



report title**existing guidelines supporting the shelter sector**

date published

May 2002

work duration

2 weeks over April-May 2002

who undertook the work

The research was undertaken and the report written by Kate Crawford kate@shelterproject.org, who works with **shelterproject.org** as a volunteer.

shelterproject.org is associated with the University of Cambridge in undertaking two projects to:

- (1) develop, with the aid community, the first detailed field guidelines for the physical planning and shelter sector (funded by DFID); and
- (2) develop, with the aid community, a full understanding of shelter in cold climates (funded by EPSRC).

Organisations participating with **shelterproject.org** in the review and implementation of these projects include DFID, UNHCR, UNICEF, UNDP, The Sphere Project, IOM, ICRC, IFRC, CARE, MSF, LWF, and CRS, with Oxfam GB acting as lead collaboration agency.

See www.shelterproject.org for more information on these and other projects.

acknowledgements

The author would like to express her thanks to her employers Fulcrum Consulting Engineers for their continuing support, and for the use of their office resources in the preparation of this report.

1 executive summary

1.1 introduction

The aim of the report project was to establish what published support to the shelter sector already exists by looking at the information available to those charged with answering shelter needs in emergencies.

1.2 findings

There is variation in the degree to which agencies are prescriptive in their literature. Existing publications are tailored to the specialist remit of the agencies whose policies they represent. Invariably, agencies advise against prefabricated or imported shelter and insist instead upon local solutions and local procurement.

The literature review turned up at least 15 bodies internationally that have been contributing to the shelter sector over the last 24 years, including UN agencies, NGOs, training organisations, university departments and individual experts.

When the shelter sector is compared with the water and sanitation sector, this brief study identified over 25 organisations and even more independent writers who have contributed to the development of the water and sanitation literatures. The published work goes back at least 44 years, almost twice as long as that of shelter and has been taken up by financial bodies like the World Bank. Entire university departments have been set up to tackle water and sanitation issues.

1.3 key conclusions

The summary guidelines that include entries on the shelter sector and that are published by operational organisations do not have a significant body of literature to refer to. The summary tables of each of the existing major field guidelines in **annex a** demonstrate that existing shelter policy is, with notable exceptions:

- the repetition of a few key guidelines;
- inconsistent in which parts of the sector it includes and which it does not, reflecting a lack of clarity in the engagement of organisations with the sector;
- inconsistent in its structure, reflecting the lack of a holistic understanding of the sector, and of operational decision-making paths.

The exiting broader body of literature, which is not the main subject of this report, might be described as being repetitive of a limited number of basic principles, not making coherent and consistent progress over time, being difficult to source, and generally outdated.

Although guidelines and advice are already available to practising aid workers, the shelter sector does not have the same institutional support as other key parts of the emergency aid community. Attempts to improve the provision of emergency shelter in practice have, nevertheless, been accompanied by an increasingly sophisticated legal framework acknowledging a person's right to adequate shelter. In contrast, the link between clean water and health has long been established and it is this that has driven investment and research in this area.

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3 introduction

3.1 introduction

This report looks at the information available to those charged providing shelter in emergencies. The aim of this exercise is to establish what support already exists for practitioners. This report was carried out part-time, totalling approximately two weeks over a six week period, by a part-time research volunteer working with shelterproject.org.

In this paper, the term 'shelter sector' is used broadly. It covers issues relating not just to temporary settlement and shelter for refugees and IDPs but also to the safety and assessment of the general built environment.

The paper opens by looking at the shelter sector as a whole. The literature review then looks at the existing guidelines and commentary concerning shelter. Finally, the paper sets shelter in the context of the research contribution to other emergency aid sectors using a brief comparison with the water and sanitation sector.

3.2 background

The shortcomings of humanitarian intervention by the housing and shelter sector have been identified elsewhere¹.

In the shelter sector, the training of field workers and the current guidelines rely on a very few key texts and assorted studies. Although these have become required reading for decision-makers within the sector, there is still scope for agencies to pool resources more effectively through wider collaboration and discussion.

4 objectives and purpose

Three principal objectives were identified in reviewing the English language field handbooks, aide memoires, the sphere guidelines, a good practice review and a summary of legal resources selected as the basis of this study:

- to identify key contributions to the sector
- to compare the emphasis of a variety of emergency handbooks
- to compare the resources available to other key aid sectors

The project duration was too short to apply the same objectives to the studies and papers that exist in the sector.

¹ See shelterproject.org paper 'the proportion of aid spent on the shelter sector – a scoping paper on the availability of data', May 2002

5 methodology and standards

5.1 introduction

Most research comes about as funding (from governments or private foundations) is directed into active institutions (developing policy, undertaking training, research, and/or field operations) which then produce publications (reports and handbooks). Here we look more closely at which bodies have been active in the shelter sector and the range of publications they have produced.

5.2 methodology

A cross-referencing exercise was carried out to identify the key texts that form the basis of shelter literature. Rather than looking at individual authors, in nearly all cases the text was grouped by **publishing body** and **year**. A final table of results is held in Annex B.

The legal resources relating to shelter have also been discussed since they help to pinpoint key dates in the development of shelter policy.

Each publication was summarised in a table showing the date of publication, publisher, title, and number of pages. An overview showing the column inches given to shelter was drawn up for the agency handbooks and then the shelter section was examined in detail. Broadly, the relevant texts were evaluated in terms of layout, emphasis and key advice.

An overview showing the **proportion of pages** given to shelter was drawn from the agency handbooks. Organisations devote more or less space to their own policies, priorities and capacities, thus to identify the editor's emphasis, the content was grouped into four further categories designed to answer the following questions:

What are the group's **aims and objectives**? **Policy/Organisational Role**

When should each objective be achieved? **Procedures/Process**

How are the objectives met? **Priorities/Checklists/Criteria employed**

What **equipment or experience** is available? **Provision/Description of Kit/Specifications/Case studies/Expertise**

All the literature is set in the context of a general process, which can be summarised as a **Need→Response→Implementation** model. The key questions outlined above come into play throughout this process.

Extracting the key advice from the text is an attempt to distil out the "guidelines" from the preamble in the existing literature.

5.3 constraints and limitations

Deciding how to qualify the extracts from each handbook was as objective as possible but ultimately, particularly in picking out the key advice, there was an element of subjectivity involved. There was arguably some overlap between categories. Procedures and checklists can, for example, be confused. Here procedure is regarded as a function of time: it suggests that the emergency should be treated as a series of phases. Similarly, a process recognises that planning is dependent on team or consensus building that may develop over time.

Time constraints limited the publications list (see annex c) and meant focussing only on the organisations implementing shelter programmes, rather than on the policy and actions of their donors.

For the same reason, this study does not test existing guidelines against specific case studies.

6 findings

6.1 a brief chronology of contributions to the sector

The key early text published on emergency shelter, Ian Davis' *Shelter After Disaster*, appeared in 1978 and precipitated further analysis of emergency shelter by Oxfam in the late 70s. In 1981, realising the importance of basic materials, Oxfam brought out guidelines for the use of plastic sheeting. Some articles from UNDRO, the Ross Institute and Intermediate Technology emerged during the 1980s but it wasn't until a decade later that major agencies began to focus on shelter.

The work of Intertect, especially that of Fred Cuny, and later the contribution of InterWorks, offered a solid basis for the development of physical planning and of training within the sector. UNHCR recognised this work, which was reflected in a series of papers by UNHCR physical planners.

Following the UNHCR's first workshop on improved shelter in 1993, other UN agencies (UNDP and UNICEF) produced guidelines on shelter in emergencies. Handbooks by UNHCR, UNICEF, USAID, OXFAM, MSF and REDR were compiled and specialist reports on shelter materials, shelter kits, environmental considerations and management issues began to appear.

Research work and articles started to get attention from 1997 onwards, with Andrew Chalinder's much cited document on planning for Temporary Human Settlements published by the Relief and Rehabilitation Network in 1998. Tom Corsellis of **shelterproject.org** was Principal Contributor to this publication.

By 2000, the Sphere Project had brought together many of the field guidelines, research and the operational experience of practitioners in an attempt to set minimum standards for the aid community.

This year an updated Sphere Report 2001 has also become available.

Our literature review turned up at least 15 bodies internationally that have been contributing to the shelter sector, including UN agencies, NGOs, training organisations, university departments and individual experts (see annex b).

6.2 legal framework

Stimulating research and discussion on shelter is also a function of the legal framework which guides policy in this area.

Leaving aside domestic, national legislation where 40% of the world's constitutions are known to refer specifically to housing or housing rights, we have taken some examples of international law which might also apply.

Shelter can appear in relation to human rights law, the rights of women, and economic, social and cultural rights. It also comes up in documentation relating to racial discrimination (as in the 1973 UN anti-apartheid legislation), the rights of the child and much more recently the rights of indigenous people and migrant workers developed by the International Labour Organisation.

The earliest international references to shelter can be found in the international declarations on human rights from 1948. A year later, the Geneva Convention (1949) ensures that, with respect to civilian persons in time of war:

The Detaining Power is...to ensure that protected persons shall...be accommodated in buildings or quarters which...safeguard...hygiene and health, and provide efficient protection against the rigours of the climate and the effects of the war.

In 1951, the International Convention Relating to the Status of Refugees then stated that:

Contracting States...shall accord refugees...treatment as favourable as possible...

The UN resolutions on housing adopted since 1986 also continue to have a policy impact today but the key events to note regarding the term “human settlements”, rather than housing, are the 1976 Vancouver Declaration and the Habitat II conference held in Turkey 20 years later in 1996. The 1976 declaration stated that:

Adequate shelter and services are a basic human right.

while the 1996 conference took this further by reaffirming its commitment to achieving that:

...everyone will have adequate shelter that is healthy, safe, secure, accessible, affordable and that includes basic services, facilities and amenities.

The latter declaration prompted the UN Commission on Human Settlement to state in 1997 their awareness “of the right of everyone to an adequate standard of living for themselves and their families, including adequate food, clothing, housing, water and sanitation.”

6.3 agency literature

The results of this review are summarised in the tables held in **annex a**. Each table contains a chart showing handbook structure, a short description and a section summarising content.

There is variation in the degree to which agencies are prescriptive in their literature. Existing publications are tailored to the specialist remit of the agencies whose policies they represent. Invariably, agencies advise against prefabricated or imported shelter and insist instead upon local solutions and local procurement.

6.4 comparison with the water and sanitation sector

In contrast to the shelter sector, the first texts dealing with water and sanitation in isolated, rural areas were published by the WHO and appeared in 1958-9 (see **annex b**).

It took another thirteen years for the next documents in sanitation to emerge in the early seventies.

The ITDG have produced several useful studies of appropriate technology applied to Water and Sanitation since 1978 and many of the ideas have been taken up by the emergency aid community. From 1978 onwards, many organisations began publishing advice on water and sanitation for development, among them were the Ross Institute, Oxfam, the US Environmental Protection Agency (EPA) and significantly the World Bank.

The WHO issued guidelines on water quality and disinfection and in 1991 released a manual covering water and sanitation for refugee situations. By 1994, MSF had published a guide to public health engineering specifically for emergency situations.

In 1997, the WEDC at Loughborough University also published guidelines and later more specialised texts, all of which have fed into the agency handbooks widely used in the field today.

As outlined in section 6.2, health and hygiene were mentioned in the Geneva Convention of 1949. The declaration of 1976 refers to “services” and in 1996 the declaration is concerned with health, “services, facilities and amenities”.

This suggests that the recognition of shelter as a right can also be interpreted to apply to water and sanitation.

In all, in this brief study we identified over 25 organisations and even more independent writers who have contributed to the development of this sector.

The published work goes back at least 44 years, almost twice as long as that of shelter and the cause has been taken up not just by agencies in the field but also powerful financial bodies like the World Bank. Entire university departments have been set up to tackle water and sanitation issues.

Crucially, the link between clean water and health has long been established and it is this that has driven investment and research in this area.

7 conclusions

Although basic guidelines and advice are already available to practising aid workers, the shelter sector does not have the same institutional support as other key parts of the emergency aid community. The work that does exist, outside of the published guidelines reviewed in this report, is not collated into a referable literature, as it appears to be in other sectors.

Literature on shelter has been emerging over the last 24 years and has been produced by a range of NGOs, multi-lateral agencies, academic institutions and individual experts.

Attempts to improve the provision of emergency shelter in practice have been accompanied by an increasingly sophisticated legal framework acknowledging a person's right to adequate shelter.

It is no coincidence that publications have started to appear and gather momentum following key international declarations and the drafting of relevant international laws. This established legal framework gives policy development the impetus and attention that it needs to progress.

The tables in **annex a** demonstrate that existing shelter policy is, with notable exceptions:

- the repetition of a few key guidelines;
- inconsistent in which parts of the sector it includes and which it does not, reflecting a lack of clarity in the engagement of organisations with the sector;
- inconsistent in its structure, reflecting the lack of a holistic understanding of the sector, and of operational decision-making paths.

It may be that what maintains the separation between the shelter sector and that of, for example, water and sanitation, is that the essential and beneficial results of good shelter as yet are neither well defined nor easily quantifiable. As a result, and because of the permanence implied in providing even basic short-term survival shelter, temporary shelter of an appropriate quality may be perceived in some quarters as unnecessary, or even counter-productive. This attitude might be reconsidered given that effective shelter, particularly in cold climates, is essential not just to quality of life, but to sustaining life.

annex a handbook reviews

| Publisher | Médecins Sans Frontières | | | | | | | | | | | | | | | | | | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------------|--------|-----|--------------------|-----|----------|----|--------------|----|------------------------------|----|----------------------|----|---------|----|
| Title | Refugee Health: An approach to emergency situations | | | | | | | | | | | | | | | | | | |
| Date | 1997 | | | | | | | | | | | | | | | | | | |
| Description | MSF specialises in medicine and correspondingly the advice on healthcare dominates their handbook. Food and nutrition, shelter and water and sanitation are also given sections with shelter coming fifth in the organisation's top ten priorities during the emergency phase. Published in 1997, this guide preceded the Sphere Report and several key articles (see part 1). | | | | | | | | | | | | | | | | | | |
| Key Advice | <ul style="list-style-type: none"> allow 3.5m² per person for shelter construction to be by refugees themselves local materials procured by MSF single family shelters if possible avoid prefabricated units. | | | | | | | | | | | | | | | | | | |
| | Need | Implementation | Response | | | | | | | | | | | | | | | | |
| Policy | | Protection against elements and vectors Sufficient housing and space for families Restoring privacy and security | Refugees construct their own shelters Local materials Avoid prefabricated units (cost, transport, acceptance) | | | | | | | | | | | | | | | | |
| Process | Selection Process Outlined | Organisation 1. Emergency phase when refugees first arrive 2. Post-emergency phase | 1. Essential Installations Layout of shelters Agency distribution of plastic sheeting, shelters or tents (short term only) Self-build 2. Rehabilitation Reconstruction | | | | | | | | | | | | | | | | |
| Priorities | Shelter and site planning 5th out of top 10 priorities during emergency phase | | | | | | | | | | | | | | | | | | |
| Provision | | | Materials Tools Specialist expertise Single family shelters 3.5m ² per person Cold climates: winter tents and heaters | | | | | | | | | | | | | | | | |
| Pie chart showing handbook structure | <table border="1"> <caption>Handbook Structure Data</caption> <thead> <tr> <th>Section</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Health</td> <td>50%</td> </tr> <tr> <td>Food and Nutrition</td> <td>12%</td> </tr> <tr> <td>Preamble</td> <td>9%</td> </tr> <tr> <td>Resettlement</td> <td>7%</td> </tr> <tr> <td>Human Resources and Training</td> <td>6%</td> </tr> <tr> <td>Water and Sanitation</td> <td>6%</td> </tr> <tr> <td>Shelter</td> <td>4%</td> </tr> </tbody> </table> | | | Section | Percentage | Health | 50% | Food and Nutrition | 12% | Preamble | 9% | Resettlement | 7% | Human Resources and Training | 6% | Water and Sanitation | 6% | Shelter | 4% |
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| Shelter | 4% | | | | | | | | | | | | | | | | | | |

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|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Publisher | UNICEF | | |
| Title | Assisting in Emergencies: A resource handbook for UNICEF field staff | | |
| Authors | Ockwell R. | | |
| Date | 1996 | | |
| Description | Health, nutrition and water and sanitation dominate this handbook; inevitably since its emphasis is on the welfare of children. Shelter is discussed but it is only considered to part of the UNICEF remit as a last resort. | | |
| Key Advice | <ul style="list-style-type: none"> • avoid temporary, prefabricated, relief housing • commit minimum of time, effort and resources to temporary shelter • UNICEF inputs only if urgent and others cannot act quickly enough | | |
| | Need | Implementation | Response |
| Policy | Lack of adequate shelter Lack of essential personal and household items Assess NEEDS rather than damage | Save lives and facilitate resumption of normal life Avoid temporary/prefab relief housing Necessary shelter for families to safeguard lives of young children | Facilitate return and resettlement |
| Process | Baseline data, impact of events, present situation, probable evolution, conclusions for action | | Core dwellings initially Phased implementation |
| Priorities | Shelter and reconstruction of dwellings Household function and personal protection Survey land ownership Structures Type and availability of materials Financing and distribution Pre-existing life-styles Co-op mechanisms, House building process Site investigation and planning Services and housing | Do not overestimate need for emergency shelter Do not underestimate time for delivery and distribution of materials, capacity of community Minimum of time, effort and resources to be committed to temporary, emergency shelter. Permanent reconstruction promoted. Roofing prioritised where shelter is unavoidable | Food preparation capacity Materials for repairs and temporary construction Clothing Support to community participation in rebuild Household items Operational kitchens Structural design Finance Local production of clothing Services and accommodation |

| | | | |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Provision | Description of Causes and Risks (exposure, inability to prepare food) | Minimum necessary provision of shelter, clothing and household items Reusable, salvaged materials Roofing Fuel for cooking | Plastic sheeting, tarpaulins, rope, tools and nails Tents according to specification, stockpiled, short term only. Temporary housing costly, imported, high-tech. |
| Pie chart showing handbook structure | <p>Food and Nutrition 27%</p> <p>Water and Sanitation 13%</p> <p>Preamble 4%</p> <p>Shelter 7%</p> <p>Co-ordination 10%</p> <p>Health 39%</p> | | |

| | | | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Publisher | OXFAM | | |
| Title | The Oxfam Handbook of Development and Relief, Vol II | | |
| Authors | Eade D., Williams S. | | |
| Date | 1995 | | |
| Description | <p>Although Oxfam have led the way in developing innovative shelter strategy over the last two decades, very little space is dedicated to this subject in their 1995 handbook.</p> <p>It is worth noting however, that other Oxfam pamphlets cover shelter kits in more detail elsewhere, for example Water, Sanitation and Shelter Packs, Oxfam Public Health Team, Oxfam 1996.</p> <p>This handbook again precedes much of the important recent work on shelter.</p> | | |
| Key Advice | <ul style="list-style-type: none"> • site selection criteria • provide public health specialists • purchase locally or regionally • choose low cost measures • roofing treated as crucial | | |
| | Need | Implementation | Response |
| Policy | Assessing need for Settlements Housing Temporary Shelter Food Storage Housing Reconstruction | Determining response Public infrastructure Do not undermine local capacity Future mitigation (sustainable, traditional techniques) | Via local NGOs Local/regional purchase Low cost measures Safety Local investment |
| Process | | | |
| Priorities | | Site selection | |

| <p>Provision</p> | | <p>Public Health Adviser Existing materials Makeshift shelters Roofing</p> | <p>Technical Expertise Tents from stockpiles (advantages and disadvantages of each type) Training (building practice)</p> | | | | | | | | | | | | | | |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------|------------|----------|-----|----------------------|-----|--------------------|-----|--------|-----|---------------|-----|---------|----|
| <p>Pie chart showing handbook structure</p> | <p>The pie chart illustrates the distribution of the handbook's content. The largest segment is the Preamble at 39%, followed by Health and Co-ordination at 16% each. Water and Sanitation and Food and Nutrition each account for 13%, while Shelter is the smallest segment at 3%.</p> <table border="1"> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Preamble</td> <td>39%</td> </tr> <tr> <td>Water and Sanitation</td> <td>13%</td> </tr> <tr> <td>Food and Nutrition</td> <td>13%</td> </tr> <tr> <td>Health</td> <td>16%</td> </tr> <tr> <td>Co-ordination</td> <td>16%</td> </tr> <tr> <td>Shelter</td> <td>3%</td> </tr> </tbody> </table> | | | Category | Percentage | Preamble | 39% | Water and Sanitation | 13% | Food and Nutrition | 13% | Health | 16% | Co-ordination | 16% | Shelter | 3% |
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| Publisher | UNHCR | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|----------------------|-----|--------------------|-----|----------|----|--------|-----|---------|----|---------------|-----|------------------------------|-----|--------------|----|
| Title | The UNHCR Handbook for Emergencies | | | | | | | | | | | | | | | | | | | | |
| Date | 1999 | | | | | | | | | | | | | | | | | | | | |
| Description | <p>A standard text which sets out the policy and objectives of the UNHCR. It gives comprehensive advice but no prescribed technical solutions. The handbook annexes give more details on the materials and equipment available.</p> <p>It refers the reader to specialist UN departments for expert advice.</p> | | | | | | | | | | | | | | | | | | | | |
| Key Advice | <ul style="list-style-type: none"> • 30-45 m2 per person in a camp • maximum camp population 20,000 (90ha) • standards for services and infrastructure • module descriptions • 3.5m2 per person in tropical climate shelter • 4.5-5.5m2 per person in cold climates or urban settings • handbook also gives detailed annexes on supplies and transport | | | | | | | | | | | | | | | | | | | | |
| | Need | Implementation | Response | | | | | | | | | | | | | | | | | | |
| Policy | Long term planning, bottom-up 3 scenarios: dispersed settlement, mass shelter in public buildings, camps | Avoid high population density and large emergency settlements | Technical Support Refugee participation Shelter | | | | | | | | | | | | | | | | | | |
| Process | Site assessment Needs assessment | Selection, Planning, Shelter Prioritise, obtain maps and information, identify flaws, make estimates, assess different layouts | | | | | | | | | | | | | | | | | | | |
| Priorities | Criteria for site selection: water supply, size, land use, land rights, security, protection, topography, drainage, soil conditions, accessibility, climate, health, vegetation | Contingency planning | Sanitation, water supply, roads, fire prevention, administrative and communal services Shelter standards | | | | | | | | | | | | | | | | | | |
| Provision | Decentralised, community-based approach, bottom-up Services, infrastructure, modular planning, environmental considerations, gender considerations | Information for planning Expertise and Personnel | Different shelter types, plastic sheeting, tents, prefabricated shelters, cold climate shelters Reception and transit camps Public buildings and communal facilities | | | | | | | | | | | | | | | | | | |
| Pie chart showing handbook structure | <table border="1"> <caption>Handbook Structure Data</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Water and Sanitation</td> <td>14%</td> </tr> <tr> <td>Food and Nutrition</td> <td>10%</td> </tr> <tr> <td>Preamble</td> <td>9%</td> </tr> <tr> <td>Health</td> <td>11%</td> </tr> <tr> <td>Shelter</td> <td>6%</td> </tr> <tr> <td>Co-ordination</td> <td>24%</td> </tr> <tr> <td>Human Resources and Training</td> <td>19%</td> </tr> <tr> <td>Resettlement</td> <td>7%</td> </tr> </tbody> </table> | | | Category | Percentage | Water and Sanitation | 14% | Food and Nutrition | 10% | Preamble | 9% | Health | 11% | Shelter | 6% | Co-ordination | 24% | Human Resources and Training | 19% | Resettlement | 7% |
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| Publisher | SPHERE | | | | | | | | | | | | | | |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|----------|------------|--------------------|-----|--------|-----|----------------------|-----|---------|-----|----------|----|
| Authors | <i>British Red Cross Annual Review 2000 plus 2000 Trustees' Report and Accounts.</i> | | | | | | | | | | | | | | |
| Description | <p>This guide is set out as a series of sections each specifying minimum standards and offering key indicators and guidance notes.</p> <p>It refers to many of the key texts discussed in this report and works through detailed steps to carry out, for example, a needs assessment. Effective disaster response is set out as a process and much emphasis is put on not operating in isolation from other over-arching sectors like logistics.</p> | | | | | | | | | | | | | | |
| Key Advice | <ul style="list-style-type: none"> • standard, indicators, guidance notes • 3.5-4.5 m² per person in a shelter • kit list of utensils, tools and soap • 45 m² per person in a camp • minimum space between dwellings and site gradient • 1 km² of forest could serve up to 500 people • annual fuel wood consumption 600-900 kg per person | | | | | | | | | | | | | | |
| | Need | Implementation | Response | | | | | | | | | | | | |
| Policy | 3 scenarios, people stay at home, people are displaced and stay in host communities, people are displaced and stay in clusters. | | | | | | | | | | | | | | |
| Process | Standard | Indicators | Guidance | | | | | | | | | | | | |
| Priorities | <p>Analysis (needs assessment)</p> <p>Monitoring, evaluation, consultation</p> | Site selection, planning, security, environmental concerns | <p>Housing, living quarters</p> <p>Clothing standard</p> <p>Household items, livelihood support and environmental concerns</p> | | | | | | | | | | | | |
| Provision | | Human Resources, competent staff and local capacity | | | | | | | | | | | | | |
| Pie chart showing handbook structure | <table border="1"> <caption>Pie chart showing handbook structure</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Food and Nutrition</td> <td>38%</td> </tr> <tr> <td>Health</td> <td>23%</td> </tr> <tr> <td>Water and Sanitation</td> <td>19%</td> </tr> <tr> <td>Shelter</td> <td>16%</td> </tr> <tr> <td>Preamble</td> <td>4%</td> </tr> </tbody> </table> | | | Category | Percentage | Food and Nutrition | 38% | Health | 23% | Water and Sanitation | 19% | Shelter | 16% | Preamble | 4% |
| Category | Percentage | | | | | | | | | | | | | | |
| Food and Nutrition | 38% | | | | | | | | | | | | | | |
| Health | 23% | | | | | | | | | | | | | | |
| Water and Sanitation | 19% | | | | | | | | | | | | | | |
| Shelter | 16% | | | | | | | | | | | | | | |
| Preamble | 4% | | | | | | | | | | | | | | |

| | | | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Publisher | RedR (ITDG publications) | | |
| Title | Engineering in Emergencies: A practical guide for relief workers | | |
| Authors | Davis J., Lambert R. | | |
| Date | 2002 | | |
| Description | <p>RedR is primarily a training organisation but the team also disseminates information to field workers. A third of this handbook is devoted to Water and Sanitation and a third again to health. Shelter is the next priority with just over 10% of the text given over to site selection, planning and the built environment. The following definition of shelter is also given:</p> <p>“Shelter includes basic structures and the complementary inputs of clothing, blankets, heaters and insulation.”</p> <p>The most recently revised handbook, it refers to the policy standards laid out by the Sphere Project.</p> <p>In the chapter on shelter, much emphasis is rightly placed on guidelines to assess damaged buildings and ways to make safe existing structures.</p> | | |
| Key Advice | <ul style="list-style-type: none"> • a useful flow diagram of the decision making processes involved in shelter provision • size estimation calculations of storage areas • an area of 45m² per person in a camp | | |
| Shelter | Need | Implementation | Response |
| Policy | See process. Availability of fuel Storage requirements by size estimation calculation | Protection from elements Security against violence Privacy and space Shelter includes basic structures, clothing, blankets, heaters and insulation Dignity, health and well-being of people affected | Temporary shelter only if necessary 500 people per feeding centre |
| Process | Refer to policy standards Consultation and participation General assessment | Settlement options | Repair/rehabilitate Conversion Self-settlement Temporary settlement |
| Priorities | Guidelines on assessing damaged buildings Structural integrity Safety | Procurement Storage options Heater options | Installation (construction methods and materials) Technical support for traditional designs and local building techniques Mitigation |
| Provision | Hazards to note with shelter: wind, fire, flooding, damp, micro-climate) Materials: details and options for cement, | Communal feeding (dry food rations preferred) Environmental impact of fuel use | Blankets (UNHCR spec) Clothing Plastic sheeting (LDPE spec, manufactured sizes, advs and disadvs) Tools Materials (timber, grass, |

| | concrete, brick, block, mud, mortar, plaster and timber. Building details and remedial action. | | corrugated steel sheets, bamboo, mud, sand, woven mats, bush poles, string, rope, nails) Simple ridge tents Oxfam hot climate shelters Stove and flue manifold (cold climates) Fuel Utensils | | | | | | | | | | | | | | | | |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|----------------------|-----|-----------|-----|------------------------------|-----|------------------|----|------------|----|--------|----|-------|-----|
| Site Selection | Policy | Response | Implementation | | | | | | | | | | | | | | | | |
| Policy | See process. | | Participation and self-reliance Flexibility and long-term view Effective environmental sanitation Location Co-ordination and integration Representation Daily management | | | | | | | | | | | | | | | | |
| Process | Site selection process: 1. team 2. aims and tasks 3. assessments | 4. identify settlement type 5. define ideal settlement 6. check ideal against site constraints 7. select site | 8. phased implementation and contingency plan 9. plan for infrastructure and services | | | | | | | | | | | | | | | | |
| Priorities | Observe spontaneous settlement Consult Check natural site features (wind direction, surface run-off, security) | Selection criteria: non-technical and technical Site ranking Settlement planning | 45m2 per person Registration and reception Food warehousing, distribution, feeding centres Fuel supply Fire precautions Markets Slaughter areas Animal areas Schools and social service centres Roads and traffic | | | | | | | | | | | | | | | | |
| Provision | Identification of population density Site assessment Needs assessment Resources assessment | | | | | | | | | | | | | | | | | | |
| Pie chart showing handbook structure | <table border="1"> <caption>Handbook Structure Data</caption> <thead> <tr> <th>Category</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Water and Sanitation</td> <td>33%</td> </tr> <tr> <td>Logistics</td> <td>34%</td> </tr> <tr> <td>Human Resources and Training</td> <td>11%</td> </tr> <tr> <td>Preamble Shelter</td> <td>4%</td> </tr> <tr> <td>Assessment</td> <td>3%</td> </tr> <tr> <td>Health</td> <td>3%</td> </tr> <tr> <td>Other</td> <td>12%</td> </tr> </tbody> </table> | | | Category | Percentage | Water and Sanitation | 33% | Logistics | 34% | Human Resources and Training | 11% | Preamble Shelter | 4% | Assessment | 3% | Health | 3% | Other | 12% |
| Category | Percentage | | | | | | | | | | | | | | | | | | |
| Water and Sanitation | 33% | | | | | | | | | | | | | | | | | | |
| Logistics | 34% | | | | | | | | | | | | | | | | | | |
| Human Resources and Training | 11% | | | | | | | | | | | | | | | | | | |
| Preamble Shelter | 4% | | | | | | | | | | | | | | | | | | |
| Assessment | 3% | | | | | | | | | | | | | | | | | | |
| Health | 3% | | | | | | | | | | | | | | | | | | |
| Other | 12% | | | | | | | | | | | | | | | | | | |

annex b literature review

this annex contains 4 tables, 1a and 1b relate to litterature on water and sanitation, tables 2a and 2b realate to shelter literature.

Table 1a water and sanitation literature reviewed, sorted by year and publisher. Table 1b contains the document names sorted by year.

| | 1955-1959 | 1970-1974 | 1975-1979 | 1980-1984 | 1985- 1989 | 1990-1994 | 1995-1999 | 2000-2004 |
|-------------------------------------------------------------------------------|-----------|-----------|-----------|-----------|------------|-------------|-------------|-----------|
| American Water Works Association | | 4 | | | | | | |
| Oxford Polytechnic Press | | | 7 | | | | | |
| OXFAM | | | 10 | 12 | | | 52,55,57,65 | |
| UNHCR | | | | | | 39,47 | 64 | |
| UNICEF | | | | | | | 58 | |
| UNDRO | | | | 17 | | | | |
| WHO | 1,2 | 33,5 | | 21 | 23,25,29 | 34,38,40,48 | | |
| MSF | | | | | | 41,43,49 | 59 | |
| USAID | | | | | | 50 | 56 | |
| ITDG / REDR | | | 8,11 | 18,22 | 24,30 | 35,42,51 | 53,60 | 71 |
| Intermediate Technology | | | | | | 46 | | |
| WORLD BANK | | | | 13 | | | 61 | 72 |
| International Reference Centre for Community Water Supplies and Sanitation | | | | 15 | | | | |
| Sphere | | | | | | | | 73 |
| Ross Institute | | | 9 | | 26,31 | | | |
| WEDC Loughborough University | | | | | | | 62,66 | 69,74 |
| IRC and LSHTM | | | | 19 | | 33,44 | 63 | |
| J Wiley and Sons (OUP) | | | | | 32 | 45 | | |
| SKAT | | | | | | | | 68,70 |
| EPA | | | | 14 | | | | |
| GTZ | | | | 16 | | | | |
| Cranfield University | | | | | | 36 | | |
| Water Research Centre, England | | | | 20 | | | | |
| Medical Journals | | | | | | 37 | 54 | |
| Misc | | | 6 | | 27,28 | | 67 | |

Table 1b – key to table 1a- water and sanitation literature sorted by year

| year | key | Publisher | Title |
|------|-----|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| 1958 | 1 | WHO | Excreta disposal for rural areas and small communities |
| 1959 | 2 | WHO | Water supply for rural areas and small communities |
| 1971 | 3 | WHO | Guide to sanitation in natural disasters |
| | 4 | American Water Works Association | Water quality and treatment |
| | 5 | WHO | Guide to simple sanitary measures for the control of enteric diseases |
| 1977 | 6 | Misc | Self-help wells, Koegel, FAO irrigation and drainage paper |
| 1978 | 7 | oxford polytechnic press | Shelter after Disaster, Ian Davis |
| | 8 | ITDG/REDR | Ferrocement water tanks and their construction |
| | 9 | Ross Institute | Small excreta disposal systems |
| 1979 | 10 | OXFAM | Safe drinking water |
| | 11 | ITDG/REDR | Small scale irrigation, a manual of low cost water technology |
| 1980 | 12 | Oxfam | Hand-pump maintenance in the context of community well projects |
| | 13 | World bank | Appropriate technology for water supply and sanitation |
| | 14 | EPA | Design Manual: On-site wastewater treatment and disposal systems |
| 1981 | 15 | International Reference Centre for Community Water Supplies and Sanitation | Small community water supplies |
| | 16 | GTZ | Traditional water purification in tropical developing countries |
| 1982 | 17 | UNDRO | Disaster prevention and mitigation |
| 1983 | 18 | ITDG/REDR | Field Engineering |
| | 19 | IRC and LSHTM | Small community water supplies. Technology of small water supply systems in developing countries |
| | 20 | Water Research Centre, England | Field testing of water in developing countries |
| | 21 | WHO | Guidelines for drinking water quality |
| | 22 | ITDG/REDR | A handbook of gravity-flow water systems |
| 1985 | 23 | WHO | Guidelines for drinking water quality |
| | 24 | ITDG/REDR | Hand dug wells and their construction |
| | 25 | WHO | Specification for pesticides used in public health |
| 1986 | 26 | Ross Institute | Small scale sanitation |
| | 27 | Misc | Groundwater and Wells, Driscoll, Minnesota, Johnson Division |
| | 28 | Misc | Groundwater resource development, Hamill, London: Butterworths |
| 1988 | 29 | WHO | Disinfection of rural and small-community water supplies: a manual for design and operation |
| | 30 | ITDG/REDR | Groundwater dams for small scale water supply |
| | 31 | Ross Institute | Small scale sanitation |
| | 32 | J Wiley and Sons (Open University Press) | The field guide to water wells and boreholes |
| | 33 | IRC and LSHTM | Pre-treatment methods for community water supply. |
| 1991 | 34 | WHO | Manual on water and sanitation for health in refugee camps |
| | 35 | ITDG/REDR | The worth of water |

| | | | |
|------|----|------------------------------------------|---------------------------------------------------------------------------------------|
| | 36 | Cranfield University | Handbook on small earth dams and weirs |
| | 37 | Medical Journals | Practical field epidemiology, J Trop Med Hyg |
| | 38 | WHO | Material de lutte contre les vecteurs |
| 1992 | 39 | UNHCR | Water manual for refugee situations |
| | 40 | WHO | A guide to the development of on-site sanitation |
| | 41 | MSF | Technicien sanitaire, en situation preciaire |
| | 42 | ITDG/REDR | Surface water treatment for communities in developing countries |
| | 43 | MSF | l'hygiene dans les soins de sante en situation preciaire |
| | 44 | IRC and LSHTM | Actions speak, the study of hygiene behaviour in water supply and sanitation projects |
| | 45 | J Wiley and Sons (Open University Press) | Environmental Health Engineering in the Tropics |
| | 46 | Intermediate Technology | Field Engineering |
| 1994 | 47 | UNHCR | Technical Approach: Environmental Sanitation |
| | 48 | WHO | Assisting in Emergencies |
| | 49 | MSF | Public health engineering in emergency situations |
| | 50 | USAID | Field Operations Guide |
| | 51 | ITDG/REDR | Environmental sanitation for the control of cholera in Lisungwi refugee camp, Malawi |
| | 52 | OXFAM | The Oxfam Handbook of Development and Relief Vol 2 |
| 1995 | 53 | ITDG/REDR | Low Cost Sanitation |
| | 54 | The Lancet | Public health impact of Rwanden refugee crisis |
| | 55 | Oxfam | Disease prevention through vector control |
| | 56 | USAID | Water for the world |
| 1996 | 57 | OXFAM | Water, Sanitation and Shelter Packs |
| 1997 | 58 | UNICEF | Emergency Relief Items |
| | 59 | MSF | Refugee Health An approach to emergency situations |
| | 60 | ITDG/REDR | Latrine Building: A handbook for implementing the SanPlat system |
| | 61 | World bank | Counting and identification of beneficiary populations in emergency operations |
| | 62 | WEDC Loughborough university | Emergency Water Sources: guidelines for selection and treatment |
| | 63 | IRC and LSHTM | Hygiene Evaluation Procedures |
| 1998 | 64 | UNHCR | Refugee Operations and Environmental Management |
| 1999 | 65 | OXFAM | Managing Water Supply and Sanitation in Emergencies |
| | 66 | WEDC Loughborough university | Out in the cold: emergency water and sanitation for cold regions |
| | 67 | Misc | Alimentation en eau des populations menacees, Drouart, Paris: Hermann |
| 2000 | 68 | SKAT | Water Lifting |
| 2001 | 69 | WEDC Loughborough university | Controlling and preventing disease, the role of water and sanitation interventions |
| | 70 | SKAT | Drilled Wells |
| 2002 | 71 | Redr | Engineering in Emergencies |
| | 72 | World bank | Babbister |
| | 73 | SPHERE | SPHERE handbook |
| | 74 | WEDC Loughborough university | Emergency sanitation |

Table 2a shelter technical literature grouped by publish date. the key is in table 2b

| | 1975-1979 | 1980-1984 | 1985-1989 | 1990-1994 | 1995-1999 | 2000- |
|---------------------------------|-----------|-----------|-----------|-----------|-------------|-------|
| Oxford Polytechnic Press | 1 | | | | | |
| OXFAM | 2 | 3 | | | 18,22 | |
| UNHCR | | | | 8,10,14 | 23,28 | |
| UNDP | | | | | 24 | |
| UNDRO | | 4 | | | | |
| UNICEF | | | | 11 | | |
| MSF | | | | 12,15 | 19,25,26,29 | |
| USAID | | | | 16 | | |
| ITDG/REDR | | | | 13 | | 32 |
| Intermediate Technology | | 5 | | 7,9 | 20 | |
| RRN | | | | | 26,30 | 33 |
| shelterproject Team | | | | 17 | 31 | |
| Sphere | | | | | | 34 |
| Ross Institute | | | 6 | | | |
| North Africa Institute | | | | | 21 | |

Table 4 key to table 3 and list of shelter publications by year.

| year | key | publisher | Title |
|------|-----|--------------------------|----------------------------------------------------------------------------------------|
| 1978 | 1 | Oxford Polytechnic press | Shelter after Disaster, Ian Davis |
| 1979 | 2 | OXFAM | Lessons learnt by Oxfam from their Experience of Shelter Provision, Disasters Vol 3 |
| 1981 | 3 | OXFAM | Plastic Sheeting: Its Use for Emergency Housing and Shelter |
| 1982 | 4 | UNDRO | Shelter after disaster |
| 1985 | 5 | Intermediate technology | Modern stoves for all |
| 1986 | 6 | Ross institute | Small scale sanitation |
| 1993 | 7 | Intermediate technology | Appropriate Building Materials |
| | 8 | UNHCR | First International Workshop on Improved Shelter Response and Environment for Refugees |
| | 9 | Intermediate technology | Field engineering |
| 1994 | 10 | UNHCR | People Oriented Planning at Work |
| | 11 | UNICEF | Assisting in Emergencies |
| | 12 | MSF | Public health engineering in emergency situations |

| | | | |
|------|----|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| | 13 | ITDG/REDR | How to make low cost building blocks |
| | 14 | UNHCR | Shelter and Infrastructure - Camp Planning. Programme and Technical Support Section |
| | 15 | MSF | Feasibility Study Alternative Shelter Materials |
| | 16 | USAID | Field Operations Guide |
| | 17 | shelterproject | RedR Construction in emergencies handouts |
| 1995 | 18 | OXFAM | The Oxfam Handbook of Development and Relief Vol 2 |
| | 19 | MSF | Shelter International Research Project |
| | 20 | Intermediate Technology | Rural Building Course |
| | 21 | North Africa institute | Shelter Provision and Settlement Policies for Refugees, Studies on Emergency and Disaster Relief |
| 1996 | 22 | OXFAM | Water, Sanitation and Shelter Packs |
| 1997 | 23 | UNHCR | Environmental Guidelines. Domestic Energy Needs in Refugee Situations |
| | 24 | UNDP | Emergency Relief Items |
| | 25 | MSF | Refugee Health An approach to emergency situations |
| | 26 | RRN | Counting and identification of beneficiary populations in emergency operations |
| | 27 | MSF | Guide of kits and emergency items |
| 1998 | 28 | UNHCR | Refugee Operations and Environmental Management |
| | 29 | MSF | Logistic Catalogue |
| | 30 | RRN | Temporary human settlement planning for displaced populations in emergencies |
| 1999 | 31 | shelterproject | Cold climate emergency shelter systems, a research project for humanitarian organisations, Manfield and Corsellis |
| 2002 | 32 | ITDG/REDR | Engineering in Emergencies |
| | 33 | RRN | Babbister |
| | 34 | SPHERE | Sphere Project Handbook |

annex c bibliography of guidelines

Additional bibliographies on background material and material related to natural disasters can be found on the World Wide Web, for example:

<http://www.shelterproject.org>

<http://www.grif.umontreal.ca/pages/Bibliog.htm>

physical planning/temporary shelter
reconstruction/disasters

Centre on Housing Rights and Evictions, Sources No.4: Legal Resources for Housing Rights, Scott Leckie, 2000

Chalinder A., Temporary Human Settlement Planning for Displaced Populations in Emergencies, Good Practice Review, RRN January 1998

Médecins Sans Frontières, Refugee Health: An approach to emergency situations, 1997

Médecins Sans Frontières, Temporary and semi-permanent buildings for health structures in refugees camps, 1998

Oxfam, The Oxfam Handbook of Development and Relief, Vol II, Eade D., Williams S., 1995

Oxfam, Water, Sanitation and Shelter Packs, Oxfam Public Health Team 1996

REDR/ITDG, Engineering in Emergencies: A practical guide for relief workers, Davis J., Lambert R., 2002

SKH - ASC – SDR, Field Manual for Site and Shelter Planners, 1999

SPHERE, The Humanitarian Charter and Minimum Standards in Disaster Response, Steering Committee for Humanitarian Response, 2001

UNHCR, Handbook for Emergencies, 2000

UNICEF, Assisting in Emergencies: A resource handbook for UNICEF field staff, Ockwell R., 1996