | WHO |
|---|---|
| SHELTER PROVIDED<br>(1) MARK OFF LINE WAY BETWEEN PEDESTRIAN WAYS LONGITUDINALLY & TO CENTRE OF MAIN SPINE LATTERALLY. PEG AT CORNER & AT EACH 50 INTERVALS.<br>(2) EITHER MARK OUT CORNER POINT OF EACH LOT, OR FIND CENTRE POINT TO LOT & DRAW CIRCLE USING ROPE.<br>(3) IF POSSIBLE NEGOTIATE CONTRACT WITH ESTABLISHED LIST OF LOCAL SUB CONTRACTORS, TO SAVE TIME. ALTERNATIVELY, ADVERTISE FOR OPEN B.D. THIS WILL ENTAIL MORE DETAILED PREPARATION OF SPECS. & DUE TIME FOR TENDERS TO BE RECEIVED.<br>(4) USE MATERIALS LOCALLY AVAILABLE. MAY NEED TO PREFAB PARTS (EG POST, ROOF MEMBERS) IF NO MATERIALS LOCALLY AVAILABLE.<br>SHELTER ON A SELF HELP BASIS.<br>(1)+(2) AS ABOVE.<br>(3). ELECT LOCAL REPRESENTATIVES TO MANAGE & BOOK-KEEP<br>(4) ESTABLISH QUANTITIES.<br>(5). VOCATIONAL TRAINING OF REFUGEE TRADES TO TEACH/ASSIST OTHERS.<br>- PROVIDE BUILDING CONSTRUCTION/ MATERIALS SPECIALIST<br>- DECIDE NOS & T. ASSISTANTS<br>- ESTABLISH SCHEDULES.<br>- SET UP LOCAL ADVISORY "SURGERY". | SHELTER PROVIDED<br>(1)+(2)+(3)<br>LOCAL GOV. SURVEYORS & STAFF.<br>(4)+(5)<br>LOCAL BUILDING CONTRACTOR WITH LOCAL GOV. SUPERVISION. UNHCR OVERSEE THE ALLOCATION & SUPERVISION OF FUNDS.<br>SHELTER ON A SELF HELP. BASIS.<br>(1)+(2)<br>LOCAL GOV. STAFF.<br>(3)+(4)+(5)<br>SUPERVISION THROUGH LOCAL GOV. IMPLEMENTATION BY NGO UNHCR TO CO-ORDINATE OTHER SPECIALIST CONSULTANTS. BUILDING BY FAMILIES.<br>(6)<br>LOCAL GOVERNMENT WITH UNHCR AS OVERSEERS. COLLABORATION OF ELDERS OR OTHER REFUGEE HEADS IF AVAILABLE. |

## 7.7 *Worksheet 2*
## LINKAGES - OPPORTUNITIES AND PROBLEMS



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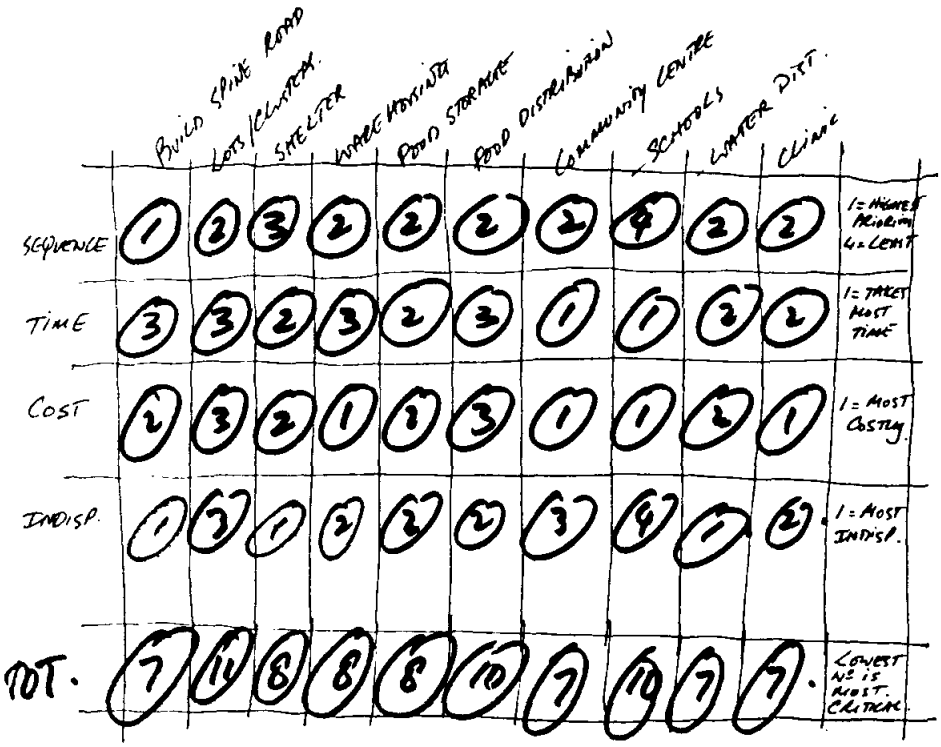
## 7.8 *Worksheet 3*
## PIVOTAL COMPONENTS



# PRIORITY THINGS TO CONSIDER

## How do you identify critical activities?

7.9 The following aspects should be considered in establishing priorities of implementation:

| **Things that tend to take more TIME to implement** | **Things that tend to be more EXPENSIVE and more difficult** | **Things that tend to be INDISPENSABLE and have priority in a development** |
|---|---|---|
| - Ordering and delivery of material from abroad. | - Imported materials are very expensive, particularly when both cost of the item and its transportation are combined. | - All weather access road, year around. |
| - Site preparation: hauling of fill, clearing of area. | - Need for heavy machinery in the preparation of site. | - Water supply |
| - Ordering and setting of special equipment. | - Outside labor from other parts of the country, but particularly foreign expatriates. | - Sufficient area for development and expansion. |
| - Securing approvals from various authorities, local and international. | - Special equipment which needs to be imported. | |
| - Time for construction of facilities generally takes longer than expected. | - Transportation cost. | |
| | - Extra cost for more rapid construction to meet deadline | |

# REFLECTIONS [redacted]

# REFLECTIONS ON OUTCOME

It is advantageous to review and re-evaluate the program and plans in its totality once the process has been completed. It is an opportunity to go over the basic decisions taken initially, how they were translated into the design and how they will affect the refugees.

The following are suggested as basic questions which should be reviewed at this juncture. Additional questions should be added as appropriate for specific designs.

The questions are arranged in sequence: each should be addressed and satisfied before going on to the next. Note that this may require modifying the development.

## QUESTIONS FOR REFLECTION

1. How does the layout compare to indeces of effective land development?
2. What specific aspects in the design reflect the social-cultural characterisitics of the refugees?
3. Is the proposal buildable given the available resources in materials, skills, and finances?
4. What impact does the site layout and community have on the surrounding areas?
5. What hurdles are anticipated in the execution of the project? How will these hurdles by overcome?

REFLECTIONS

**1. How does the layout compare to INDECES of EFFECTIVE LAND DEVELOPMENT?** Fundamental to any land development is how it relates to the three basic indeces of land utilization percentage, circulation length/ area ratio, and density.

• *Land utilization:* The percentage of land allocated to plots and that allocated to facilties and services is a vital indication of the future health of a development: too much land for services increases carrying costs and unduly limits the amount of land and the number of refugees to accommodate. To determine the percentages, divide the total development into land that is used for circulation (streets, walkways) and open spaces (playgrounds, parks, and any leftover areas of unclear definition), and land that is allocated for the plots for the refugees. Experience suggests that less than 50% of land for plots is a warning to re-evalute the layout.

• *Circulation length/area ratio:* The layout pattern effectively fixes the costs of infrastructure: water supply, roads, etc. and affects the continued costs of maintenance. To determine the ratio, divide the total length of streets and walkways (in linear meters) by the total area (in hectares). A ratio greater than 286 linear meters per hectare is a warning to re-evaluate the layout.

• *Density:* Density is useful in determining the amount of facilities and service required for a given population. Very high density can rapidly overload facilities and increase social pressures, very low densities imply a higher per capita cost of land and services and are not cost effective. Precise values are difficult to determine, and depend on the particular social and cultural situation. (See section on "Understanding Refugee Characteristics" for identifying specific characteristics.) Very approximately, a gross density of 350 people per hectare (600 p/ha. net density) is an average value for a community, dependent on lot size and size of project, but values of 1000 people per hectare (gross density = total people divided by total area) and above are not uncommon for refugee camp conditions.

**2. What specific aspects in the design REFLECT THE SOCIAL AND CULTURAL CHARACTERISTICS of the refugees?** How does the development incorporate the leadership structure, the traditonal groupings, cooking and sanitary customs, and the process of shelter building? Has the development considered the self-organizing potential of the refugees? Is the development structure supportive of the self-sufficiency efforts of the refugees?

**3. Is the PROPOSAL BUILDABLE, given the available resources in materials, manpower, skills, and finances?** Estimate the resources that will be needed, and determine if they match the needs. Can materials be secured in sufficient quantities and in sufficient time to be able to be used? Is the manpower available to carry out the construction of the development? Is there sufficient adminstrative capacity to implement the project? How much reliance can be made on local labor? Are funds sufficient for both the initial construction costs and as well as the operational costs in the longer term?

**4. What IMPACT does the site layout and community have on the surrounding areas?** Two types of impacts should be distinquished: 1) those that are designed deliberately and can be modified; for example, the standard used in the provision of water, health services, etc. Will the provided facilities cause local services to collapse in face of the competition of the higher standard? and 2) those that are a direct result and a consequence of the development; for example, the deforestation of the surrounding areas. Other aspects to consider include the access to a fuel supply, the ability of the surrounding area to provide food stuffs, and availability of construction materials. Will the carrying capacity of the area be sufficient for the rapid increase of population? If local resources are used, will speculation and shortages result?

In general, consider the following: economic impacts, such as increase or decrease in local jobs related to construction or maintenance, the supply of subsidized foods to the marketplace, and the resources which may be consumed or saved. Consider environmental impacts, such as sanitary habits, pollution of natural resources (lakes, streams) due to increase density, the impact on land that increased grazing may have, and the decrease or increase in the quality of services and facilities. Consider commerical impacts, where consumers may be affected by changing prices of goods, and by high prices of utilities. Consider Social impacts, with the unclear associated effects of integrating different ethnic groups within the region, and their impact on usage of land and religous habits.

**REFLECTIONS**

**5. What HURDLES are anticipated in the execution of the project? How will these hurdles be overcome? What does your experience tell you where you would likely have difficulties? Some of the issues that may arise include the following, and it is prudent to think of possible courses of action in dealing with them: Where do you store equipment and materials before construction starts? How do you deal with equipment that does not meet the specifications? What if the latrines are not used in the development? What if the development is not completed and the refugees already start to move onto the site? How would you deal with fire hazards? What if the plots become overdevelopment and density becomes too high? How do you deal with encroachment on roads and other areas? Will refugees be allowed to sell lots or rent their shelters to non-refugees? What if the influx of refugees is greater than expected? How do you prevent the overuse of facilities? What if there is inadequate supply of water at the standpipes?**

III

# PART III
# Problems

*This section summarizes the most common problems encountered after the camp has been completed.*

*It is arranged in three parts: the first two parts contain a listing of symptoms and problems encountered in a camp. The last part combines the symptoms with the most probable underlying problem, and presents a more detailed discussion of alternative actions to overcome the problems.*

# SYMPTOMS AND PROBLEMS

## Index of symptoms

8.6 The following list contains common symptoms identifiable from observations in a camp. For each symptom, the most likely underlying problems are presented, and alternative courses of action are suggested for each. The symptoms are grouped by general topic areas, alpabetically arranged.

## Index of problems

8.7 The following list contains problems derived from an analysis of the most common symptoms observed in camps. They are grouped around major topic areas alpabetically.

- *Symptom:* **FAMILIES DEFECATE IN UNDESIRABLE LOCATIONS**
- *Problem:* **LATRINES NOT ADEQUATE OR APPROPRIATE**

| POSSIBLE CAUSES | ALTERNATIVE ACTION | IMPLICATIONS |
|---|---|---|
| **Poor location** | If too far; reduce distance by building more facilities or provide alternatives to those farthest from facilities. | Land must be available.<br><br>Duplicates efforts and wastes previous investments. |
| | If lacking privacy; provide screens or select alternative location after reviewing socio-cultural characteristics. | |
| | If inaccessible when rains; consolidate access with additional fill, or select new location. | |
| **Culturally not familiar** (note: this is more prevalent with communal latrines). | Mount education program. | Education program requires long term effort, implying sufficient funds for trainers and well developed program. |
| | Provide individual latrines. | Requires surplus space available for location of individual latrines. |
| | Divide the latrines among smaller groupings of people; consider placement of latrine with each cluster. | How to decide on composition of smaller groupings? How to control outside users? |

| | | |
|---|---|---|
| **Broken, not working;** (smell, etc.) | Improve maintenance program perhaps involve users in cleaning. | Issue remains as to who would undertake maintenance. |
| **Overflow** | Build new facility, or extend existing one. | Consider if latrine overused and if larger size is needed. |

• *Symptom:* **REFUGEES MOVING ONTO SITE BEFORE COMPLETION**

• *Problem:* **PRESSURE FOR SETTLEMENT EXCEEDS ABILITY TO PROVIDE SHELTER**

| POSSIBLE CAUSES | ALTERNATIVE | IMPLICATIONS |
|---|---|---|
| **Unexpected emergency** | Finish pivotal elements only; water supply, access routes, lot allocation, rudimentary circulation network,(see "Preparing the Workplan" for pivotal elements).<br><br>Allocate land in terms of lot groups and do not differentiate individual lots.<br><br>Upgrade reception center: see if site meets fundamental criteria and otherwise suitable for settlement. | Construction of facilities can take place over longer periods of time.<br><br>Control is lost when lots are not assigned: more difficulty in monitoring. Self-organizing cultures (nomads) would have little difficulty with that approach.<br><br>Requirements may have to be compromised in order to meet demand. |

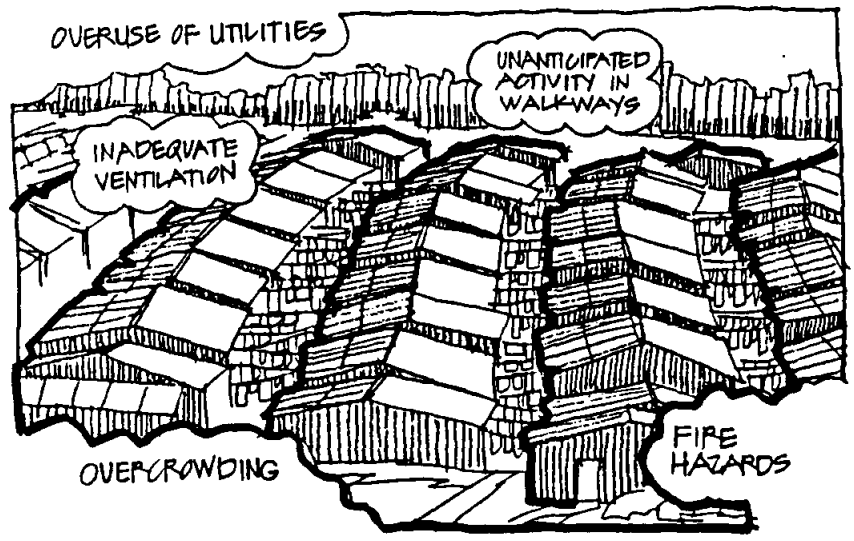
• *Symptom:* **SHELTER MATERIAL AND HIGH DENSITY LEADS TO FEAR OF FIRE**

• *Problem:* **TRADITIONAL FLAMMABLE MATERIALS AND UNCONTROLLED DEVELOPMENT RESULT IN INHERENT PROBLEM.**

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Shelters too close together** | Encourage quicker permanent construction particularly roofs. | May require provision of materials. |
| **Cooking habits:** inconsistent with high density | Under take hazard awareness education program.<br><br>Change to fuel with less open flames. | New fuels may need to be imported at great expense. |
| **Incinration of garbage on lots** | Provide metal cans, one per lot, for burning.<br><br>Provide improved pickup service for development. | Consider income potential in making garbage cans and in pickup services. |
| **Vandalism:** sometimes due to inter-ethnic | Some types of facilities or their location may be culturally intimidating. | Locate facilities carefully, particularly religious and entertainment facilities. Group ethnic groups carefully, in clearly defined boundaries. |

- *Symptom:* **DENSE OVERDEVELOPMENT OF PLOT**
- *Problem:* **LACK OF EFFECTIVE CONTROLS; BUT OFTEN TRADITIONAL FORM OF SHELTER AND PLOT DEVELOPMENT.**

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Plot too small** for single family | Groups adjacent lots together.<br><br>Allow extension into public land if available. | Lowers the number of families that may be accommodated.<br><br>Plot area may now be too large, and may encourage additional rental housing. |
| **Extended families not considered in program.** | Groups adjacent lots together. | Lowers number of families able to be accommodated, but total number of people may remain the same. |
| **Family size larger than expected** | Relocate families so adjoining lots can be grouped. | Space must be available for relocation. |



- *Symptom:* **ENCROACHMENT ON ROADS, OTHER AREAS**
- *Problem:* **LOTS TOO SMALL AND/OR STREETS TOO WIDE**

8

Families tend to expand their domain into the streets or into open areas intended for other uses. This process goes on gradually, and often can only be noticed after a long interval. The key issues is determining if the encroachment represents a problem to the proper functioning of the street or area. It has been noted in older projects that most streets do not require the width provided, particularly when they are only used for pedestrian access and no vehicular distribution takes place on these streets. At the minimum, a 2-3 meter width is adequate for pedestrians, but it should be kept in mind that this width precludes emergency vehicles should they be needed.

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Plot too small** | Group two plots together. | Lowers number of families that may be accommodated. |
| **Normal cultural attributes**; public open areas not related to cultural patterns; **Excessive Roads or open areas**; not really used or needed. | Assess if encroachment is detrimental<br><br>Consider placing land in control of adjacent land, deed land to groups of lots to form cluster.<br><br>Subdivide area for additional shelter.<br><br>Allocate for communal activities: market.<br><br>In hindsight, plan future settlements in a more flexible, loose manner to allow encroachment | |
| **Lack of mechanism to control.** | Create local management units: consider cooperatives. Increase management capacity. | Requires substantial monitoring efforts . Can create resentment among refugees |

- *Symptom:* **DEFORESTATION OF SURROUNDING AREAS**
- *Problem:* **CARRYING CAPACITY OF AREA EXCEEDED**

Examples are known of up to 30 km. of clear-cut areas. This is more serious in dryer climates where vegetation is relatively slow growing.

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Use as firewood** | Supply charcoal or other alternative fuel. | High cost and built - in long term dependency. |
| | Develop alternative sources, for example agricultural waste made into fuel blocks. | Generates income for families.<br><br>May require importation of material; i.e. binder for fuel blocks, or machinery to manufacture.<br><br>Unclear cultural acceptance by families<br><br>Should be recognized as clearly experimental and should be seen as such.<br><br>Question of who develops? Who organizes and Who manages? must be addressed. |

| | | |
|---|---|---|
| **Use as building material** | Supply materials from outside | Potential high cost and long term dependency. |
| | Develop and supply alternative material; for example, fiberglass poles for traditional thatch dwellings. | Most probably high cost and long term dependency on outside suppliers.<br><br>May be culturally unacceptable.<br><br>May require training programs in how to build with new material |
| **Collected and sold generate income** | Develop training programs in alternative employment possibilities. | Experience shows only limited success in employment generation.<br><br>Agency must be identified to undertake long -term training program.<br><br>No short- term quick changes can be expected. |

- *Symptom:* **NON-REFUGEES LIVING IN CAMP**
- *Problem:* **SELLING OF LOTS AND RENTAL OF SHELTERS TO OUTSIDERS**

Subsequent registration may often indicate that refugees have sold or rented their lot or shelter to members of the local communities. This may be more prevalent when a shortage of housing exists in neighboring communities.

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Supplementary income source** | Assess if, in fact, practice is harmful to community | |
| **High standard facilities attract** non-refugees | Indicates need to carefully consider impact on surrounding areas. | |
| **Lot too big,** encourages renting to others. | Consider subdividing lots. | Generally difficult to do after settlement occupied. |

- *Symptom:* **INFLUX OF REFUGEES GREATER THAN EXPECTED**
- *Problem:* **CAMP CAPACITY EXCEEDED**

8

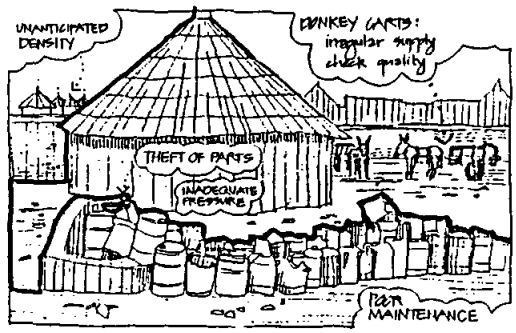
Two kinds of difficulties are noted: one where too many people come at one time, and the second where the planned areas are rapidly filled and it appears that the continued flow with exceed planned capacity.

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Migration from other sites; Unexpected emergency** | Check capacity of site to absorb higher density than anticipated. | Determine refugee acceptance of reduced standard of lot area, water provision and other facilities. |
| | Extend site on ad hoc basis; consider lot groups (clusters) speed process. | Assumes that site can be expanded without<br><br>Assumes that area can absorb additional capacity; fuel, water supply, etc.<br><br>Requires additional facilities, and funds to construct and manage them. |
| **Disparity of standards among adjoining areas and camps.** | Review facilities of camps and align standards to comparable level | May imply lower than acceptable standards, but still higher than surround. communities Will be difficult if not impossible to return families to original camps. |

• *Symptom:* **LONG LINES AT WATER POINTS; USE OF POLLUTED SOURCES; HIGHER INCIDENCE OF DISEASE**
• *Problem:* **INADEQUATE SUPPLY OF WATER**

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Inadequate pressure**<br>Inadequate main supply or failure or lack of capacity of pumps. Sometimes informal connection to mains reduce pressure. | Reduce number of standpipe services | More crowding of remaining taps |
| | Increase pumping capacity. | Longer walking distance |
| | Increase number of sources, or the storage capacity. | Higher running costs, more maintenance. |
| | | Extra costs if extra storage needed |
| | Schedule water supply on a rotational basis, so not all standpipes are not serviced at once. | Requires extra management |
| | | May not prevent people from walking to quality checks, more difficult to control |
| | Consider supplementary supply with carried water | Potential employment generation if refugees can carry out operation |
| | Increase capacity to store water on lots | May require increase in size of lot |
| | | May lead to increased pollution of water in storage containers |
| | | Requires extra storage containers |

| | | |
|---|---|---|
| **Poor maintenance:** lack of staff or unclear designation of responsibilities; perhaps too public | Designate 1-2 persons in community to maintain standpipes | Raise issues of pay, perhaps offer land near standpipe as incentive |
| | Inspect adequacy of technical specifications may be inherently difficult to maintain | Charge service fee for water to cover maintenance |
| | | Expensive structural changes may be necessary |
| **Theft of parts** (faucets most commonly stolen | Greater control, preferably locally | Locate standpipes in clear view of community |
| | Install improved standpipe which is more tamper-proof | |
| **Unanticipated density** | Increase number of standpipes | Supply may not be sufficient to allow increase |
| | Increase capacity to store water, on site or lot | May need to find additional source |
| | Encourage water to be carried in by refugees | May fund suitable location |
| | | Increased cost, which can be high |
| | | Increased difficulty in maintaining non-polluted supply |
| | | Can be used as employment generation |



- *Symptom:* **LONG WAITING LINES AND/OR RAPID BREAKDOWN OF COMPONENTS**
- *Problem:* **FACILITY UNABLE TO MEET DEMAND**

| POSSIBLE CAUSES | ALTERNATIVE ACTIONS | IMPLICATIONS |
|---|---|---|
| **Density greater than expected;** families bigger than expected; or unexpected subletting | Increase provision of facilities.<br><br>Find other sources for provision; consider development as income generation by refugees. | Extra costs |
| **Inadequate consideration for growth** designed into facility | Extend, replace, or replicate facility | Assumes space is available.<br><br>High cost compared to other alternatives |

# PART IV
## Technical Supplements

# WHEN DO YOU USE EXPERTS?

Specific tasks will generally be carried out by experts, either hired directly or from another implementing agency.

The following table identifies the planning stages, the types of experts most appropriate in each stage, and their general area of responsibility. These experts may be used to coordinate and to assist in the preparation of terms of references, as well as in carrying out the tasks required. No easy distinction exists between some categories of experts, for example, sociologist and anthropologist, and often they can be used interchangeably. Often more specialized experts are not needed, and more general experts may suffice; for example, a civil engineer in place of a water engineer and a sanitary engineer.

| PLANNING STAGE | WHO CAN HELP? | WHAT CAN THEY DO? |
|---|---|---|
| UNDERSTANDING REFUGEE CHARACTERISTICS | - sociologist<br>- anthropologist | - carry out surveys<br>- interpret information<br>- provide background information and perspective |
| SELECTING THE SITE | - geologist, soil chemist<br>- hydrologist, water engineer<br>- civil engineer<br>- physical planner | - carry out surveys<br>- assess data<br>- recommend alternatives and implied tradeoffs |
| DECIDING THE PROGRAM | - civil engineer<br>- physical planner<br>- architect<br>- sociologist, anthropologist | - prepare program<br>- develop standards |
| MAKING THE LAYOUT | - physical planner<br>- civil engineer<br>- architect<br>- water engineer<br>- sanitary engineer | - prepare layout<br>- prepare detail component designs<br>- estimate costs |

| | | |
|---|---|---|
| PREPARING FOR IMPLEMENTATION | - civil engineer | - assess difficulties<br>- prepare work program |
| TROUBLESHOOTING | - civil engineer<br>- physical planner<br>- architect<br>- sociologist, anthropologist | - carry out reviews<br>- identify symptoms and analyze problems<br>- provide solutions to problems |

The following are desirable attitudes to look for when hiring experts to deal with the specialized refugee camp conditions:

- Experience in working with little information and under conditions of urgency.
- Understanding of how to utilize minimum resources.
- Supportive attitudes toward refugee communities.
- An understanding of community participation in planning and implementation.
- Understanding when to apply own skills and when to offer skills as a resource to others.

## MAKING SOCIAL SURVEYS

The following notes outline considerations for making quick, directed social surveys, with the goal of identifying aspects relative to settlement programming and planning.

*Who should be respondents in survey?*

Both male and female respondents should be interviewed, particularly when it is suspected that many households will be headed by females. When interviewing females, it may be necessary to use female interviewers.

If available, people identified by refugees as knowledgeable should be interviewed. Such people may be identified by statements such as "talk to that person" or some similar statement or through a clearly identified organization associated with the refugees. Also, experienced personnel of various N.G.O.'s may be helpful with information.

Finally, it is important that you interview relevant officials and bureaucrats from the host government and local area to assess their attitudes about and knowledge of refugees.

*Who and how many should be interviewed?*

A two step process is suggested:

1) Determine types of people, i.e., tribes, types of refugee groups, ethnic groups, ethnic affiliations, language group, etc. This can be done at initial registration.

2) Although standard statistical sampling will probably not be possible or reasonable given time and personnel constraints, try to obtain as representative a sample as possible. A "shorthand" version is suggested, as follows: Select approximately 10 respondents minimally from each grouping previously established. If you have more time do more interviews. Try to choose either randomly, or if not possible, use some mechanism like interviewing every one hundredth refugee or other consistent technique. Do not interview arbitrarily. Do not interview volunteers or people you meet causally.

If answers to your questions corroborate each other, either generally or specifically, the assumption may be made that you have discoverd some fair idea of social and cultural attributes and initial settlement trials can start.

Do not expect consensus, even within small groups people have different opinions and varying experiences.

*How to interview?*

There are generally two types of interview techniques. Open-ended interviews ask general questions without setting options or limits. Closed-ended interviews set options such as multiple choices or yes/no questions.

Open-ended interviews may yield unexpected answers and give greater space to more discursive and qualified answers. Closed-ended interviews, where the questions are reasonably well informed, provide more quantifiable and often more
immediately applicable and practical information.

However remember when you ask a question, no matter how irrelevant or poorly phrased, meaningless or inappropriate, respondents will answer it. *So* always be sure your questions ask what is necessary for you to know in a way that respondents will understand. For example, you may ask about something you take for granted, but refugees do not, e.g., separation of functional spaces in a house.

Also, when interviewing try to ask important questions, or questions about possibly sensitive issues in several ways. This way you can assess answers better. Differing answers may not be contradictory but several sides to a complex and/or sensitive issue.

*When should interviews be done?*

Depending on pressure of an impending move into a new settlement, or new refugees into an already established settlement, the sooner the better. Be aware that respondents may be frightened and respond either incorrectly; e.g., about family size, home village, resources etc., or in a way which they think might please you. However the longer one waits the greater the influence camp experiences might have on responses.

*Who should do the interviews?*

The best choices are yourself with a member of the refugee group. Choose refugees from each targeted group, those who are recommended assuming they can be trusted and can be readily trained. Local interviewers/ translators will not only help you translate your interviews, they can warn you about culturally sensitive issues and help you phrase questions in an appropriate manner.

One caveat, the locally based translators may not be trusted by his/her fellow refugees or the translator/interviewer may have his/her own ideologi-

cal blinders or prejudices which may affect the interview and/or the translation. Tape record where possible so that another party can listen to the interview and assess its reliability.

*Cautions!*

- Any question may raise expectations and thus void responses; or, worse, build up false hopes which cannot or may not be fulfilled and thus result in possible distrust or unrest. Questions must be carefully selected.
- Some questions may insult people, particularly questions about sanitary habits, personal hygiene, skill levels, etc. Local assistants can help in these areas.
- Awareness of etiquette is necessary to avoid social blunders, e.g. in Islamic society males do not talk to unrelated females directly.
- Do not be overly concerned that one of the interviewing team is a foreigner. Indications of genuine concern and interest will go a long way in overcoming misgivings on the part of the refugee. This also holds when making small blunders of etiquette.
- Emphasize that interviews are confidential and that no answers will be attributed to the respondent. Take no names and assure respondent that you and your translator will be the only persons who know who gave what answers to what questions. Do not interview in presence of local or national government officials, N.G.O. representatives or other officials or strangers.
- Do not interview in public places, especially in government locations. Go to where people live, in their shelters or homes.
- What people say and how they say it is very important! However, do not forget that observations are equally important and may offer important insights about aspects of refugee life which cannot be gathered from interviews. What you see, combined with what people tell you, is a better indicator than either alone, and perhaps is more important.

# DOING SOCIO-CULTURAL ANALYSIS: Implications for Practice in the Field

This essay describes some critical areas of concern associated with socio-cultural analysis of refugee communities and its implications for site planning.

*Contextualizing Social Research*

Socio-cultural analysis is imperative if we are to develop appropriate and adequate settlement planning. When physical planning of camps, reception centers or durable settlements is undertaken without adequate knowledge of indigenous social practices and cultural beliefs, the places where refugees are settled may be inappropriate to their everyday needs. More tragic, inappropriate physical planning can lead to violent social conflict or cultural alienation. In some instances, whole quarters of a refugee settlement have been set afire owing to internal conflicts and in other instances lack of awareness of refugee social organization has prevented the development of refugee participation in the local economic infrastructure of new arrivals to already inhabited areas. In a more positive light, awareness of the organizational potential of refugee groups has fostered significant participation in local self-help to the benefit of both refugee groups and those charged with their care. *We plan sites without knowledge of socio-cultural patterns at our's and the refugees' peril.*

Social research, however, is a complex and profoundly difficult endeavor. To understand another society is equally if not more difficult than understanding our own society; a society we know imperfectly at best. *Imperfect understanding though should not stand as a barrier to addressing socio-cultural issues*. The more we know about another's society, especially to the extent that we understand the limits of that knowledge, the better able we will be to evaluate the effectiveness of the actions we undertake when working for or with people of that society. What we know helps us not only to plan more appropriately but to understand the extent to which what we are doing entails risks or unknowns.

When we are to use social analysis for practical applications one critical way to mitigate the problems of imperfect knowledge is to ask what it is we need to know to plan appropriate sites. Given the constraints of time, personnel and resources, what might we discover about a given group of

refugees that would be of help to us in our efforts? *Understanding Social Characteristics* offers one set of questions and associated physical implications which can be used to guide the inquiries that are made. However it can be neither exhaustive nor will all the questions always be germane to the problems at hand in all situations.

What we need to know should always be defined by the situation and physical context into which refugees are being placed and the goals that have been set for refugee resettlement. This of course assumes that the situation into which the refugees are moving is itself reasonablly well understood. The site, its ecology and physical patterns, the attitudes of local officials of the host government and local populations, the institutions set in place by the host government and various N.G.O.'s should all be reviewed before a decision about what to learn about refugees is made. If we know a great deal about refugees and nothing of the situation into which they are coming, the information we have gathered will be useful only in a vacuum. For example, refugees might be moving onto a site which is provided as a place for self-organization and self-building by the refugees. Or, refugees may be moving into a place that has been inhabited and settled for a considerable period of time and is already built up to capacity.

In the first instance, we would want to know rather more about indigenous patterns of building, the tools and materials that refugees need in order to build, the capacity of the refugees to organize themselves, and the skills and the ways they organize their labor and the ways the refugees would probably pattern themselves on the ground in households and clusters than about other issues. In the latter instance, knowledge about how the place into which the refugees are moving will accommodate indigenous settlement patterns in regard to size, density, pattern of households, social diversity and social organization among other things would be of more importance. In one situation we are organizing activity on the other dealing with problems of social adaptation and adjustment and the best way to support and reeducate the refugees in their new environment.

Other differences will define what you need to know. Similarity or differences with indigenous ecologies, the reasons refugees have migrated, and the time the refugees will remain in a given place among other possibilities will all shape what you want to know. *Social inquiry which is applied to the development of social policy and site planning must be guided by the context and goals of that policy and/or plan.*

For the UNHCR, socio-cultural research and analysis should provide a *connection* between understanding refugees and decisions about actions to be taken, *communication* between the UNHCR personnel and the refugees

and *control* over a reasonably orderly and socio-culturally responsive process of site planning and refugee resettlement.

*Sampling and Interviewing*

In developing knowledge of refugees, who you ask is as critical as what you ask. *Who you ask* is also constrained by time and personnel and *can and should be tailored to the context of the inquiry.*

While random sampling a statistically significant number of respondents may be best for precision of statistically significant quantifiable data and long term participant observation may be best for a depth of qualitative analysis, neither is possible given the need for fast action and the lack of resources in the field nor is it necessary given the needs and context of any social inquries made by UNHCR personnel.

Even if we do not sample randomly, we can derive reasonably representative samples using other means. So long as we are consistent and unbiased in our selection of respondents, as suggested by the section *Making Social Surveys* we can be reasonably assured of a representative sample. What we must remember though is given our needs representativeness will vary. For example, if we want to understand how women respond as heads of households we must be sure to interview women who find themselves in that situation. However, we must also interview women who are not heads of households if we are to understand in what ways women heads of households are influenced and changed by their new status. *A sample may be representative but what is represented may not offer a complete enough picture of what it is you need to know.* As in our example of women heads of households, it is often necessary to remind oneself that some other segment of the whole population may be a necessary part of our sample as a basis for comparison. For another example, interviewing only male refugees will give a male biased view of the refugee world and will ill equip you to understand the ideas and beliefs of women or children.

Often representative samples are not possible because of the exigencies of time or resource availability. At other times, one needs a more indepth view of particular knowledgeable or important individuals. In such circumstances, we may want to work with either *key* informants or *exemplary* samples. A key informant is someone who might speak for the refugees for he/she is acknowledged by them to be knowledgeable, a leader or spokesperson. Exemplary samples are chosen on the basis of some particular need, e.g., western educated refugees, or healers or refugees already experienced with refugee life among others. Although not as representative as more broadly based samples, interviews with such respondents may be quite useful in

specifically defined spheres of activity or where no other interviews are possible, Whatever the case when undertaking such interviews, remember, barring other sources of knowledge about the refugee population under study, what you learn is limited by the experience and biases of the respondent. Analysis should be based on these limits. As useful as a western educated member of a refugee population might be, he/she may have ideas and prejudices that are not shared by the less educated brethren. Healers may give you insights into indigenous forms of medicine but it may be biased by what the healer perceives as his/her best interests.

Whenever you interview, whether it be an open or closed-ended interview, focused or unfocused, it is most important that we remind ourselves constantly of the interviewer-interviewee relationship. Unlike many other interview situations where the interviewee has something the interviewer needs or wants, or where interviewer and interviewee are equals, *in our situation the relationship between the interviewer and the interviewed, i.e., the refugee, is hierarchical.* The refugee is under the UNHCR's good offices and those interviewing have something the refugee desperately wants and needs and cannot get without their help.

Given this relationship it is important to be aware of a series of possible postures the refugee being interviewed might take. Most of course will try to respond as honestly as they feel they can, i.e., within the limits of how secure they feel the situation is. In this instance, answers will not be so much consciously biased as incomplete or guarded. An effort to put respondents at ease by showing real concern and awareness of the need for confidentiality is vital.

However there are two postures which offer not only incomplete answers but consciously biased answers.

One common posture is that of subordination. In this instance, the respondent will try to frame answers in ways that he/she feels will give the interviewer what he/she wants or that will curry favor or approval. Another posture is more manipulative. In this posture, the respondent answers in terms of what he/she thinks can be gotten out of any answers. For example, let us say we ask about how refugees built their houses in the indigenous environment, in a situation where the site is generally being constructed through self-building. The subordinate posture might lead to answers which emphasize the capacity of the refugee population under study to self-build even if this capacity may not exist given the refugees' present condition. In the manipulative answer, the respondent might overemphasize the need for materials, or the number of people needing support for building to increase available resources for uses other than self-building. In neither instance do respondents

usually lie outright. Rather they answer understandably to emphasize what they feel would best serve their interests.

To deal with this problem, it is important to avoid telegraphing our own interests in stating a particular question. Also, by asking questions in more than one way or probing answers a little, often on the basis of what we might already know from other interviews, we might be able to pierce the postures taken. If our sample is big enough and representative enough the range of answers will usually balance any posturing. That is why carefully selected samples are so important.

*How to Evaluate Interview Answers*

Evaluation of respondents answers must thus be done in light of what we know to be the relation between interviewer to interviewee, the nature of the sample, the situation we find the refugee in and other contexts for the enquiry. What we are looking for are trends and patterns, particularly those trends and patterns which we might use to plan our sites or accommodate, through education or other means, refugees to already built sites. One way to evaluate a whole series of answers is to undertake another dialogue in which you in effect ask questions of the already obtained interview results. For example you might ask, how many of the answers give us a feeling that the respondent involved could self-build and what would be our criteria for assuming so? From this kind of secondary inquiry, we can come to some clearly defined, and observable conclusions. Another example would be to tabulate each respondent's household age and cluster arrangement to see the scope of household ages and internal cluster arrangement in order to derive a reasonable average size per lot.

However, in going through our interviews, we may find that a given respondent's answers are as contradictory as they are consistent and that answers between respondents range considerably. Do not be disturbed. *Rather, use the range of varied and contradictory answers among refugees and by a given refugee see to 1) how varied refugees are and to what extent shared beliefs and behaviors are necessary to define policies and plans and 2) to grant the refugee the same potential for complexity and conflict as we probably grant ourselves in order to see the refugee as wholly human.* We ignore the contradictory and complex aspects of respondents when we do social analysis only in order to simplify our lives. We do so at the expense of useful understanding.

*Understanding where there are agreements among the refugee population and where there are ambiguities or ambivalent responses, is of great help when deciding about policy and planning.* If refugees, for example,

disagree or are unclear about the size or nature of household clusters, or if they appear to vary along lines set by internal structural differences, like religion, it may well suggest interventions and mediations on the part of the settlement managers.

Contradictory answers within a given respondent's interview may be evidence of the fundamental strains or complex facets of the refugee experience. These aspects of refugee life could not be identified if we attempted to either ignore such testimony or if we structured interviews to avoid complexity. In my own work, I was initially perplexed by what appeared on the surface to be contradictory responses within my interviews. On the one hand, respondents initially claimed, in answer to an open question about how long they thought they would remain where they were — a town located in Northern Canada — that they would leave anytime. On the other hand, when asked in a more formal way to check the box which most accurately predicted when they would leave almost all checked the box "retirement." This among males averaging 30 to 40 years old. The answers, I finally figured out, contradictory as they were, both told a truth. In this town people psychologically needed to believe they could up and go at any time. At the same time, when asked in a more formal way about their intentions after a series of questions about comparative opportunities found elsewhere given their training and skills, respondents answered knowing that their present situation was better than any other possible. The contradiction, while accurate, was also more descriptive of the complex truth of their lives. More importantly, knowing this complex facet of respondents lives could help with town planning because it would help planners understand the necessity of overcoming feelings of isolation and a lack of identity in the place even though people remained settled in the town.

The example discussed while not about refugees per se is very germane to the refugee situation. Like the respondents in my study, refugees will respond to the way the question is asked, to what situation they find themselves in, to their understandings of that situation and the options they have for action. Answers might reflect one or another of these understandings and options and vary consequently within the interview itself.

One distinction, however, is important to recognize. Some questions, about intentions to stay within a settlement, ask more about possiblities rather than actualities. Such questions ask in a sense about *commitment;* i.e., an adherence to a particular view of the world. Other questions ask about what the respondent will do. These questions ask about what we might call *involvement* i.e., the criterion for disposition to action. Often commitments and involvements do not coincide. As in our example above, refugees too

may well be committed to returning to their homeland at any time but involved in actively creating a place for themselves in the refugee settlement. In one sistuation the emphasis is on hopes and desires, on the other emphasis is placed on an assessment of options. Clarity about which answer is being given by a respondent and the coexistence of possibly contradictory answers will help us plan for the appropriate policies for the site.

For example, in one interview, at a refugee site I visited, an old man told me constently that his loyalties were to his homeland and that he desired to return home. At the same time, he showed his compound and spoke of the efforts he and his fellow refugees had put into making it a decent place to live, pointing with pride to a community built latrine. A latrine, he said, built with the refugees own resources. To the site planners this is an important discrepancy. It shows a willingness, given options, for the refugees to involve themselves energetically in building a place. At the same time, these refugees had no sense of place and no commitment to the settlement as a whole and thus also remain unwilling to participate in larger camp activities. One could ask, why should they? Their commitment was temporary at best and their own loyalties resided elsewhere.

In another instance, the opposite situation prevailed. In one camp visited, many refugees were intensely committed to groups which were organizing for a better camp life. At the same time one organizer of an active camp group told me of the difficulties in getting people actively involved in the organization's activities. In this instance, refugees had accepted the fact of their semi-permanent existence in the settlement but were unwilling to act on this fact given other needs and priorities which defined these activities.

Time has been spent in the issue of ambivalences and contradictions because it is imperative not to see such as answers as confused or unhelpful. Remember, when looking at refugees, to remind yourself of your own complexities and contradictions. In one UNHCR sub-branch office I visited, most of the personnel complained of excessive heat in their homes and the high cost of air-conditioning. All told me that it was important to try to make life as reasonable and comfortable as possible and were trying to do so. However, no one had taken any steps, technically quite simple, to alleviate the problem of heat in their homes. Why? I asked. Because, they said they were not at the sub-branch long enough; only two years. In other words, contradictory committments, one to a desire for a comfortable residence, and one to a sense of impermenance, led to an absence of a sense of involvement. This lack of action even though many had been at the sub-branch for over three years. If UNHCR professionals can be influenced by such complex and contradictory attitudes and notions, why can't refugees? This example becomes

particularly ironic when we note that many of the personnel of the sub-branch were perplexed by refugee inconsistencies in the face of their stated needs or desires.

*Knowing that what people believe, and what people do may not be consistent, that involvement does not necessarily follow from commitment (and visa versa) expands our ability to plan rather than reducing it.* Knowing that a refugee is capable of self-building but has no sense of power or belonging will better enable the planner to put his/her energies in the right place. The issue here may that rather than setting out cluster patterns or household lot sizes, one might offer inducements or defer options that, if not changing refugee beliefs, does offer them reasons to get actively involved in building. In fact, undertaking to layout site patterns might reinforce the refugee sense of powerlessness and mitigate against involvement. Conversely, the refugee may well be committed to self-help but may not act on his/her commitment because of insufficient resources, skills to organize such activities. In this instance, policies and planning would take a different tact.

*Uses of Observation*

One partial way to analyze the range of answers and attitudes expressed in interviews is through systematic observation. By consistent and non-arbitrary observations one can discover much about refugee activity. Through observations we can at least see what the refugees do in given situations. However, observation while informing us of refugee behavior gives us no sense of what this behavior might mean. The meaning of activity is often as important as the action itself. *Observations in concert with interviews can best help us evaluate what policies and plans are most appropriate.* Each part of the strategy is a check on the other.

For example, let us say water taps are continually being taken to make into jewelry. Observation will tell you that there is a problem, and possibly who is responsible for the problem but it does not tell you what to do about it. If the taps are being taken by refugees unaware of the cost and importance of taps the possible policy remedy will be different than if the taps are taken by refugees with full knowledge of the costs. In one case education is called for, in the other some mode of supervising or policing.

The contradictions and conflicts between belief and act does not make policy implications of social research intractable. Rather it offers opportunities for creative and appropriate responses. Simplifying a situation may appear intellectually attractive but, in the long run, it may offer no real solutions to problems. Refugees may know how to use, let us say, latrines but they may be unwilling to do so because of religion or custom.

*Frames of Reference: The Refugee and The Professional*

It is important, too, when dealing with refugees to remember that what we believe about the world and professional technical-rationality is not presumed to be superior to the refugees' own frames of reference. At the same time, we should be cautious about overly romanticizing the refugees' socio-cultural beliefs and predilections. *Just as what we think may be best for the refugee is open to question, so too is what the refugee may believe is best for him/her.*

If we define what the refugee brings to his/her world, e.g., beliefs, knowledge, experience, as "local knowledge", that knowledge is always "real" in the sense that it forms a meaningful world to the refugee. However that world may not include experience or knowledge of the refugees' new situation in terms of new conditions of settlement, the attitudes of the host government, resource or ecological capacities among other things. When working with the refugee, it is imperative to evaluate the extent to which the refugee population under study has the capacity, and in what ways, to respond adequately to his/her situation. For example, refugees from small scattered communities, may well not understand the extent to which traditional practices, e.g., use of wood for fuel, may be ecologically catastrophic in dense and large settlements. In some situations, direct support and intervention which may contradict refugee norms may be essential. When training women heads of households about income generating activities it may be essential to challenge traditional gender role models and activities. Increased income-generation may demand that women take on tasks traditionally associated with males. Working within traditional role models might prevent successful income-generation for women.

Technical frameworks thought to be reasonable, operational and practicable need to be designed in terms of refugee understandings and needs. Issues of health and sanitation are often as much issues of aesthetics as they are of technical well being. A clinic may be well supplied to western medical standards but inadequate because it does not reflect indigenous attitudes or knowledge of healing. Western clinics, for example, are based on notions of institutionally healing individuals, whereas in some refugee experience healing occurs in a context of family support. Designing to enable such family support may be essential to proper healing.

What is also critical to remind oneself is that there are cases where refugee experience and frames of reference are more appropriate than our technical expertise. Knowledge of planting cycles, soils or materials; the extent to which a site might be able to support traditional economic pursuits may well be better understood by the refugee than the resident professional

expert.

For example, building practices might not appear technically efficient given our notions of planning but may work best given the materials and labor organization of the refugees.

Whatever approach is necessary, knowledge of and respect for the refugees "local knowledge" will always enable us to couch plans and programs within the refugees frame of reference. This will hold whether we are changing that frame of reference or reflecting it. We might, for example, find it necessary to shape attitudes about sanitation. Using refugee's notions of pure and impure, or sacred and profane might be more effective than trying to explain sanitation in western medical terms. We may from this be able to teach the refugee about our categories and knowledge of sanitation by comparing his/her notions with ours. Through sound research we can develop a basis for mutual, if not entirely shared, frames of reference as the basis for action.

*Use of Social Scientists*

Finally, as you study refugees, remember that they are probably being changed by their experiences as refugees. A new study, six months or a year after the initial study, may help us understand the effects of our planning and policy decisions. This, in turn, will help us deal with incoming refugee populations especially if they are from the same or similar societies. Such restudy can change the context of inquiry, suggest new or reframed questions or better prepare you for planning without interviewing the new refugees.

Ongoing studies and restudies of refugee populations may best be done by local social scientists. This though will only hold if a) we are clearly able to define our context of inquiry, and b) we are able to evaluate to what extent the social scientist we employ is sympathetic to our research needs and the refugee population.

Remember too that in many cases there is research work already available on monographs and articles about the refugee population. Prior research in libraries or building a small local field library can be of inestimable help. It can save time by revealing where new research needs to be done and guide what research still may be necessary.

*Conclusion*

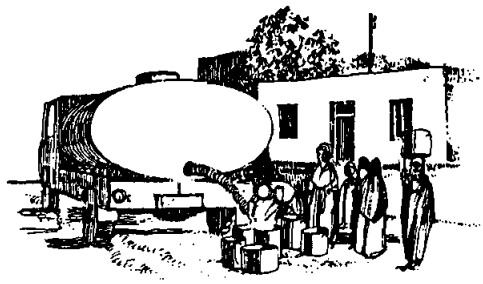
Whatever approach we take, proper socio-cultural research offers no simple answers but it does offer opportunities to suggest and better define site planning, programming and policy implementation.

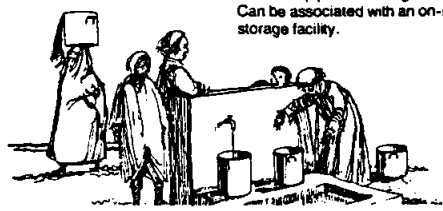
# TRADEOFFS IN CHOOSING COMPONENTS

*Source: URBAN PROJECTS MANUAL. Forbes Davidson and Geoff Payne. Overseas Development Administration, Liverpool Univeristy Press, 1983.*

*Water supply options*

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Communal well | Large capacity well to serve a reasonable number of plots. | ● Quality of water can be good if appropriate sanitation systems are used. | ● Moderate capital cost, though less than individual on-plot wells.<br>● Dependent upon geology and depth of water table.<br>● Inconvenient. Volume of water used dependent on distance from well.<br>● Risk of contamination. |
| Water tanker/water vendor | Supply from tanker or from kiosks. | ● Low initial cost to provider.<br>● Water can be good quality. | ● Very high running costs.<br>● Difficult to control quality.<br>● Inconvenient.<br>● Often expensive to consumer. |
| Existing water course or pond | Generally requires modification to bank of river, stream or pond to facilitate removal of water, though it could be pumped to outlets remote from source. | ● Low capital cost. | ● High risk of contamination by users and/or upstream conditions.<br>● Dependent upon climate.<br>● Inconvenient.<br>● Volume of water used dependent upon distance to source. |
| Communal storage | Various possible methods include dammed-up streams or river to reservoir, storage tank with gravity or pumped supply and treatment works *if necessary. Distribution from a central* point via communal taps or standpipes. | ● Quality of water can be controlled if access to stored water is prohibited, or treatment provided between storage and *outlet.* | ● Capital cost dependent on type of system used.<br>● Inconvenient.<br>● Volume of water used dependent *upon distance to source.* |
| Public standpipes | Piped network throughout development with standpipes at strategic locations. Can be associated with an on-site storage facility. | ● Moderate cost.<br>● Good quality of water if from treatment plant.<br>● Enables individual on-plot connections to be made when people can afford it, if piped network is adequate. | ● Risk of wastage of water from damaged fitments and negligence.<br>● Slightly inconvenient.<br>● Efficiency and risk of pollution dependent upon spacing of standpipes. |





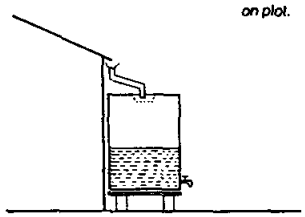
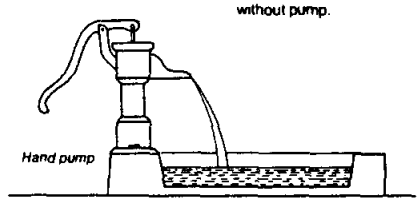
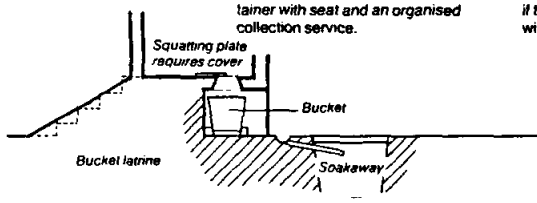
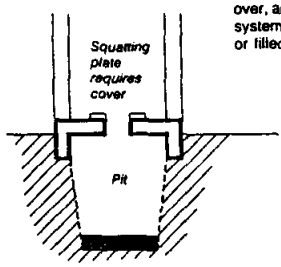
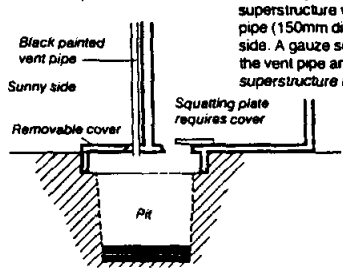
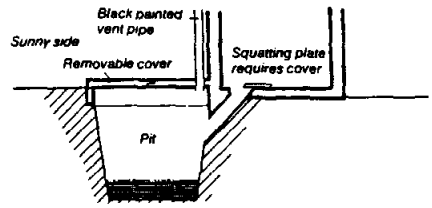
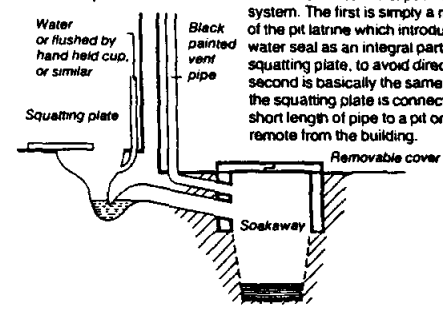
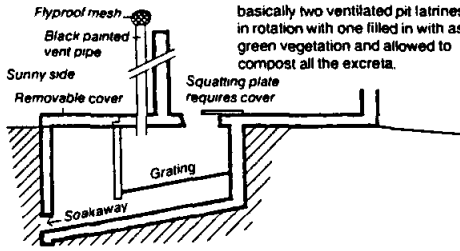
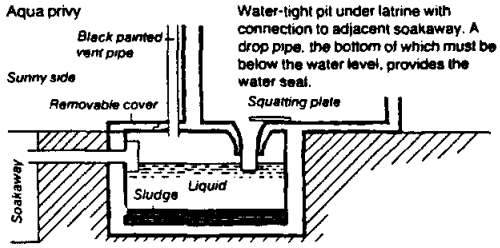
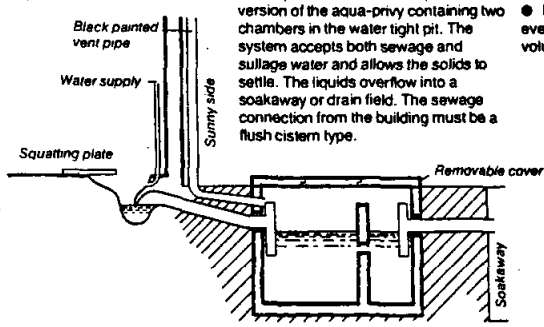
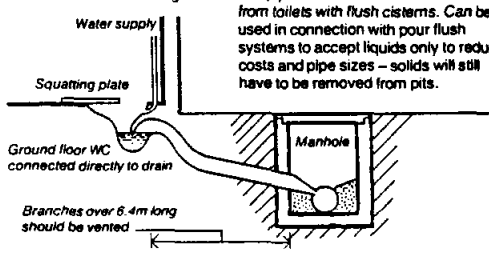
| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Individual water butt  | Water collected from roofs and stored on plot. | • Convenient.<br>• Good quality.<br>• Low capital cost. | • Small storage volume.<br>• Very dependent on climate.<br>• Risk of contamination if stored for long periods. |
| Individual well on plot   | Individual well or borehole with or without pump. | • Convenient.<br>• Quality can be very good. | • Can be high capital cost.<br>• Dependent on local geology.<br>• Risk of contamination from sewage if pit latrines are used. |
| Individual piped supply – single tap | Fully piped network from treatment plant to plots. Individual connections can be phased as residents can afford it, if adequate mains are installed in street. Single tap only provided on plot. | • Good quality.<br>• Readily accessible in moderate quantities.<br>• Significant health benefits.<br>• Can operate with lower grade sewage disposal systems. | • High capital costs.<br>• Increases volume of sullage water to be disposed compared with no connection. |
| Individual piped supply – multi-tap | Generally as for single tap, but mains required to be larger and multiple taps or outlets provided to each plot enables water flushed toilets to be used. | • Good quality.<br>• Readily accessible in large quantities.<br>• Maximum health benefits. | • High capital costs.<br>• Requires fully piped sewage disposal system. |

Table 11
*Sewage disposal options*

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Communal system. Various levels from pour flush latrine to piped network | The basic concept is to provide a block of toilet facilities connected to any of the following sanitation systems:<br>pour-flush latrine<br>aqua-privy<br>septic tank<br>piped sewerage. | • Possible reduced costs compared with individual provision.<br>• Can be installed in densely populated areas without requiring extensive demolition. | • Inconvenient.<br>• High maintenance costs due to damage and neglect.<br>• Can become unhygienic and under-used if not kept clean.<br>• If subsequent up-grading is carried out, the capital cost of toilet blocks would have to be written off.<br>• Often socially unacceptable. |
| Night soil collection   | Provision of a sealable bucket container with seat and an organised collection service. | • Comparatively low capital cost if treatment is already available with collection vehicles. | • High maintenance cost.<br>• Comparatively high health hazard to users and collectors. |

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Pit latrine   | Pit dug in ground with squatting plate over, and superstructure over whole system. When 3/4 full either emptied or filled and new one dug. | ● Low cost. | ● Can be source of flies and mosquitoes.<br>● Possible bad odours.<br>● Direct access therefore accident risk.<br>● Health risk moderate.<br>● Risk of polluting ground water.<br>● Water usage critical factor in maintenance requirements.<br>● Dependent on geology, e.g. porosity of ground. |
| Ventilated pit latrine   | Similar to pit latrine but offset outside superstructure with black painted vent pipe (150mm dia) outside on the sunny side. A gauze screen across the top of the vent pipe and a dark interior to the superstructure is advantageous. | ● Low cost. Little fly or mosquitoe nuisance due to vent which creates a through draft which discourages mosquitoes and flies especially if inside of superstructure is dark.<br>● Virtually no health hazard if properly maintained. | ● Periodic maintenance/ emptying; which is expensive.<br>● Accident risk due to direct access.<br>● Dependent on geology to avoid ground water pollution. |
| Modified ventilated pit latrine (Reid odourless earth closet, ROEC)   | Similar to ventilated pit latrine but totally offset from superstructure and connected by curved chute. | ● Similar to ventilated pit latrine but additional excreta are not visible and no risk of accident. | ● Similar problems to ventilated pit latrine. Less accident risk, but chute can become blocked. |
| Pour-flush pit latrine   | There are two forms of pour-flush pit system. The first is simply a modification of the pit latrine which introduces a water seal as an integral part of the squatting plate, to avoid direct drop. The second is basically the same except that the squatting plate is connected by a short length of pipe to a pit or vault remote from the building. | ● Advantages are similar to modified pit latrine with even less risk of flies or mosquitoes. | ● Water seal must be maintained for system to remain effective therefore some user education required.<br>● Water usage is important in that large quantities will shorten life of pit. |

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Composting toilets<br>  | There are two basic types of composting toilet, the continuous composter and the double vault. The double vault is basically two ventilated pit latrines used in rotation with one filled in with ash and green vegetation and allowed to compost all the excreta. | ● Produces usable humus fertiliser after several months to one year. | ● Has similar disadvantages to pit latrine during operational use.<br>● Costs are relatively high due to double provision.<br>● Requires good user care.<br>● Not suitable unless use of composted excreta is common practice in locality. |
| Aqua privy<br>  | Water-tight pit under latrine with connection to adjacent soakaway. A drop pipe, the bottom of which must be below the water level, provides the water seal. | ● No flies or odour if water level in tank is maintained. Should only require emptying once every 2 or 3 years when 2/3 full of sludge. | ● Requires good user education.<br>● Possible contamination of ground water.<br>● High cost; no more benefit than ventilated pit latrine.<br>● Geology must be suitable. |
| Septic tank<br>  | The septic tank is a more sophisticated version of the aqua-privy containing two chambers in the water tight pit. The system accepts both sewage and sullage water and allows the solids to settle. The liquids overflow into a soakaway or drain field. The sewage connection from the building must be a flush cistern type. | ● Good treatment of effluent.<br>● Infrequent maintenance once every 2–5 years depending on volume per person. | ● High cost requires piped water supply to provide sufficient water. Requires large areas of land to disperse liquids.<br>● Requires a permeable soil for good disposal of liquids. |
| WC waterborne sewerage<br>  | Full piped network with connections from toilets with flush cisterns. Can be used in connection with pour flush systems to accept liquids only to reduce costs and pipe sizes – solids will still have to be removed from pits. | ● High user convenience no sewage in vicinity of dwellings. | ● High cost.<br>● Requires piped water supply and high usage.<br>● Requires sophisticated treatment plant to cope with effluent in large volumes. |

*Surface water drainage options*

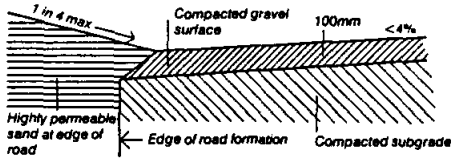
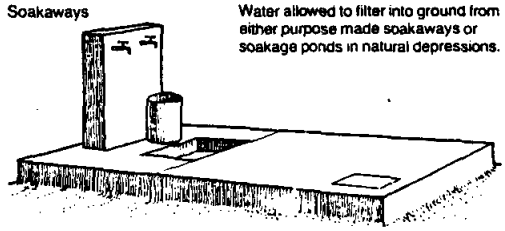
| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| *Any of the following options can be used in combination* | | | |
| *Transporting options* | | | |
| *No provision* | *Water finds its own way along roads and paths.* | ● *No capital cost to agency.* | ● Depends for adequacy on very low rainfall.<br>● Can be inconvenient especially during rainy periods.<br>● Dependent on site topography and geology. |
| |  | | |
| Open channel | Open channels adjacent to paved areas carry water to outfall point. | ● Disposes of water adequately.<br>● Moderate cost.<br>● Extent of network can be varied without great disturbance. | ● Can restrict vehicular or pedestrian access across roads.<br>● Dependent upon topography for outfall point. |
| *Disposal options* | | | |
| Natural water-course | Water led into river and stream and allowed to run off site downstream. | ● Low capital cost. | ● Dependent on existence of stream and adequate topography. |
| Soakaways | Water allowed to filter into ground from either purpose made soakaways or soakage ponds in natural depressions. | ● Moderate capital cost. | ● Cost dependent on solution.<br>● Dependent upon geology and rainfall.<br>● Temporary flooding likely. |
| |  | | |
| Storage | Water stored for re-use in natural basins or purpose made facilities. Can be used to prevent downstream flooding due to sudden water run-off. | ● Water retained for local use.<br>● Low to moderate costs possible. | ● Dependent upon geology, topography and climate. |
| Piped network | Piped mains used in conjunction with road gullies. Can be combined with foul sewerage system to reduce costs and assist with cleansing, though treatment works will need to be larger. | ● Maximum layout flexibility.<br>● Maximum use of Rights of way for vehicles/pedestrians. | ● High capital cost.<br>● Can silt up in arid climates. |

Table 13
*Electricity supply options*

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Not provided | No installation of mains electricity within project site. Residents make their own provision for heat, light, cooking and power. Communal facilities such as schools may use generators. | ● No capital cost to agencies except for communal facilites. | ● Inconvenience.<br>● No security lighting possible.<br>● Unreliability of alternatives.<br>● High maintenance costs for communal facilities equipment.<br>● High cost to occupants. |

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Street lighting only | Lighting for security of streets and footpaths. | ● Provides convenience and security.<br>● Costs to project are relatively low. | ● Can be illegally tapped. |
| Full connections | An intermediate form of provision is not necessary since additional capital costs are not high. Plot occupants can obtain connections when they can afford it. | ● Convenient.<br>● Level of security lighting can be varied as funds permit.<br>● Low costs to households for electricity. | ● Possible high cost depending on mains equipment required, though this may be borne at least in part by the electricity authority. |

*Rubbish disposal options*

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Nil | Plot occupants responsible for disposal. Nature of rubbish dictates means of disposal: vegetable matter can be composted or fed to animals. Most natural products can be allowed to compost. Man-made products generally require disposal in tips or similar facilities. | ● No capital cost to agency. | ● Can create major health hazard.<br>● Clutters roadways and blocks drainage. |
| Communal disposal points | Large capacity containers located at convenient points adjacent to roads. | ● Comparatively low maintenance and collection costs.<br>● Can help overcome health hazard problem. | ● Some inconvenience to residents. |
| On-plot collection | Regular collection of refuse from each plot. | ● Minimise health hazard.<br>● Convenient. | ● Higher running costs than communal collection points. Low quality of rubbish means little potential for recycling – thus unlikely to operate commercially in low income areas. |

*Telephone options*

| Type of provision | Characteristics | Advantages | Disadvantages |
|---|---|---|---|
| Not provided | No provision on project site. | ● No capital cost to agency. | ● Inconvenient especially in local or personal emergency. |
| Communal provision | Telephone installations in public facilities and possibly also in kiosks or local shops, etc. Restricted number of lines. | ● Provides an emergency service without placing great demands upon telephone exchange capacity. | ● Fairly high capital costs for small number of telephones.<br>● Subject to vandalism. |
| Plot connection available | Telephone cables sufficient for the majority of plots available in vicinity and also exchange with adequate capacity. | ● Provides full access when people can afford it. | ● High capital cost, especially if new exchange facilities are required.<br>● Unlikely to be many households who can afford connection. |